



Scan for reading  
Annual Report 2019



# Bangkok Expressway and Metro Public Company Limited Annual Report 2019

BEM Connects Every Journey  
To Extend the Route of Happiness





BEM Connects Every Journey  
To Extend the Route of Happiness





Bangkok Expressway and Metro Public Company Limited or **BEM** determines to be a leading service provider of the integrated transportation system of Thailand and ASEAN with its administration under corporate governance and social responsibility.

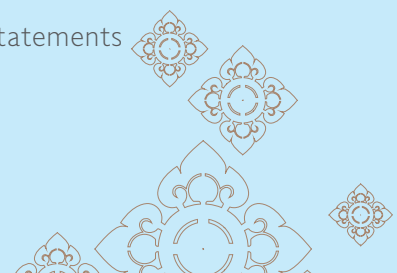
**BEM's** businesses consist of Expressway service, Mass transit system, and also Commercial development, which expands its business through infrastructure in forthcoming service providing networks.

Throughout its business administration, **BEM** has delivered good and efficient service to expressway and metro users for their convenience, rapidity and safety. **BEM** also has had a vital role in elevated civic quality of life and alleviated traffic congestion for building pleasant society, fulfilled with smiles of joy forever.



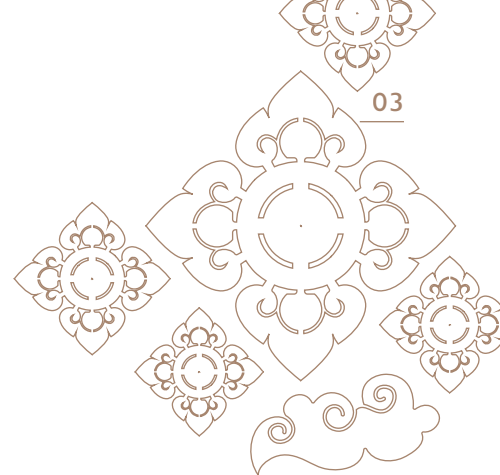
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# Financial Summary



## Bangkok Expressway and Metro Public Company Limited and its Subsidiaries

### Financial Highlights

Unit : Million Baht

<b>Financial Position</b> (As at December 31)	<b>2019</b>	<b>2018</b>
Total assets	111,697	103,831
Total liabilities	72,874	68,219
Shareholders' equity	38,823	35,612

<b>Operating Results</b> (For the year ended December 31)	<b>2019</b>	<b>2018</b>
Revenue from expressway business	10,302	10,174
Revenue from rail business	5,022	4,736
Revenue from commercial development business	783	705
Net profit attributable to the Company	5,435	5,317

<b>Financial Ratios *</b>	<b>2019</b>	<b>2018</b>
Net profit margin (%)	18.66	20.35
Return on equity (%)	8.38	9.90
Return on total assets (%)	3.24	3.76
Debt to equity ratio (times)	1.62	1.59
Interest bearing debt to equity ratio (times)	1.37	1.34
Book value per share (Baht)	2.54	2.32

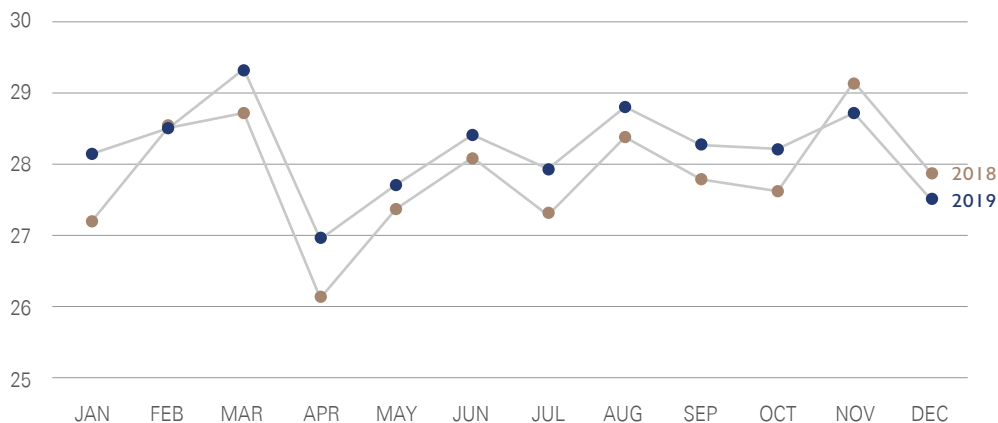
Remark: \* Excluding loan-related transactions under the Concession Agreement for the M.R.T. Chalong Ratchadham Line Project and gain on reclassification of investment.

## Average Daily Toll Revenue :

Chalerm Mahanakorn, Si Rat, Udon Ratthaya and Si Rat - Outer Ring Road Expressway

(Million Baht / Day)

↑  
2019  
increase  
from 2018  
**1.29%**



AVG Daily  
Toll Revenue **2019** :  
28.23 Million Baht/Day

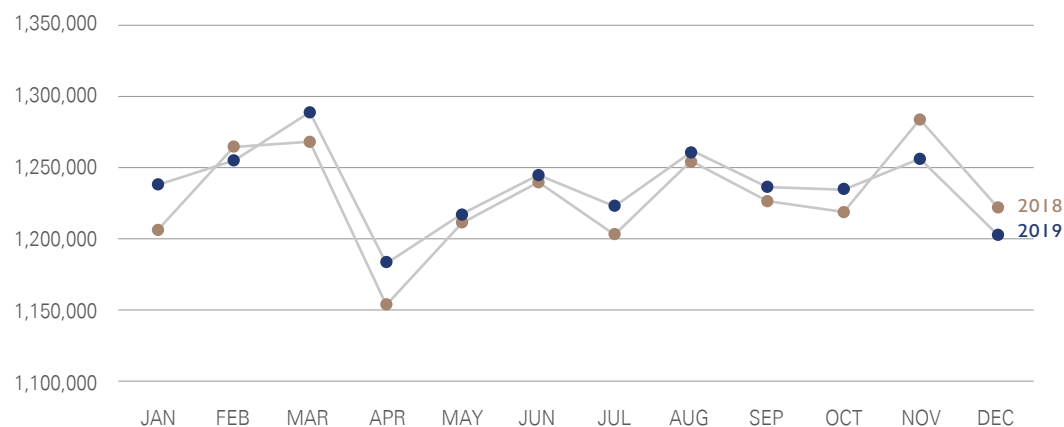
AVG Daily  
Toll Revenue **2018** :  
27.87 Million Baht/Day

## Average Daily Traffic :

Chalerm Mahanakorn, Si Rat, Udon Ratthaya and Si Rat - Outer Ring Road Expressway

(Trips / Day)

↑  
2019  
increase  
from 2018  
**0.58%**



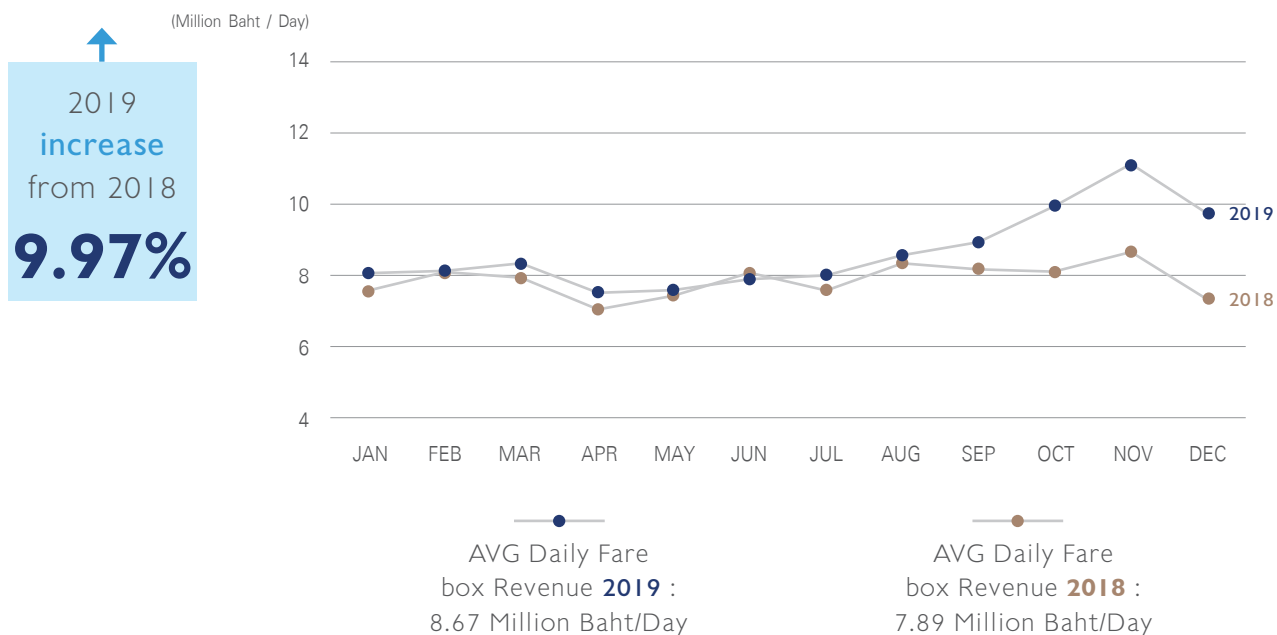
AVG Daily  
Traffic **2019** :  
1,237,235 Trips/Day

AVG Daily  
Traffic **2018** :  
1,230,132 Trips/Day



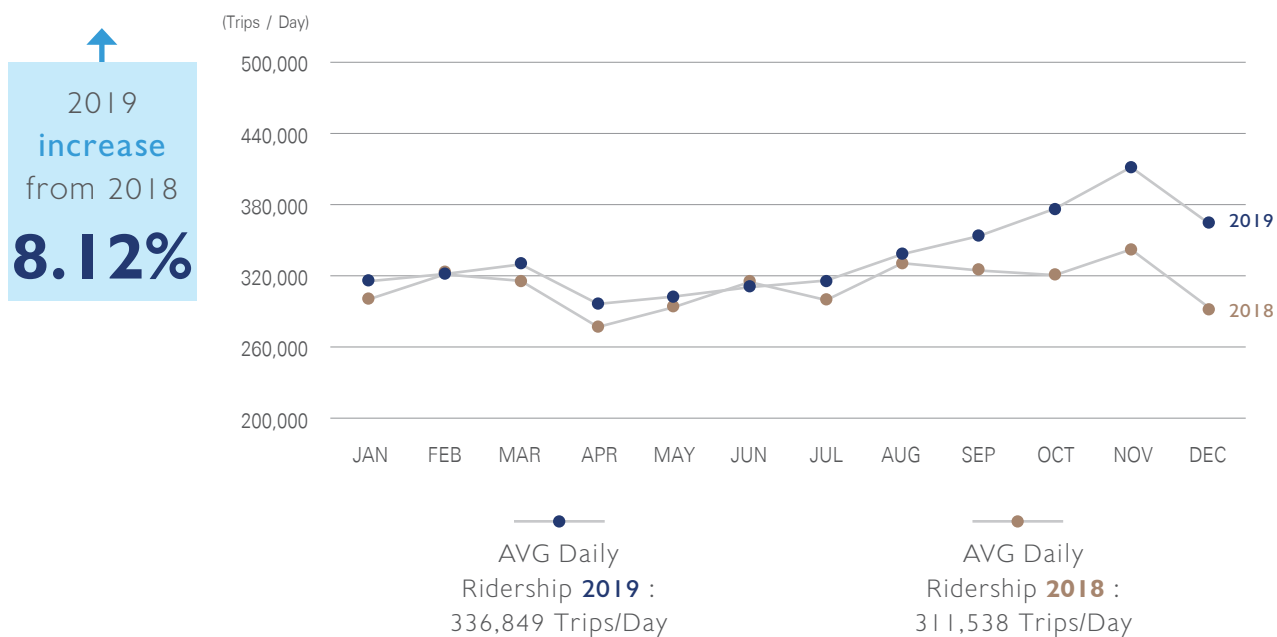
## Average Daily Fare Box Revenue :

the MRT Chaloem Ratchamongkhon Line



## Average Daily Ridership :

the MRT Chaloem Ratchamongkhon Line



# Message from the Chairman of the Board of Directors



Bangkok Expressway and Metro Public Company Limited or BEM continues to develop the provision of its fully-integrated transportation system services, both of expressway and rail businesses. In 2019, BEM has created the Happy Blue Line for Bangkok people, both of the Phra Nakhon and Thonburi sides, by officially opening the M.R.T. Chaloem Ratchamongkhon Line, Hua Lamphong Station - Lak Song Station, for service on September 29, 2019. Such route would provide commuters with more seamless and convenient journeys. Furthermore, BEM has expedited the works in preparation for the official opening of the Tao Poon Station - Tha Phra Station, which has been opened for trial run for free since late 2019, with the official opening expected to take place in March 2020.

The Company's business operations have been based on the corporate governance and corporate social responsibility, with the commitment to achieving the intention to alleviate traffic problems in order to deliver the good and efficient services with convenience, rapidity and safety to the expressway users and the MRT passengers. As a result, BEM has received the Thailand Sustainability Investment 2019 award for the third consecutive year in its capacity as a listed company taking into account the environment, society and corporate governance in its business operations. Moreover, BEM has also received the Drive Award 2019 for Environment and Sustainability in Services Business, as one of the organizations which played an active role in driving Thailand's economy and business in various aspects, including the Thailand Energy Awards 2019 in the category of energy conservation in transportation from the Department of Alternative Energy Development and Efficiency. These achievement awards present the dedication and determination of all BEM's executives and staff whose concerted efforts have helped develop the organization to be a driving force for Thailand's sustainability in all aspects.

The operating results for 2019 of BEM and its subsidiaries have reflected the Company's firm foundation as evidenced by the net profit of Baht 5,435 Million. The Board of Directors of the Company has resolved to propose the Shareholders' Meeting to approve the dividend payment for the second half of 2019 at the rate of Baht 0.09 per share. During the year, the Board of Directors of the Company has also resolved to approve the interim dividend payment for the first half to the shareholders at the rate of Baht 0.06 per share, and as such, the total dividends paid in 2019 represent the rate of Baht 0.15 per share.

Finally, on behalf of the Board of Directors of BEM, I would like to extend my sincere thanks once again to all stakeholders, including shareholders, customers, counterparts, staff, public and private agencies, and etc., who have played their key roles in support of BEM to achieve such a secure and sustainable growth. In 2020, BEM will remain committed to our missions in the business operations with corporate social responsibility while balancing economic, social and environmental factors, as well as adhering to the corporate governance to secure our growth and steady returns in the long run to all stakeholders. Most importantly, BEM will continue to develop and create innovations to improve the quality of life in terms of commuting and bring happy smiles to all expressway users and MRT passengers.

**(Dr. Virabongsa Ramangkura)**

Chairman of the Board of Directors



# Report of the Audit Committee



The Audit Committee of Bangkok Expressway and Metro Public Company Limited, as appointed by the Board of Directors, comprises three independent directors, namely, Mr. Vitoon Tejatussanasoontorn, as Chairman of the Audit Committee, General Chetta Thanajaro, and Dr. Annop Tanlamai, as Audit Committee Members. The Chairman of the Audit Committee and Dr. Annop Tanlamai specialize in accounting and finance, and the General Manager of Internal Audit Office serves as secretary to the Audit Committee.

The Audit Committee has performed its duties within the scope, duties and responsibilities as assigned by the Board of Directors in line with the requirements of the Stock Exchange of Thailand, together with the suggestions on various related matters. In 2019, the Audit Committee held four meetings for discussion and sharing of opinions with the management and internal auditor, and two meetings with the auditor without the management's presence, for discussion on the essence of the audit plan, significant accounting matters, and accounting standards to be applicable, along with independence in performance of duties and expression of opinions of the auditor.

The key performance of duties of the Audit Committee can be summarized as follows:

**1. Review of Financial Report:** The Audit Committee reviewed the quarterly financial statements and the financial statements for 2019 of the Company and its subsidiaries, including changes in the accounting policy, significant accounting adjustments, and correct and complete disclosure of information, by receiving clarifications from the auditor, management, and internal auditor to its satisfaction that the financial statements were prepared in accordance with the legal requirements, the generally accepted accounting standards and the financial reporting standards, with correct and sufficient disclosure of information in a timely manner for the benefit of users of the financial statements, and therefore approved such financial statements, as audited and reviewed by the auditor, representing a report on an unqualified opinion.

**2. Review of Internal Control System:** The Audit Committee reviewed the assessment results of the internal control in respect of the operating system and the IT system by using the Internal Control Adequacy Evaluation Form under the practice guidelines as specified by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) to ensure the efficient and effective performance in all work units in order to meet the specified objectives and targets, compliance with various laws and requirements, and adequate ability to control and prevent corruption. The Internal Audit Office independently reviewed and evaluated the sufficiency of the internal control, as well as reporting directly to the Audit Committee, by taking into consideration the operations, resource utilization, property management, risk prevention and minimization, and reliability of the financial report.

**3. Supervision of Internal Audit:** The Audit Committee reviewed the Internal Audit Unit to ensure its independence, with a duty to report directly to the Audit Committee, by approving the annual internal audit plan, and reviewed the operations as per the approved work plan, considered issues as a result of the audit and useful suggestions in order to enhance the efficiency of the internal audit system, and regularly followed up the operational results under the suggestions, as well as approved the consideration for appointment, transfer, termination of employment of the Head of the Internal Audit Unit.

**4. Review of Good Corporate Governance:** The Audit Committee reviewed the Company's operations to ensure that its business operations was carried out under the corporate governance principles in compliance with the law on securities and exchange, rules and regulations of the Office of the Securities and Exchange Commission, requirements of the Stock Exchange of Thailand, and other laws relating to the business operations, including obligations which may arise from agreements executed with third parties, and found that the Company has duly and properly complied with the relevant laws and requirements in a timely manner.

**5. Review and Provision of Opinions on Connected Transactions or Transactions which might give rise to conflicts of interest, including Disclosure of Information on such Transactions:** The Audit Committee reviewed and provided opinions on execution of connected transactions or transactions which might give rise to conflicts of interest in compliance with the applicable laws and requirements of the Office of the Securities and Exchange Commission and the Stock Exchange of Thailand, and found that the Company executed such transactions with transparency, justification, and benefit to the Company's business operations and shareholders as a whole, together with correct and complete disclosure of information in a timely manner.

**6. Consideration for Selection, Nomination of the Auditor and Annual Remuneration for the Auditor:** The Audit Committee had the duties to consider selecting, nominating, re-electing, or terminating the engagement of the auditor, and consider the remuneration for the auditor, by taking into account the auditor's independence, knowledge, capability, experience, previous audit performance, reasonableness of the auditing fee, and was of the view that the auditor from EY Office Limited was independent, knowledgeable, capable and experienced regarding the audit, provision of advice on the accounting standards, certification of the financial statements in a timely manner, and that the auditing fee was reasonable. Therefore, it resolved to propose the matter to the Board of Directors to consider and seek approval from the meeting of shareholders for appointment of the auditor from EY Office Limited as the Company's auditor for 2020, with the remuneration in an amount not exceeding Baht 4,240,000 per year.

In summary, the Audit Committee independently performed its duties under the responsibilities as assigned by the Board of Directors, by applying various fields of knowledge and abilities in response to the business operations with due care, prudence, independence in line with those as specified in the Audit Committee Charter as approved by the Board of Directors, in providing opinions and suggestions for the fair benefit of all interested parties. It was of the view that the Company's report on financial information and operations was correct in compliance with the generally accepted accounting standards and the financial reporting standards, that the risk management was sufficient, with effective and proper internal control system and internal audit, and operations in accordance with the good corporate governance principles, as well as compliance with applicable laws, rules and requirements relating to the business operations in all respects.

A stylized signature of Mr. Vitoon Tejatussanasoontorn, consisting of several fluid, overlapping strokes.

(Mr. Vitoon Tejatussanasoontorn)  
Chairman of the Audit Committee

# Report of the Nomination and Remuneration Committee



The Board of Directors of Bangkok Expressway and Metro Public Company Limited appointed the Nomination and Remuneration Committee by having General Chetta Thanajaro as Chairman of the Nomination and Remuneration Committee, Mr. Plew Trivisvavet, Mr. Vitoon Tejatussanasoontorn and Mr. Supong Chayutsahakij as Nomination and Remuneration Committee Members, with the duties to nominate and consider remuneration for directors and Managing Directors to ensure transparency and fairness.

In 2019, there were two Nomination and Remuneration Committee's Meetings to consider various matters. The essence of the performance of duties can be summarized as follows:

1. **Considering and selecting qualified persons to hold the position of the Company's directors in accordance with the Company's criteria and procedures for nomination by nominating persons to be appointed as directors to replace those directors who retire by rotation in the ordinary general meeting of shareholders.**

The Board of Directors considered the qualifications and roles in the previous year's performance of duties of five directors who retired by rotation and proposed the 2019 Annual Ordinary General Meeting of Shareholders to re-appoint them for another term, and also considered qualifications of a person having knowledge, ability and experience which would be beneficial to the Company, and having qualifications in line with those of directors in listed companies, to be nominated as a director to replace the directors who retired by rotation.

2. **Reviewing criteria on consideration and determination of remuneration for directors for 2019**

The Board of Directors considered reviewing the criteria on consideration of remuneration for directors and was of the opinion that it were determined as appropriate and

in line with the scope of duties and responsibilities of each director; remuneration stayed at the same rate as that of the same industry to attract and retain knowledgeable and qualified directors to perform duties for the Company; elements of remuneration were clear, transparent, and easy-to-understand, by proposing the remuneration for directors for 2019 to the shareholders' meeting for consideration and approval.

3. **Reviewing criteria for consideration and determination of remuneration for Managing Directors**

The Board of Directors considered reviewing the criteria for consideration of remuneration for Managing Directors to stay at the rate which remained attractive to them in the long run, appropriate for the scope of duties and responsibilities of Managing Directors; and also considered determining remuneration for Managing Directors from the results of performance assessment of Managing Directors, together with the Company's operational results, by proposing the same to the Board of Directors' Meeting for consideration and approval.

In conclusion, the Nomination and Remuneration Committee has fulfilled their duties as specified in the Nomination and Remuneration Committee's Charter which has been approved by the Board of Directors, by employing their knowledge, ability with due care and independence as sufficient to provide the opinions and suggestions for the overall benefits of the Company.

**General Chetta Thanajaro**

Chairman of the Nomination and Remuneration Committee



# Report of the Corporate Governance and Risk Management Committee



The Board of Directors of Bangkok Expressway and Metro Public Company Limited has realized the significance of compliance with the good corporate governance principles and risk management whereby the Board of Directors appointed the Corporate Governance and Risk Management Committee, comprising Mrs. Vallapa Assakul as Chairman of the Corporate Governance and Risk Management Committee, Mr. Phongsarit Tantisuwanitchkul, Dr. Sombat Kitjalaksana and Mrs. Payao Marittanaporn as Corporate Governance and Risk Management Committee Members, with the duties to formulate policies and directions of operations in respect of the good corporate governance of the Company to ensure performance of duties with transparency and independence in compliance with the guidelines for the good corporate governance, consider risk management plan, risk management process, as well as monitoring, inspecting and reviewing the Company's overall risks to stay at an acceptable level.

The Corporate Governance and Risk Management Committee has performed its duties as assigned by the Board of Directors, and in 2019, convened its four meetings with the high-ranking management team to consider reviewing policies and follow up progress of compliance with the good corporate governance principles and risk management plan of the Company. The key performance of duties can be summarized as follows:

## 1. Monitoring to ensure the Company's compliance with the good corporate governance principles

The Board of Directors followed up and reviewed the practical guidelines for the good corporate governance by proposing the Board of Directors' Meeting to consider the appropriateness in adopting it as guidelines for the Company's operations. In this regard, the Board of Directors considered reviewing and improving the good corporate governance policy relating to shareholders' rights; treatment towards shareholders and stakeholders; disclosure of information; and the Board of Directors' responsibility in line with the requirements of the Stock Exchange of Thailand. In 2019, the results of the Company's corporate governance survey were shown at the very good level; the results of assessment of the Annual Ordinary General Meeting of Shareholders were shown at the excellent level; and the Company was selected as one of 98 listed companies on the Thailand Sustainability Investment

for the third consecutive year; not to mention the fact that the Company was selected as one of 30 listed companies in SET Well-being (SETWB) Index which reflected the performance of securities in Thailand with high competitiveness and in which foreign investors remained interested, all of which were instrumental in the nation's gross domestic product growth or GDP growth, generating income to the people in the country and raising the quality of life for Thai people.

## 2. Risk management

The Board of Directors, in association with the high-ranking management, considered compliance with the annual risk management plan, reviewed and followed up the risk management on a regular basis as well as following up movement, tendency for review of plan and strategies to manage risks to stay at the acceptable level in an appropriate and timely manner for the ongoing changing situations and consistent with the Company's work plan. In 2019, there were the significant changes in risks from construction and operation of the projects; the Company was able to open the MRT Blue Line Project, Hua Lamphong-Bang Khae Section, for service in September 2019 and Tao Poon-Tha Phra Section for trial runs in December 2019.

In conclusion, the Corporate Governance and Risk Management Committee is certain that the Company has complied with the good corporate governance principles and guidelines, has continuously and efficiently conducted risk management, as well as making prudent emergency response preparedness in advance for enabling the Company to carry out operations uninterruptedly to ensure the sustainable existence.

*V- Assakul*

**(Mrs. Vallapa Assakul)**

Chairman of the Corporate Governance  
and Risk Management Committee

# The Board of Directors



## Dr. Virabongsa Ramangkura

- Chairman of The Board of Directors

### Academic Achievement

- Doctor of Law (Honorary), Webster University, St. Louis, USA
- Ph.D. (Economics), University of Pennsylvania, USA
- M.A. (Economics), University of Pennsylvania, USA
- B.A. Political Science, Chulalongkorn University
- National Defence Course for the Joint State Private Sector, National Defence College
- Director Certification Program (DCP), Thai Institute of Directors Association



## Mr. Plew Trivisvavet

- Vice Chairman of The Board of Directors
- Chairman of The Executive Board
- Nomination and Remuneration Committee Member
- Authorized Signatory Director

### Academic Achievement

- Honorary Doctorate (Civil Engineering), Kasetsart University
- Honorary Doctorate (Civil Engineering), Nakhon Phanom University
- Honorary Doctorate of Engineering, Civil Engineering, Rajamangala University of Technology Isan
- Honorary Doctorate of Engineering, Thai-Nichi Institute of Technology
- M.Sc. (Electrical Engineering), Osaka University, Japan
- B.Sc. (Electrical Engineering), Osaka University, Japan
- National Defence Course for the Joint State Private Sector, National Defence College
- Director Certification Program (DCP), Thai Institute of Directors Association
- Director Accreditation Program (DAP), Thai Institute of Directors Association
- Finance for Non-Finance Directors (FND), Thai Institute of Directors Association
- Capital Market Academy Leader Program, Capital Market Academy





### Mr. Vitoon Tejatussanasoontorn

- Director
- Chairman of The Audit Committee
- Nomination and Remuneration Committee Member

#### Academic Achievement

- B.A. in Commerce, Thammasat University
- Director Certification Program (DCP), Thai Institute of Directors Association
- IOD Chartered Directors, Thai Institute of Directors Association
- Audit Committee Program (ACP), Thai Institute of Directors Association
- Advanced Audit Committee Program (AAP), Thai Institute of Directors Association
- Role of the Compensation Committee (RCC), Thai Institute of Directors Association



### General Chetta Thanajaro

- Director
- Chairman of The Nomination and Remuneration Committee
- Audit Committee Member

#### Academic Achievement

- Master of Arts (Political Science), Ramkhamhaeng University
- Bachelor of Science, Chulachomklao Royal Military Academy
- Infantry Basic Officer Leadership Course, United States Army Infantry School
- The Royal Thai Army Command and General Staff Course
- National Defence Course for the Joint State Private Sector, National Defence College
- Director Certification Program (DCP), Thai Institute of Directors Association
- Finance for Non-Finance Directors (FND), Thai Institute of Directors Association



### Mrs. Vallapa Assakul

- Director
- Chairman of the Corporate Governance and Risk Management Committee

#### Academic Achievement

- Master of Economics, University of Detroit, USA
- Bachelor of Economics, Chulalongkorn University
- Audit Committee Program (ACP), Thai Institute of Directors Association
- Director Certification Program (DCP), Thai Institute of Directors Association
- Director Accreditation Program (DAP), Thai Institute of Directors Association
- Role of the Compensation Committee (RCC), Thai Institute of Directors Association



### Dr. Annop Tanlamai

- Director
- Audit Committee Member

#### Academic Achievement

- Ph.D. Engineering Management, University of Missouri, USA
- M.B.A (Quantitative Business Analysis), Indiana University, Bloomington, USA
- M.S. in Engineering Management, University of Missouri, USA
- Bachelor of Engineering (Mechanical Engineering), Chulalongkorn University
- Director Certification Program (DCP), Thai Institute of Directors Association
- The Audit Committee's Role in Compliance and Ethical Culture Oversight, Thai Institute of Directors Association



### Mr. Supong Chayutsahakij

- Director
- Nomination and Remuneration Committee Member
- Executive Director
- Authorized Signatory Director

#### Academic Achievement

- Honorary Ph.D. (Management Science), Phranakhon Rajabhat University
- Master of Political Science (Politics and Government), Sukhothai Thammathirat Open University
- Executive Master of Business Administration, Sasin Graduate Institute of Business Administration of Chulalongkorn University
- Master of Engineering (Electrical), University of Tokyo, Japan
- Bachelor of Engineering (Electrical), University of Tokyo, Japan
- Director Certification Program (DCP), Thai Institute of Directors Association
- Audit Committee Program (ACP), Thai Institute of Directors Association



### **M.L. Prasobchai Kasemsant**

- Director

#### **Academic Achievement**

- M.S. (Civil Engineering) and M.S. (Operations Research), Stanford University, USA
- B.S. (Civil Engineering, Mathematics), Virginia Military Institute, Virginia, USA
- Thailand Energy Academy Course for Management, Thailand Energy Academy
- National Defence Course, National Defence College
- Director Certification Program (DCP), Thai Institute of Directors Association

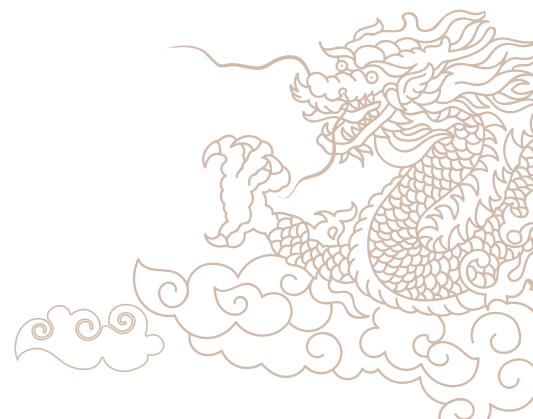


### **Mr. Phongsarit Tantisuvanitchkul**

- Director
- Corporate Governance and Risk Management Committee Member
- Executive Director
- Authorized Signatory Director

#### **Academic Achievement**

- Master of Engineering (Construction and Management), University of Michigan - Ann Arbor, USA
- Bachelor of Engineering (Mechanical Engineering), Kasetsart University
- Director Certification Program (DCP), Thai Institute of Directors Association
- Finance for Non-Finance Directors (FND), Thai Institute of Directors Association
- Understanding the Fundamental of Financial Statements (UFS), Thai Institute of Directors Association







**Miss Arisara Dharamadhaj**

- Director

#### Academic Achievement

- M.B.A., Roosevelt University, USA
- Bachelor of Economics Program  
University of the Thai Chamber of Commerce
- Director Certification Program (DCP)  
Thai Institute of Directors Association
- National Defence Course for the Joint State Private Sector,  
National Defence College



**Mr. Panit Dunnvatanachit**

- Director

#### Academic Achievement

- M.B.A. (Finance), Washington University, St. Louis, USA
- Bachelor of Arts & Science, Washington University,  
St. Louis, USA
- Director Certification Program (DCP),  
Thai Institute of Directors Association
- Capital Market Academy Leader Program,  
Capital Market Academy
- Broadcasting Executive Forum, Office of the National Broadcasting  
and Telecommunications Commission
- Thailand Energy Academy Course for Management,  
Thailand Energy Academy



**Mrs. Natamon Bunnak**

- Director

#### Academic Achievement

- Master of Economics (Business Economics),  
University of the Thai Chamber of Commerce
- Master of Public and Private Management Program,  
National Institute of Development Administration
- Bachelor of Science (Agricultural Economics),  
Kasetsart University
- Director Accreditation Program (DAP),  
Thai Institute of Directors Association



### **Dr. Sombat Kitjalaksana**

- Director
- Corporate Governance and Risk Management Committee Member
- Executive Director
- Managing Director
- Authorized Signatory Director

#### **Academic Achievement**

- Dr. Techn. (Soil Mechanic), University of Innsbruck, Austria
- Bachelor and Master of Engineering (Civil), Chulalongkorn University
- Director Certification Program (DCP), Thai Institute of Directors Association
- Finance for Non-Finance Directors (FND), Thai Institute of Directors Association
- Director Accreditation Program (DAP), Thai Institute of Directors Association

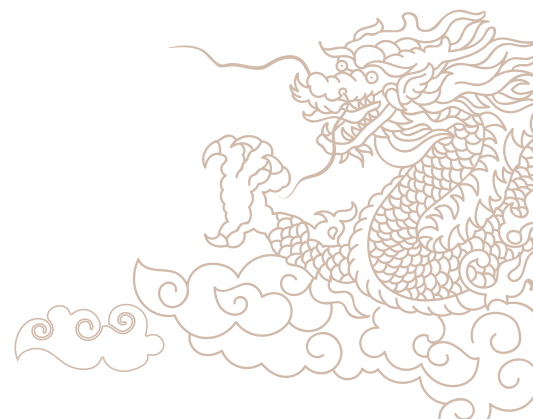


### **Mrs. Payao Marittanaporn**

- Director
- Corporate Governance and Risk Management Committee Member
- Executive Director
- Managing Director
- Authorized Signatory Director

#### **Academic Achievement**

- M.B.A., Chulalongkorn University
- Higher Diploma in Auditing, Thammasat University
- Bachelor of Accountancy, Chulalongkorn University
- Director Certification Program (DCP), Thai Institute of Directors Association
- Role of the Compensation Committee (RCC), Thai Institute of Directors Association
- Capital Market Academy Leader Program, Capital Market Academy



# Management Team



**Dr. Sombat Kitjalaksana**

Managing Director

**Mrs. Payao Marittanaporn**

Managing Director



**Mr. Sanguan Kunatinun**

Deputy Managing Director  
Expressway Engineering



**Mrs. Sudruthai Prommart**

Deputy Managing Director  
Expressway Operation



**Miss Panan Tosuwanthaworn**

Deputy Managing Director  
Finance



**Mr. Witoon Hatairatan**

Deputy Managing Director  
Railway System Operation and  
Engineering



**Mr. Alvin Gee**

Deputy Managing Director  
Operation Support



**Dr. Vites Techangam**

Deputy Managing Director  
Technology and E-Business



**Mr. Anawash Suwanarit**

Deputy Managing Director  
Business Development

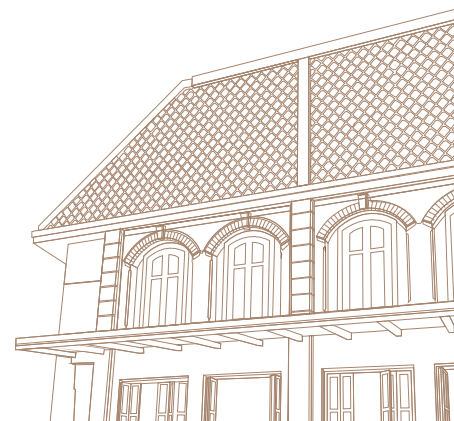
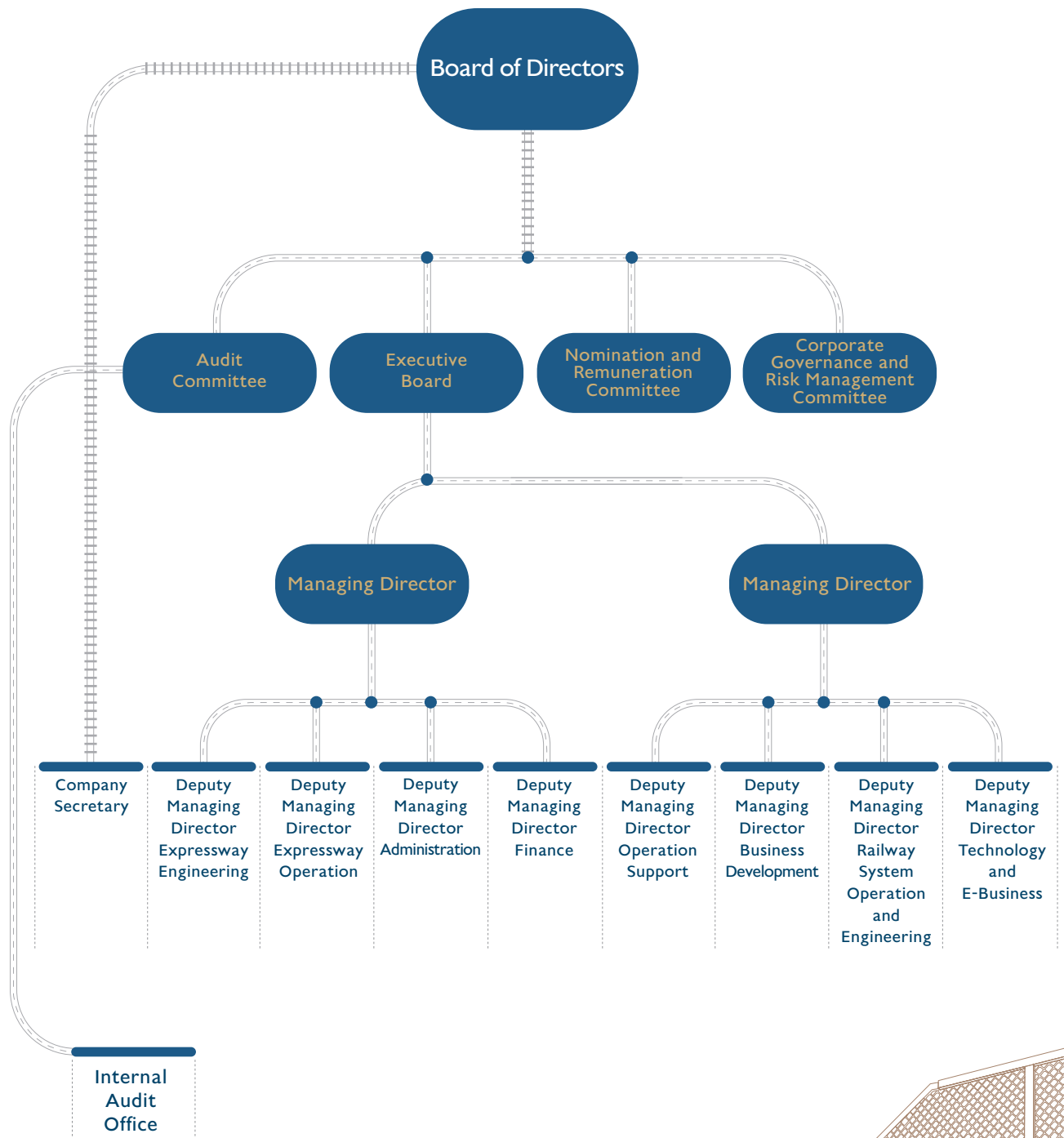


**Mr. Phakpoom Thaweewittayarat**

Deputy Managing Director  
Administration and  
Company Secretary



# Organization Structure



## Awards of Pride 2019



### BEM Received the Thailand Energy Awards 2019

In the category of energy conservation in transportation at the national level from the Department of Alternative Energy Development and Efficiency, Ministry of Energy, with Mr. Somkid Jatusripitak, Deputy Prime Minister, presiding over the ceremony at BITEC Bangna.

For the received award, BEM was proud to be a part in energy conservation and environmental protection, with BEM's commitment to conducting studies and development to be compatible with the MRT services in order to maximize and achieve the highest efficiency in energy consumption. Moreover, BEM has carried out prevention and control of pollution to minimize environmental impacts to make sure that the travelling with the MRT is environmentally friendly, together with social development to be happier and have a better quality of life. Likewise, the MRT passengers are also deemed a part in energy conservation and environmental protection for sustainability.

### BEM Received the DRIVE AWARD 2019



BEM received the DRIVE AWARD 2019 in Services Business from the proven provision of comprehensive transportation system services based on corporate governance by taking into account social and environmental responsibility in pursuit of sustainability, along with innovations in ready place to serve as a driving force behind the organization's movement to the global stage.

"DRIVE AWARD 2019" was presented by MBA Chula Alumni, in collaboration with the Master of Business Administration Program, the Faculty of Commerce and Accountancy, Chulalongkorn University, to the top business organizations with the outstanding performance as a role model in economic and social driving.



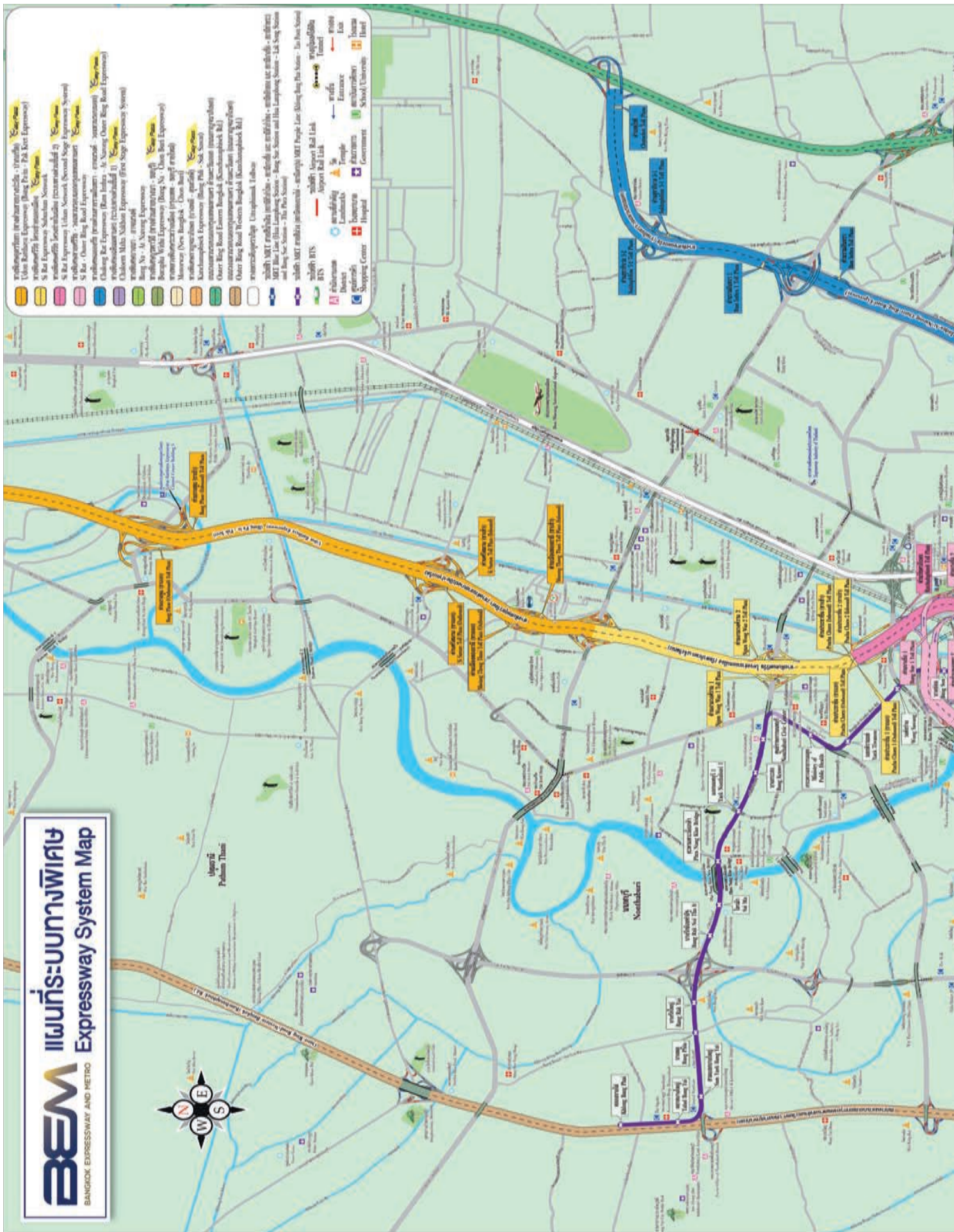


## BEM was Selected for the List of Thailand Sustainability Investment (THSI) for the Third Consecutive Year

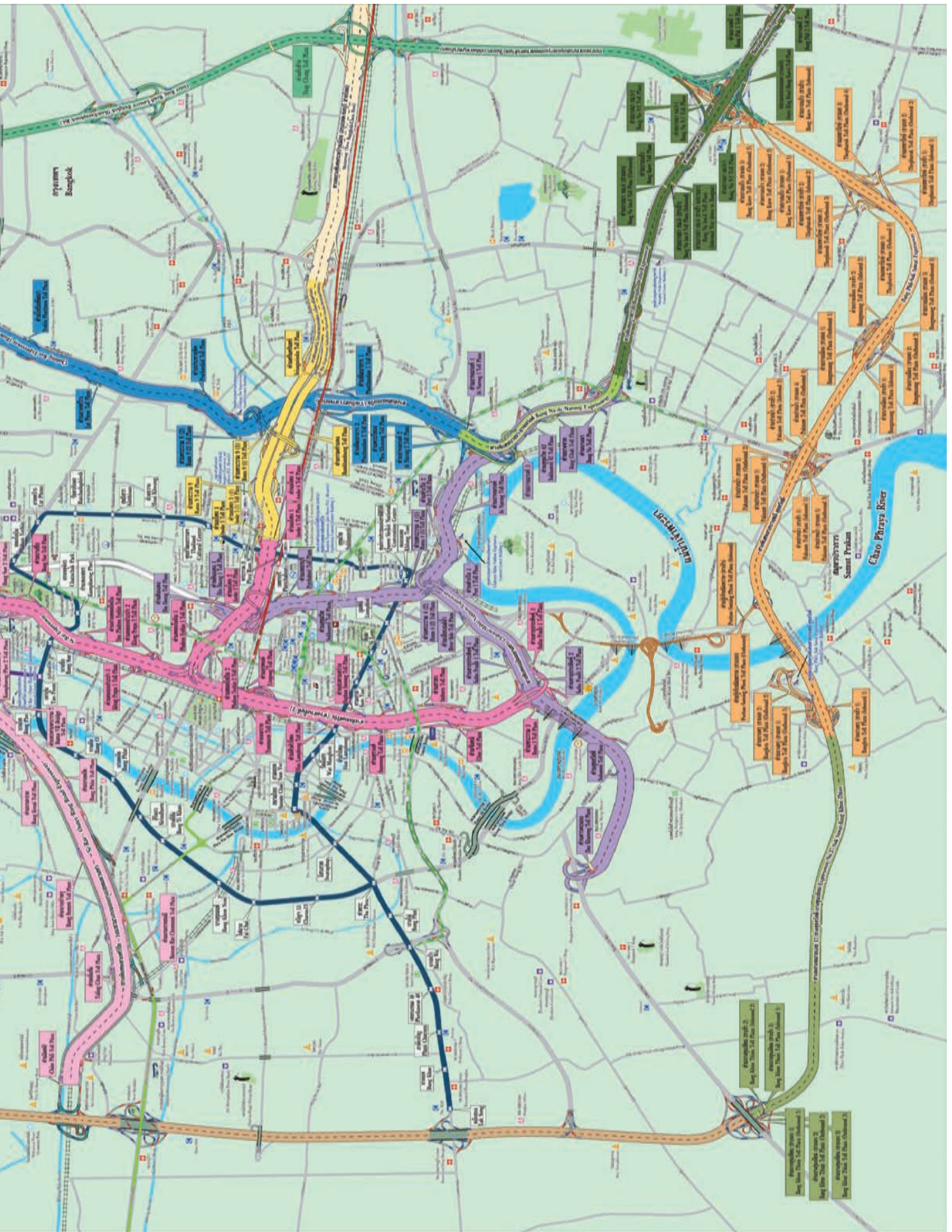
BEM was selected to enlist in the Thailand Sustainability Investment (THSI) 2019 for the third consecutive year and was also selected to be in SETTHSI Index 2019 by the Stock Exchange of Thailand, as the listed company with the commitment to the business operations under the sustainable development guidelines in environmental, social and corporate governance aspects.



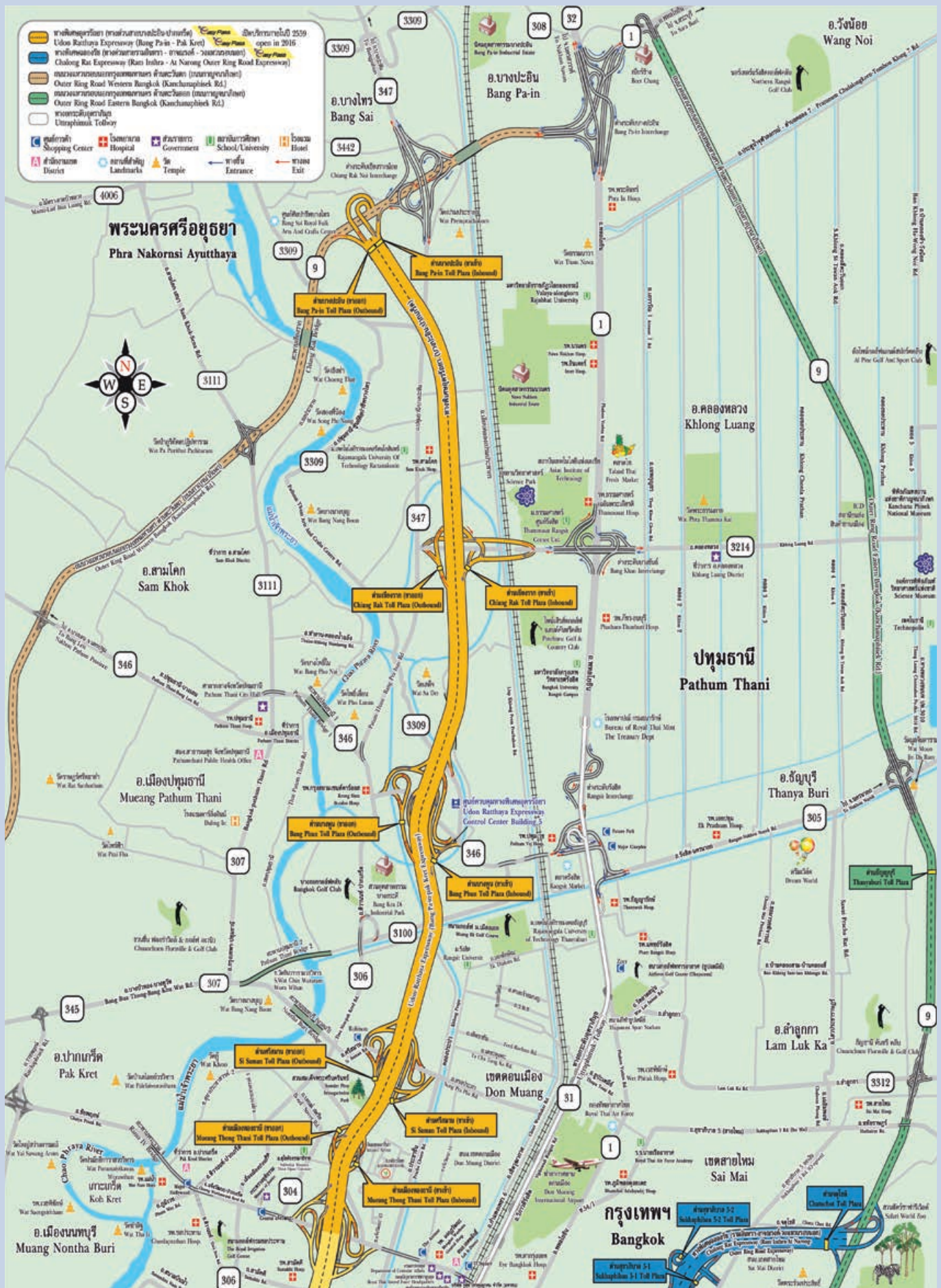




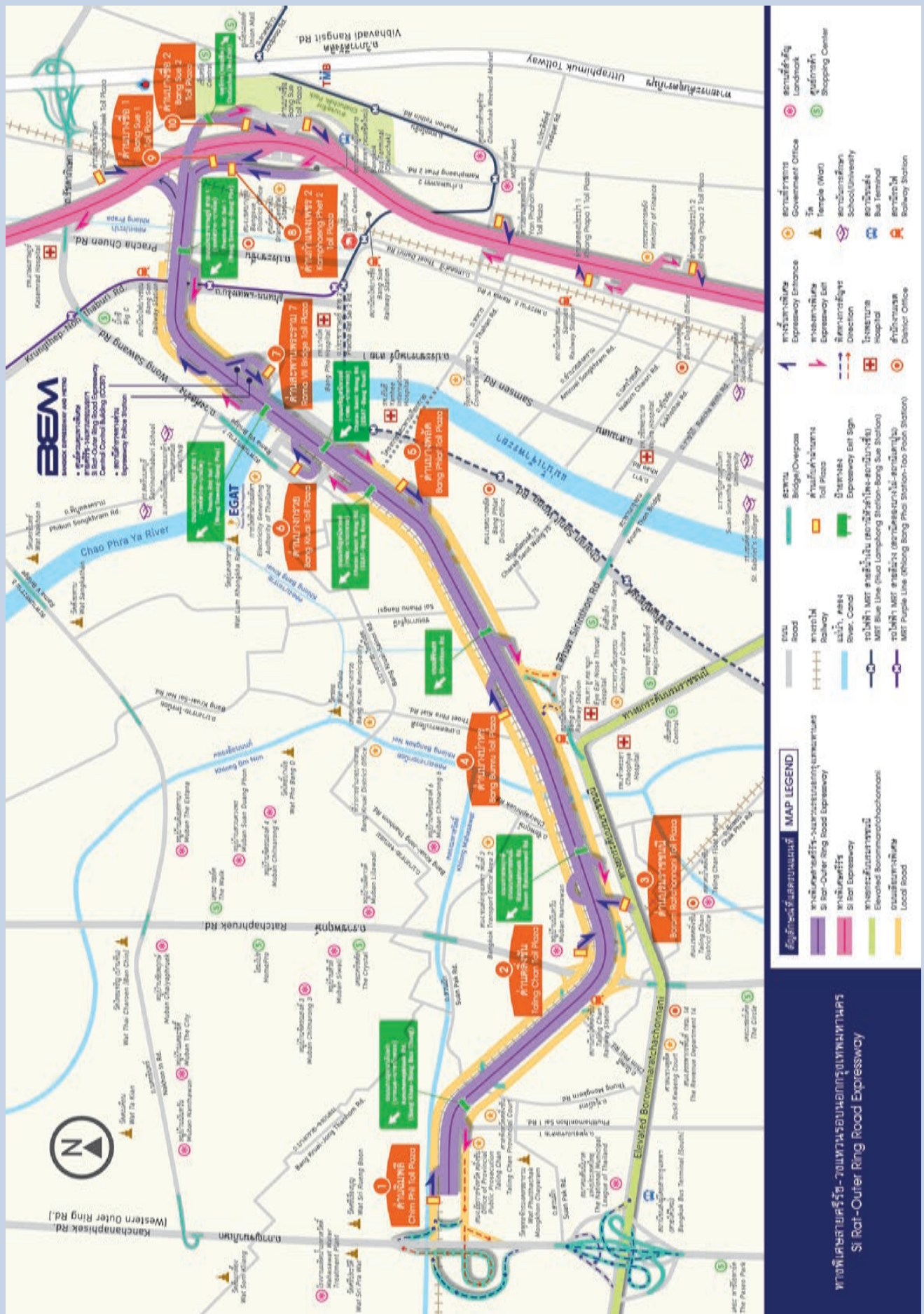












# First Class Expressway Services

Services on the Expressway are the core of BEM's management, therefore, over the past period, The Company has been determined to develop and enhance the efficiency of its services so as to ensure that motorists will be impressed by the convenience, rapidity and cost-efficiency of the services. In regards to the first class services, BEM provides various services as follows:



## I. Communications and Facilities

The Company established the expressway system control centers by having communication staff to coordinate with the rescue operation units as well as police officers on the expressway and at the ground level roads so as to service the motorists 24 hours a day. The communications facilities comprise:

- **Closed-circuit Television (CCTV)**

Closed-circuit televisions are installed at intervals throughout the Expressway to monitor traffic flow and various events on the Expressway, hence, motorists can be assured of prompt assistance should there be any emergency.

- **Emergency Telephones (ETS)**

Emergency telephones are installed at intervals of every 500 metre 1 kilometer on the Expressway so as to enable motorists to contact communication staff at the control centers by pressing the metal shaft or green button to call the center, then the communication staff pans the closed-circuit television which is nearest to such SOS telephone to the location of such telephone. This enables the communication staff to monitor the calling site and simultaneously, sound and video recorders record the conversation between the motorist and the communication staff.

- **Variable Message Sign (VMS)**

The Company publicizes various information on traffic flow and significant events to motorists by VMS which are installed prior to various intersections on the Expressway.

## 2. Traffic Management

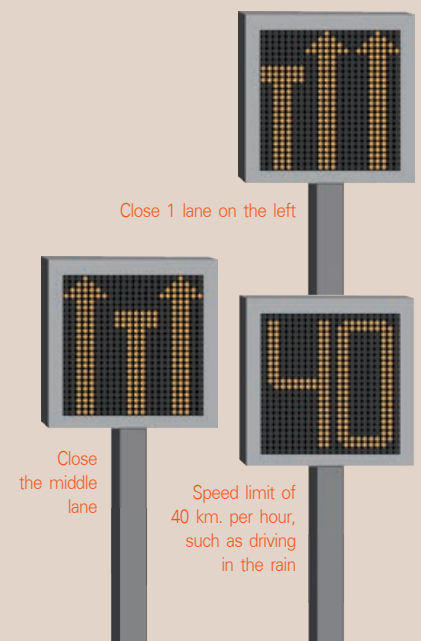
Traffic management is a routine operation that the Company coordinates with the Traffic Division, EXAT and the police officers at the Si Rat Expressway Police Station so as to ensure rapid and safe passage for motorists, especially at on-off ramps or at any areas with heavily congested traffic. The traffic management facilities comprise:

- **Traffic Signs**

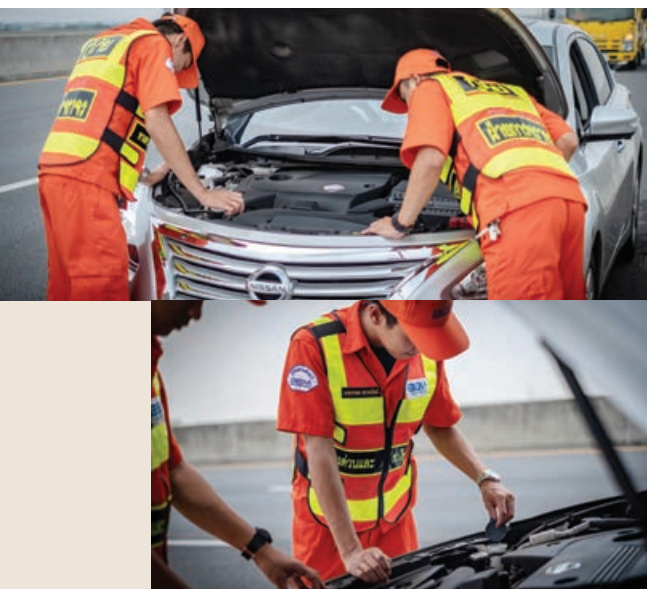
The Company has installed traffic signs to ensure the motorists' safe and careful use of the Expressway, namely, speed limits on the Expressway when it is raining or traffic direction indicators.

- **Weighing Stations**

The Company takes into account the safety of motorists by providing weighing station so as to control the weight limits in accordance with the legal standards. Any truck loaded in excess of the weight limit will not be allowed to enter the Expressway.







### 3. Rescue and Trailer Services

Should any motorist encounter any accident or engine trouble on the Expressway, the rescue staff will help repair the engine to working condition or if it is unable to be repaired, the staff will help tow such vehicle on the Expressway to exit at the nearest off ramp without any expense, except for:

- **Fuel Cost**

Should the vehicle be out of gas, the staff will refuel the vehicle to enable such vehicle to exit the Expressway and reach a gas station whereby the rate of gas to be charged at the market rate which is merely approximately Baht 100.- on average.

- **Chemical Powder Cost**

Should any vehicle encounter any problem causing oil to leak onto the road, it is necessary for the staff to apply chemical powder to clean up such oil spill for the safety of other motorists.

## Useful Telephone Numbers

### Accident / Breakdown Car / Traffic Information

Tel. 1543 / 66 (0) 2664 6400

### Chalerm Mahanakorn Expressway Control Center

Tel. / Fax. 66 (0) 2240 0709

### Si Rat Expressway Control Center

Tel. 66 (0) 2664 6400 / Fax. 66 (0) 2247 1994  
66 (0) 2248 7574-6 /  
66 (0) 2641 4611 ext. 7007

### Si Rat - Outer Ring Road Expressway Control Center Building (CCB7)

Tel. 66 (0) 2555 0255 Fax. 66 (0) 2555 0281

### Chalong Rat Expressway Control Center

Tel. 66 (0) 2319 9730-9 ext. 4610-11 Fax. 66 (0) 2319 9730-9 ext. 4623

### Udon Ratthaya Expressway Control Center

Tel. 66 (0) 2567 5700 ext. 7171 / Fax. 66 (0) 2567 5700 ext. 7155  
66 (0) 2567 5680

### Buraphawithi Expressway Control Center

Tel. 66 (0) 2746 9800-4 ext. 5501 Fax. 66 (0) 2746 9799  
66 (0) 2746 9799

### Kanchanaphisek Expressway Control Center (Bang Phli Suk Sawat)

Tel. 66 (0) 2442 0876-7 Fax. 66 (0) 2442 0899

### Chalerm Mahanakorn Expressway Police Station

Tel. 66 (0) 2249 8007 Fax. 66 (0) 2249 8007 /  
66 (0) 2240 0147

### Si Rat Expressway Police Station

Tel. / Fax. 66 (0) 2248 6891-5

### Si Rat - Outer Ring Road Expressway Police Station

Tel. 66 (0) 2555 0275 Fax. 66 (0) 2555 0281

### Udon Ratthaya Expressway Police Station

Tel. 66 (0) 2567 5682-3

### Bangkok Expressway and Metro Public Company Limited Branch Office (1) Expressway Business

Tel. 66 (0) 2641 4611 Fax. 66 (0) 2641 4610

### Expressway Authority of Thailand

Tel. 66 (0) 2579 5380-9 / Fax. 66 (0) 2561 2984 /  
66 (0) 2558 9800 66 (0) 2579 8737

## The Opening Ceremony of the M.R.T. Chaloem Ratchamongkhon Line Project, Hua Lamphong - Bang Khae Section



### Press Conference for the Public Demonstration run of the M.R.T. Chaloem Ratchamongkhon Line Project, Hua Lamphong – Bang Khae Section

On July 18, 2019, Mr. Pakapong Sirikantaramas, Governor of the Mass Rapid Transit Authority of Thailand, Mr. Sombat Kitjalaksana, Managing Director of Bangkok Expressway and Metro Public Company Limited, held the press conference for the Public Demonstration run of the M.R.T. Chaloem Ratchamongkhon Line Project, Hua Lamphong – Bang Khae Section, at Sanam Chai Station, and then, a group of executives of MRTA and BEM brought press medias to take a Public Demonstration run of the M.R.T. Chaloem Ratchamongkhon Line Project, Hua Lamphong – Bang Khae Section, from Sanam Chai Station to Tha Phra Station, together with notice of a schedule for a Public Demonstration run.



### The Opening Ceremony for the Public Demonstration run of the M.R.T. Chaloem Ratchamongkhon Line Project, Wat Mangkon Station - Tha Phra Station

On July 29, 2019, Mr. Saksayam Chidchob, Minister of Transport, presided over the opening ceremony for the Public Demonstration run of the M.R.T. Chaloem Ratchamongkhon Line Project, Hua Lamphong - Bang Khae Sections, at Sanam Chai Station. And then, Mr. Saksayam Chidchob, Minister of Transport, accompanied by a group of executives of the Ministry of Transport, MRTA and BEM, together with business alliances, took a trial ride of the M.R.T. Chaloem Ratchamongkhon Line from Sanam Chai Station to Tha Phra Station.

### The Official Opening Ceremony of the M.R.T. Chaloem Ratchamongkhon Line Project, Hua Lamphong – Bang Khae Section

On September 30, 2019, General Prayut Chan-ocha, the Prime Minister, presided over the official opening ceremony of the M.R.T. Chaloem Ratchamongkhon Line Project, Hua Lamphong – Bang Khae Section, accompanied by Mr. Anutin Charnvirakul, Deputy Prime Minister, General Anupong Paochinda, Minister of Interior, Mr. Saksayam Chidchob, Minister of Transport, Mr. Chaiwat Thongkamkoon, Permanent Secretary for the Ministry of Transport, Mr. Sarawut Songsivilai, Director-General of the Department of Rail Transport, Mr. Disathat Hotrakit, the Prime Minister's Secretary, Police General Aswin Kwanmuang, Governor of Bangkok, Mr. Pakapong Sirikantaramas, Governor of the Mass Rapid Transit Authority of Thailand, with Mr. Plev Trivisvavet, Chairman of the Executive Board of Bangkok Expressway and Metro Public Company Limited, along with a group of executives of the Ministry of Transport, MRTA, and BEM, participating in the ceremony at Tha Phra Station, Bangkok Yai District, Bangkok.





## The Opening Ceremony for the Public Public Demonstration run of the M.R.T. Chaloem Ratchamongkhon Line Project, Tao Poon - Tha Phra Section

On December 23, 2019, Mr. Saksayam Chidchob, Minister of Transport, presided over the opening ceremony for the public Public Demonstration run of the M.R.T. Chaloem Ratchamongkhon Line Project, Tao Poon – Tha Phra Section, at Tha Phra Station, and then, Mr. Saksayam Chidchob, Minister of Transport, accompanied by a group of executives of the Ministry of Transport, MRTA and BEM, took a trial ride of the MRT Blue Line from Tha Phra Station to Tao Poon Station.

## Cooperation and Activities within the MRT System



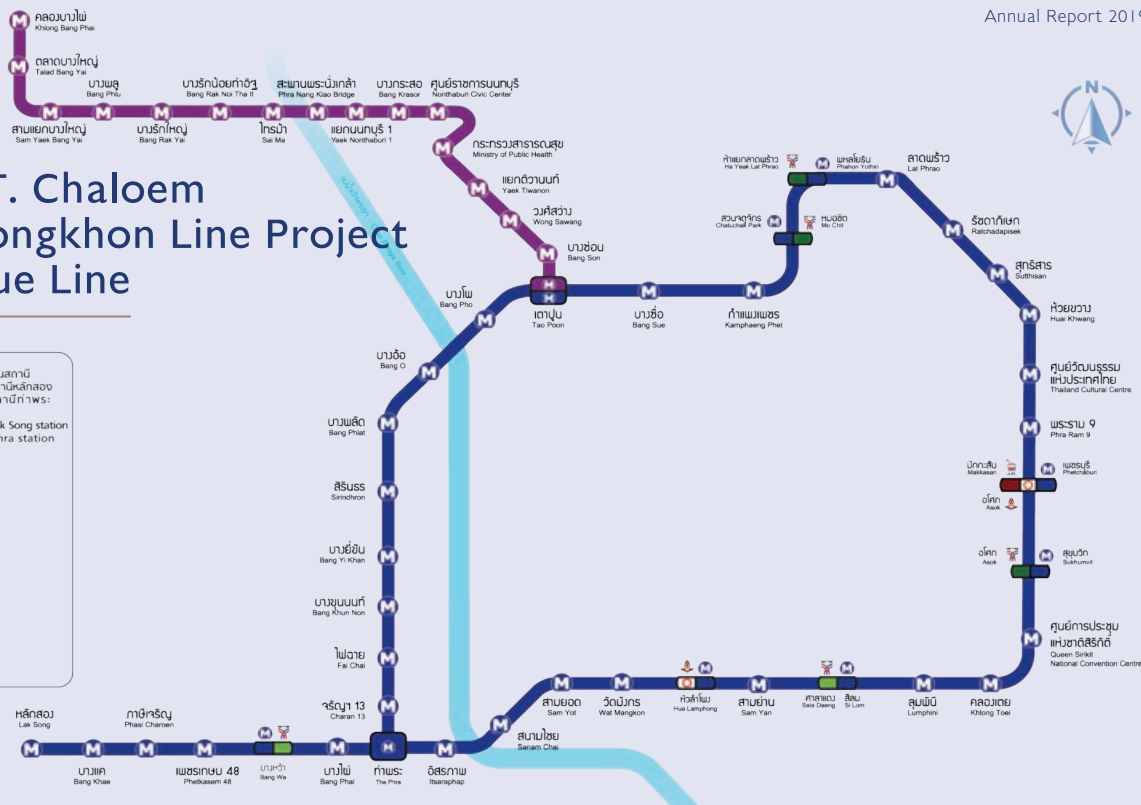
## The Signing Ceremony of Memorandum of Understanding for Cooperation to Promote Tourism by Using Public Transport System

On November 21, 2019, TAT signed the cooperation with MRTA and BEM outlining the invitation to visit the city with convenience, safety, care for pollution reduction, and experience the distinctive landmarks adjacent to new four MRT stations where everyone can come to visit, with Mr. Yuthasak Supasorn, Governor of the Tourism Authority of Thailand (TAT), Mr. Pakapong Sirikantaramas, Governor of the Mass Rapid Transit Authority of Thailand (MRTA), and Mr. Sombat Kitjalaksana, Managing Director of Bangkok Expressway and Metro Public Company Limited (BEM) participating in the signing of the MOU for cooperation in promotion of tourism by using the MRT Blue Line system, at Sanam Chai Station, to travel to the famous tourist attractions of both Phra Nakhon side and Thon Buri side passing the new four MRT stations, which would facilitate accessible tourism for all to ensure rapidity, safety in their travelling.



## Book Journey at MRT X'mas Fest 2019 for Two Consecutive Year

On December 24-25, 2019, Bangkok Expressway and Metro Public Company Limited or BEM in association with Bangkok Metro Networks Limited organized the Book Journey at MRT X'mas Fest 2019 No. 2 activity, presided over by Mr. Pakapong Sirikantaramas, Governor of the Mass Rapid Transit Authority of Thailand, accompanied by Mr. Alvin Gee, Deputy Managing Director of Bangkok Expressway and Metro Public Company Limited and Mr. Nattavut Trivisvavet, Managing Director of Bangkok Metro Networks Limited, who also took part in a slot activity, organized at Metro Mall at Chatuchak Park Station, (Exit No. 3.), to select a book from the Christmas tree as giveaways, in which the MRT passengers were welcomed to participate to pick up giveaways of more than 3,500 books from over 10 publishing presses and also to be qualified to obtain a special set of books.



## Wat Mangkon Station

On Charoen Krung Road which is intersected by Phlappha Chai Road and Plang Nam Road at Yaek Plang Nam Intersection, with the station's design and interior architecture decoration in the Chinese-Portuguese or Sino-Portuguese style to be in harmony with the environment surrounding the station, reflecting the Chinese community in the Chinatown area, and with the inspiration of the decoration concept coming from Wat Mangkon Kamalawat which has been decorated with pictures of dragons and lotus flowers.

## Sam Yot Station

On Charoen Krung Road which is intersected by Mahachai Road at Sam Yot Intersection until reaching Charoen Krung Road crossing with Unakan Road and Burapha Road. The inside station was decorated with the ancient architecture in the reign of King Rama V, with the construction of three entrances to the station, and its surrounding wall being cemented as the folding doors to be in harmony with the buildings and houses nearby.



## The M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line) divided into three phases:

The total distance of 48 kilometers, with 38 stations, comprising:

- Hua Lamphong – Bang Sue Section, covering a distance of 20 kilometers, with 18 stations, as the first underground station of Thailand;
- Hua Lamphong – Bang Khae Section, covering a distance of 16 kilometers, with 11 stations, whose structure is mixed between underground and elevated rails.
- Bang Sue – Tha Phra Section, covering a distance of 12 kilometers, with 9 stations, which is the entire elevated structure.

## The M.R.T. Chalong Ratchadham Line Project (MRT Purple Line)

Bang Yai - Bang Sue Section, covering a total distance of 23 kilometers, which is the entire elevated rail, with 16 stations, starting from Khlong Bang Phai Station to Tao Poon Station, which is the interchange station with the M.R.T. Chaloem Ratchamongkhon Line (MRT Blue Line).



**Sanam Chai  
Station**

### Location

On Sanam Chai Road which is intersected by Phra Phiphit Road to Sanam Chai Road crossing with Rachini Road in the area of Khlong Khu Mueang Doem. Sanam Chai Station has been known as the most exquisite MRT station in Thailand, designed by Assoc. Prof. Dr. Pinyo Suwankiri, the National Artist as the Master in Thai Architecture, with the early-Rattanakosin-era architecture in its interior decoration, where pillars with tiles in Pikul flower pattern are installed and the ends of the pillars were decorated with Jongkon lotus; the ground floor and walls were modeled from the ancient city walls; with the stenciled ceiling in a moon surrounded by stars pattern, having a feel for a reception hall in the Rattanakosin era.



**Itsaraphap  
Station**

### Location

Soi Itsaraphap 23 until Soi Itsaraphap 34, which is the first underground station on the Thonburi side, with its design being inspired by “Swan”, a sacred and holy animal which is symbolic of “Wat Hong Rattanaram Ratchaworawihan”.

# Mass Rapid Transit & Commuter Train Network

## สัญลักษณ์ Legend

- 1 รถไฟ การรถไฟแห่งประเทศไทย  
State Railway of Thailand
- 2 รถไฟฟ้ามหานคร สายสีเขียวยาว (สายสีลม)  
Light Green Line (Si Lom Line)
- 3 รถไฟฟ้ามหานคร สายสีเขียวยาว (สายสุขุมวิท)  
Dark Green Line (Sukhumvit Line)
- 4 รถไฟฟ้ามหานคร สายสีน้ำเงิน  
Blue Line
- 5 รถไฟฟ้ามหานคร สายแอร์พอร์ต เรล ลิงก์  
Airport Rail Link
- 6 รถไฟฟ้ามหานคร สายสีม่วง  
Purple Line
- 7 รถไฟฟ้ามหานคร สายสีทอง  
Gold Line
- 8 รถไฟฟ้ามหานคร สายสีชมพู  
Pink Line
- 9 รถไฟฟ้ามหานคร สายสีแดงเข้ม  
Dark Red Line
- 10 รถไฟฟ้ามหานคร สายสีชมพู  
Pink Line
- 11 รถไฟฟ้ามหานคร สายสีเหลือง  
Yellow Line
- 12 รถไฟฟ้ามหานคร สายสีส้ม  
Orange Line

## สถานีเชื่อมต่อการเดินทาง Interchange Stations



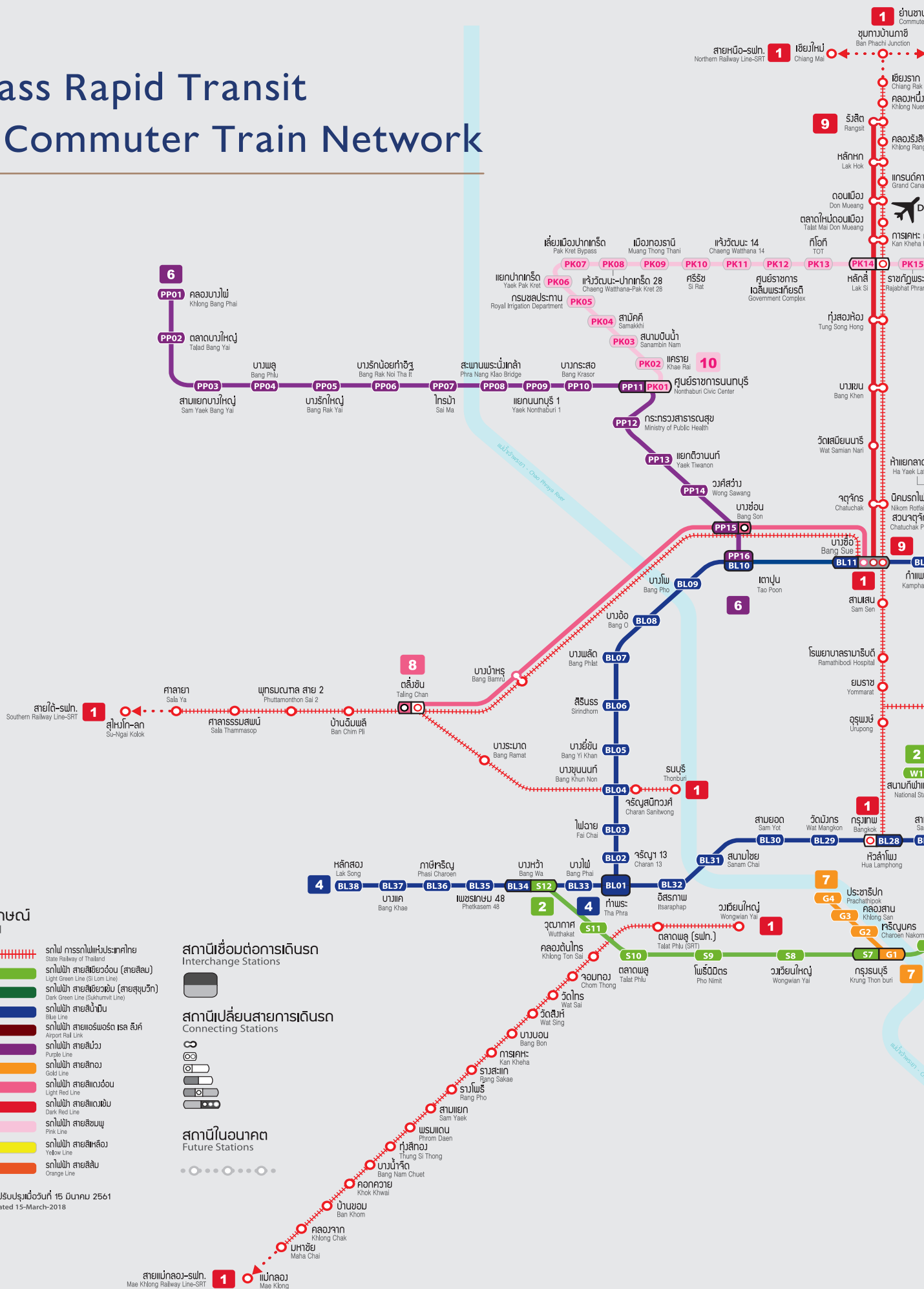
## สถานีเปลี่ยนสายการเดินทาง Connecting Stations



## สถานีในอนาคต Future Stations



ฉบับที่ 1 : ปรับปรุงเมื่อวันที่ 15 มีนาคม 2561  
Ver 1 : Updated 15-March-2018







## MRT Safety Activities

### The Safety Share Safety All On Tour 2019 within the MRT Blue Line, MRT Purple Line and MRT Blue Line Extension Stations



The Safety Share Safety All On Tour 2019

### Activities with Internal and External Agencies,



The Children's Day Activity to Acquaint Children with Information on Safety in Using the MRT



The M Care Activity to Acquaint Passengers with Information on Safety in Using the MRT

### Incident Management Drills within the MRT System

Including drills under the risk management plan and the incident action plan for the rail transport system, conducted by the Transport Safety Operation Center (TSOC) on February 23, 2019.



Drills under the Risk Management Plan and the Incident Action Plan for the Rail Transport System

The service with safety is always top priority of BEM under our mission by making public relations to acquaint and give the passengers to understand how to properly and safely use the MRT system on a continuous basis via various channels, and organizing activities within the stations to ensure the continuity in operations and to promote knowledge and understanding of the requirements for safety of the passengers in order to help reduce a chance of potential accidents of the MRT passengers and to be in line with the expansion of the train operation routes, which included:

### Media About Safety

via Facebook, Twitter, Passenger Information Display (PID), and Digital Media within the MRT stations and trains.



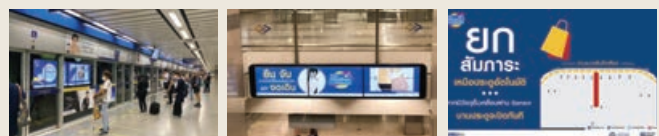
Improvement of Media within the MRT System Examples of the Public Promotion Media Published on Social Network (Facebook, Twitter)



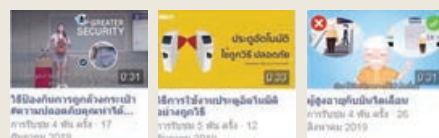
Media in the MRT Stations



Media in the MRT Trains



Media on PID and Digital Media



Animation Clips

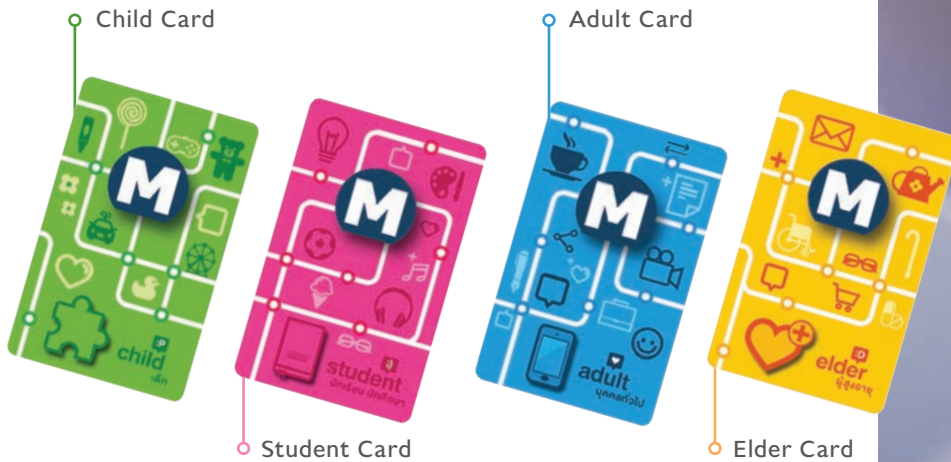




## MRT Tickets

### Faster and More Convenient Travelling with MRT Tickets

MRT tickets are available for travelling by both the M.R.T. Chaloom Ratchamongkhon Line (MRT Blue Line) and the M.R.T. Chalong Ratchadham Line (MRT Purple Line). There are four categories of the top-up MRT tickets, namely, Adult Card, Student Card, Elder Card, and Child Card, at an initial price of 180 Baht for purchase of a new card (100 Baht Fare Value; 500 Baht Deposit; and 30 Baht Issuing Fee).



### Business Traveller Card

The MRT cards are designed in a special front pattern as a souvenir card for various occasions or corporate customers in order to build a unique, distinctive business.

## Facilities for MRT Passengers



## Facilities for MRT Passengers



### Activities for Good Relationships with Passengers

**Privileges for MRT Cardholders** are provided to allow them to enjoy discounts when MRT tickets are topped up at the MRT Blue Line stations, including privileges offered by nearby restaurants and shopping malls.

For further details, please check out at <https://metro.bemplc.co.th/Privilege>



**MRT Lucky Hour 2019** activity which was organized to promote off-peak journeys by encouraging the MRT passengers of all types to travel by the MRT system before 07.00 a.m. on Monday-Friday for a chance to win rewards every month, with the total value of 2,274,000 Baht.

### Activities for Booths and Good Relationships with Passengers at MRT Blue Line Stations

The MRT passengers were invited to play games to obtain free souvenirs which brought impressive and happy smiles to them.



### Special Activities for MRT Club Members

For example, M Movie Fever, MRT Club members were invited to watch a movie premiere new movie, free of charge, at the Esplanade Ratchada and Grand EGV Seacon Bangkai, including enjoying fun activities to win tickets of DISNEY's The Lion King the musical.





BEM is not only committed to providing the MRT service, but also giving priority to the passenger care in the M.R.T. Chaloom Ratchamongkhon Line Project (MRT Blue Line) and the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line) for their convenience in use of the MRT services in various aspects, as follows:

#### CRD (Card Reader Device)

This is to increase the convenience channel for the passengers with CRD (Card Reader Device), which is functional like the Automatic Fare Collection Gate, both the Entry and the Exit Gates, to provide additional entries-exits to and from the MRT system during peak hours in the crowded stations so that the passengers can enter and leave the stations more quickly.

#### Arrow Symbols Marked on PSDs (Platform Screen Doors) and Facility Officers

They are arrow symbols to indicate the queuing lines waiting to board the trains which are marked on PSDs (Platform Screen Doors) that are barrier gates between the platform and the train, enabling the passengers standing in four queuing lines to board the train together per one door. During peak hours, the facility officers are provided to position at each platform to publicize and ensure security of the passengers while getting on and getting off, whereby the passengers are recommended to stand behind the yellow line to allow the alighting passengers inside the trains to get off first, and avoid obstructing operations of the electric train equipment and systems which may cause any service delay.



#### Emergency Buttons

▶ The emergency buttons are available inside passenger toilets and disabled toilets which are located on the concourse floor. In case of emergency, the passengers can press the emergency button or pull a rope as a signal for help in which the signal will sound in front of the room to notify the staff to rush to help immediately.



▶ The emergency buttons installed at the ticket offices are to be used if the passengers are inconvenient to walk through the automatic gates due to, such as, a large number of luggage, the elderly, children, pregnant women, and disabled people, including the passengers who encounter problems which are unable to log out the system, in which case, they can press the button at the ticket office to contact staff to request use of the special gate.



## Facilities for MRT Passengers



**M Shop products**, cute souvenirs from the MRT for collection and as a gift for various occasions, which can be ordered via the website <https://metro.bemplc.co.th/MRT-Shop> <https://metro.bemplc.co.th/MRT-Shop> or Bangkok MRT Application, including at M Shop Booths at MRT stations.

For further details on **M Shop** please contact at email: [mshopinfo@bemplc.co.th](mailto:mshopinfo@bemplc.co.th).



### Automated self-service machines ▲

More than 200 automated self-service machines installed within 18 MRT stations. For example, ATM, cash deposit machines, bank authentication machines, bill payment machines and automatic vending machines, to serve the convenience of the users within the MRT system.



### Telecommunications ▲

From 2019, the telecommunications network are available as follows:

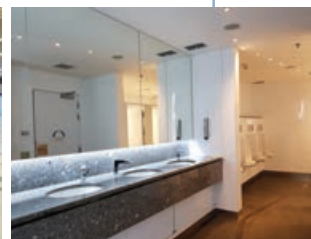
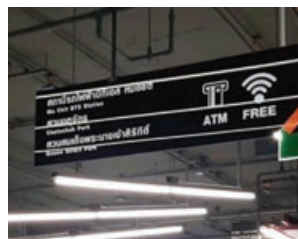
- Mobile phone service has been installed inside 7 stations from Tha Phra Station to Lak Song Station of the MRT Blue Line Extension.

### ▼ Metro Mall

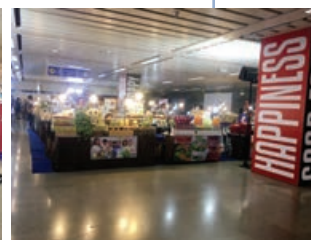
Metro Mall is opened for service at 8 MRT stations, namely, Kamphaeng Phet station, Chatuchak Park station, Phahon Yothin station, Phra Ram 9 station, Thailand Cultural Centre station, Sukhumvit station, Phetchaburi station, Khlong Toei station, from 6.30 a.m. - 9.00 p.m., and in the basement level of the Park & Ride Facility at Lat Phrao station where Gourmet Market is opened for service from 7.00 a.m. - 10.00 p.m.



▲ More than 150 shops available within the space of Metro Mall



▲ Facilities available within Metro Mall



▲ Great fair with special price

# Promotion and Campaign Activities for Using the MRT System in 2019



New Year's Day

The “MRT Extended Service Hours on New Year’s Day until 2 AM” activity was held on the occasion of the New Year’s Day, whereby service hours were extended from 06.00 a.m. on December 31, 2019 until 02.00 a.m. on January 1, 2020.



National Children's Day

The MRT Share Happiness by Giving Free MRT Ride to Children activity was held on the occasion of the National Children’s Day 2019 for children not taller than 140 centimeters to take the MRT ride for free on January 12, 2019 throughout the service hours.



Songkran Day

Activities on the occasion the Songkran Day, the National Elderly Day, and the Family Day, comprising two activities, as follows:

- The “Celebrating Songkran Day with MRT” activity was held to provide the MRT passengers an opportunity to make merit under the Thai tradition during April 10 - 16, 2019 for blessing by performing a pouring water on to statue at 9 MRT Blue Line stations, namely, Hua Lamphong Station, Si Lom Station, Sukhumvit Station, Phra Ram 9 Station, Thailand Cultural Centre Station, Lat Phrao Station, Phahon Yothin Station, Chatuchak Park Station, Bang Sue Station, and at 16 MRT Purple Line stations.
- “Free MRT Ride for Elderly (60+)” activity was held on April 13 - 15, 2019 by providing free rides for the elderly aged 60 or over throughout the service hours.



Royal Coronation Ceremony of King Rama X

MRT facilitated the people’s travelling during the royal coronation ceremony, by providing them with free MRT rides, both the MRT Blue Line and the MRT Purple Line, on May 5, 2019, throughout the service hours.



National Mother's Day

The “12 August, Free MRT Riding for Mom” activity was held to provide mothers with free MRT journeys on August 12, 2019 throughout the service hours.



Car Free Day

MRT took part in the global warming solution campaign in the “Bangkok Car Free Day 2019” activity by granting an exemption of fares to those who carried foldable bicycles to use the MRT system service on the MRT Blue Line and the MRT Purple Line on Sunday, September 22, 2019, throughout the service hours.



National Father's Day

The “5 December, Free MRT Riding for Dad” activity was held to provide fathers with free MRT journeys on December 5, 2019 throughout the service hours.



Royal Barge Procession

MRT facilitated the people’s travelling during the royal barge procession, by providing them with free MRT rides, both the MRT Blue Line and the MRT Purple Line, on December 12, 2019, throughout the service hours.



## Corporate Social and Environmental Activities



The Company has a policy and is determined to continuously take care of every sector of society in respect of the management of improved operational results, and creation of value added to shareholders, and giving priority to nearby communities as well as taking care of both nearby and remote communities. In 2019, the Company organized the corporate social and environmental contribution activities as follows:

### Activities for Development of Quality of Life on Safe Travelling

Driving cars by traffic rules and taking care of cars to ensure that they are in ready condition for travelling lie at the heart of helping prevent and reduce potential accidents on roads, including expressways, as well as ensuring the greater safety to motorists and their companions. The Company has therefore organized traveling safety promotion activities, as follows:

#### “Smart Drive” ▶

The Company provided the Smart Drive training to the general public on two occasions in order to promote safe driving, acquaint them with knowledge and techniques about methodical and accurate driving under traffic rules, solving immediate problems in case of emergency to help reduce potential accidents, including first aids for road accident victims by the emergency rescue unit, and provision of basic car care advice, together with taking them to make a site visit to the Si Rat - Outer Ring Road Expressway Control Center.





## Good Family Relationships



### ► “Moms & Kids Strengthen Relationships with BEM by Taking Mom on Trip, Enjoy Tea and Visit the Garden”

The family institution is regarded as the first basic unit which is of vital importance to the society, the Company is committed to playing a part in strengthening family relationships, and on the occasion of the National Mother's Day, the Company then held the good family relationship activity by taking the expressway service users' families to pay homage to Phra Buddha Devaraj Patimakorn at Wat Devaraj Kunchon Worawihan, and learn about floral culture at the Museum of Floral Culture, as well as doing activities to strengthen family relationships by making flower garlands for moms to allow kids to express the gratitude towards their moms in the midst of a heartwarming atmosphere.



### ► “Dads & Kids Strengthen Relationships with BEM by Taking Dads on Trip at Natural Classroom for Thai Herbal Learning”

To strengthen the family relationships, on the occasion of the National Father's Day, the Company then held the activity titled Dads & Kids Strengthen Relationships with BEM by Taking Dads on Trip at Natural Classroom for Thai Herbal Learning, at Sireeruckhachati Nature Learning Park in Nakhon Pathom Province, by taking the expressway service users' families to go on a trip by using the Si Rat - Outer Ring Road Expressway to jointly promote Thai wisdom and health care by learning about healthful herbs of different types, as well as doing activities to strengthen family relationships by jointly decorating beautiful herbarium cards for dads to allow kids to express the gratitude towards their dads in the midst of a heartwarming atmosphere.



### “BEM Let Lovers Save Phakhai Community” ►

The Company organized the activity titled “BEM Let Lovers Save Phakhai Community”, by inviting couples to go on a trip on the Si Rat - Outer Ring Road Expressway connected to the Si Rat Expressway heading to Chaeng Watthana along the Udon Rattaya Expressway to visit Ruean Manila at the Traditional Thai House Conservation Place in Amphoe Bangsai, Ayutthaya Province, to appreciate the unique exquisiteness of the traditional Thai houses and listened to a lecture about the interesting history, as well as jointly making the hand-made original Thai dessert, e.g., Kanom Khrok (Mortar-Toasted Pastry), Khov Griep Pag Mo (Steamed Rice Dumplings), at Baan Thanakan Rimnam, and took a boat trip to admire the spectacular natural scenery on both sides of Phakhai Community canal, in the midst of a cheerful and happy atmosphere.





## Good Relationships with Related Authorities

The cooperation for the provision of good services to meet the utmost satisfaction of the expressway users is regarded as a key goal of the three collaborating authorities, namely, staff of the Company, staff of EXAT, and police officers of the Expressway Police Station 2. To strengthen relationships among them in order to ensure unity and maximum efficiency of the services, the Company organized activities, as follows:



### ◀ “Let’s Watch Movie with Expressway”

The Company invited families of staff of EXAT and police officers of the Expressway Police Station 2 as well as families of the Company’s staff to meet, enjoy games, and watch a 3D movie titled “Captain Marvel”, the sci-fi action, at Esplanade Cineplex.



### “Let’s Admire Artworks Reflecting the National Heritage with BEM” ▶

The Company brought the management and staff of toll collection division of EXAT and toll collection division of the Company, to jointly pay homage to Phra Buddha Naruemon Dhanmopas and visit the Buddha image hall, the royal temple in the magnificent and remarkable architectural styles combined both Thai and Western arts at Wat Niwet Thamma Prawat, as well as visiting the Arts of the Kingdom Museum and enjoying the Khon Exhibition, as a marvelous cultural heritage of Thailand, at Kao Koet Royal Folk Arts and Crafts Center in Ayutthaya Province, in order to strengthen relationships among agencies.





## “Let’s Love Environment with BEM” ▶

The sustainable maintenance of the balance of nature and the environmental preservation must be given priority by everyone and required their concerted efforts to raise awareness of environmental preservation, the Company then organized the program titled **Let’s Love Environment with BEM**, by taking a group of executives and staff to jointly restore the mangrove ecosystem by helping repair the wooden bridges and disposing of garbage in the area of the mangrove forest at the Laem Phak Bia Environmental Study and Development Project under the Royal Initiatives, in Amphoe Ban Laem, Phetchaburi Province.



Awareness  
of Environmental  
**Preservation**



## ◀ “Mangrove Plantation to Build Relationships with MRT Lovers”

The Company, in association with the Mass Rapid Transit Authority of Thailand (MRTA), held the activity titled **“Mangrove Plantation to Build Relationships with MRT Lovers”**, by taking executives and staff to jointly plant 450 mangrove trees at Ban Khlong Khon Mangrove in Samut Songkhram Province to play a part in the environmental preservation together with restoration of Ban Khlong Khon Mangrove to ensure the habitat for aquatic species and shoreline protection to enable the local villages to make a living sustainably. This activity also encouraged staff to have the volunteering efforts in social and environmental responsibility.



## Promotion of Youth Learning



The youth are the vital force of the nation. An education represents a key foundation for the youth's sustainable development of knowledge, abilities, thoughts, and values in order to become decent and quality citizens of society, the Company then continues to encourage and support youth education every year through various activities as follows:



### ▲ “Scholarships to Adjacent Schools”

The Company organized the activity titled “BEM Grants Scholarships to Underprivileged Students with Good Academic Records and Funds for Development of 14 Schools adjacent to the Si Rat Expressway, the Udon Ratthaya Expressway and the Si Rat - Outer Ring Road Expressway”, to raise morale of the youth in studying hard and growing up as a quality adult for the country's development in the future.





Outdoor experience is an opportunity for children to fully gain experiences, which will help them to understand various things clearly and comprehensively, and be able to apply the gained knowledge to their life in the future. The Company thus organized outdoor learning experience activities as follows:

## Support for Outdoor Learning Experience

### National Children's Day 2019 Activities "Join Kids' Forces to Save the World"

The Company organized the National Children's Day activity titled **"Join Kids' Forces to Save the World"** to allow children to jointly accomplish the mission to save the world by showing their imagination through the invention of miracle cloth bags to reduce the use of plastic bags, and learning about correct waste separation for the environmental preservation, as well as enjoying a close-up experience with the expressway-sweeping trucks, with active participation of staff's children, students from schools adjacent to the expressways and nearby neighbors.



### ◀ "MRT Happy Children's Day 2019"

The Company, in collaboration with the Princess Mother Memorial Park, held an activity titled **"MRT Happy Children's Day 2019"** to deliver the happiness to children on the occasion of the National Children's Day in 2019 at the Princess Mother Memorial Park in Khlong San District, Bangkok, adjacent to the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line), Itsaraphap Station, in order to enhance learning experience and skills of children through various games, such as Safe Zone game, allowing children to practice the use of the MRT system in a correct and safe way, Let's Love Environment with MRT game, allowing children to practice the learning skills to raise their social responsibility awareness and participation by learning about categories of garbage, basic garbage separation, and Let's Grow Home-Grown Vegetable with MRT game, allowing children to practice the environmental preservation by learning how to plant trees and home-grown vegetables by themselves.



## Support for Outdoor Learning Experience

### “MRT Happy Blue Line” ▶

The Company held the activity to ensure recognition and public relations about the service opening of the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line), Hua Lamphong - Bang Khae Section, with a commitment of developing a group of youth, people and communities nearby the MRT route to ensure that they have learned about the correct and safe use of the MRT system, as well as learning about travelling on the MRT system; visiting four exquisite underground stations, namely, Wat Mangkon Station, Sam Yot Station, Sanam Chai Station, and Itsaraphap Station, which are elaborately designed and decorated with the Thai style architectures in the Rattanakosin era perfectly reflecting the arts, cultures, and livelihoods of communities nearby. The activity was divided into two phases, namely:



1. Activity for enhancement of learning skills about the MRT system, targeting at a group of students in the nearby schools to ensure the recognition and public relations among them about the service opening of the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line), Hua Lamphong - Bang Khae Section, included learning about the use of the MRT system via the “MRT Safety Share” activity, and acquainting them with the MRT routes via “Bangkok MRT Application”, as well as ending with the enjoyable games for winning many rewards.

2. Activity for public demonstration run on the MRT system, targeting at a group of students, and people in the nearby communities to visit four exquisite underground stations, namely, Wat Mangkon Station, Sam Yot Station, Sanam Chai Station and Itsaraphap Station, throughout July and September, from a total of 17 schools and 3 communities, and with a total of 2,885 participants.







## “Let’s Learn about the Earth’s Animals Dating Back Million Years at the Geological Museum” ▶

The Company brought a group of teachers and students, totaling 60 persons, from Wat Choeng Krabue School adjacent to the Si Rat - Outer Ring Road Expressway to visit the National Geological Museum Pathum Thani to learn about geology via modern technologies, allowing children to take a close-up look at the lost world dinosaurs as if they were alive, in order to promote children’s outdoor learning, which made children gain knowledge and enjoyable.

## ▼ “Let’s Admire Artworks Reflecting the National Heritage”



The Company brought a group of teachers and students, totaling 60 persons, from Wat Matchantikaram School adjacent to the Si Rat - Outer Ring Road Expressway to visit the Arts of Kingdom Museum and enjoy the Khon Exhibition, as a marvelous cultural heritage, learning about production process of scenes and characteristics of the Khon performing in the Thai literature, allowing students to gain knowledge and become aware of preservation of the Thai cultures and arts via outdoor experience at Kao Koet Royal Folk Arts and Crafts Center in Ayutthaya Province.

## “Making Dream Come True with Learning Center for Kids by BEM” ▶

The Company organized the activity titled “Making Dream Come True with Learning Center for Kids by BEM” under the policy to promote and develop the quality of life in terms of education to children and youth in educational institutions/communities adjacent to the MRT system to make it a ready place to serve as modern learning center to encourage Thai children to love reading and enhance physical development to ensure that they grow up to become a key force of the nation, by granting the learning and teaching equipment as suitable for their ages, scholarships, outdoor playground equipment for early childhood’s development. As well as organizing recreational activities and sponsoring luncheon to children, as welcomed by the representatives from both public and private sectors, including the Thonburi District Office, representatives from the Musjid Ban Somdej Community who participated in such activity at the Early Childhood Development Center, the Musjid Ban Somdej Community, Bangkok.





## Support for Other Social Activities



### ▲ “Thot Kathin Ceremony for 2019”

The Company jointly upheld the good culture and maintained the Buddhism by organizing the Thot Kathin Ceremony for 2019 at Wat Kamphaeng Bang Chak, Phasi Charoen District, Bangkok, adjacent to MRT Bang Phai Station, with the raised donations from executives, staff of the Company, MRT service users of both the M.R.T. Chaloom Ratchamongkhon Line Project (MRT Blue Line) and the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line), affiliates in CK Group, and business alliance. For the purpose of renovation of the arched gateways and boundary wall, as well as maintaining the Buddhism, together with contribution of scholarships to Wat Thong Sala Ngam School, located in the nearby communities of MRT Bang Phai Station, as scholarships for the underprivileged students.



### ▲ “Happy Smile Happy the Elderly”

The Company, in collaboration with Chaturamit Samphan Community, Thonburi District, Bangkok, a community adjacent to the MRT route, organized the activity titled “Happy Smile Happy the Elderly” to uphold the family institution and foster the good culture on the occasion of the Songkran Festivals and the National Elderly Day for 2019, by holding activities bathing rite for Buddha images and pouring water on the hands of the revered elderly and asking for blessing. As well as delivering a lecture on safety of use the MRT system for the elderly, sponsoring the luncheon, and ending with the recreational activities to bring the great happy smiles to the elderly in the community.







## “Activities on the Auspicious Occasion of the Royal Coronation Ceremony”

The Company organized the activities to celebrate the auspicious royal coronation ceremony of His Majesty the King Rama X, as follows:

### • Honorary exhibitions

From April 22 to July 31, 2019, which were held in commemoration of the royal grace of His Majesty the King Rama X towards the metro business of Thailand once he proceeded to graciously lay the foundation stone for the M.R.T. Chaloem Ratchamongkhon Line Project on November 19, 1996; together with exhibitions featuring his royal history, remarkable talents, and royal duties in various aspects, at Hua Lamphong Station of the M.R.T. Chaloem Ratchamongkhon Line. Moreover, BEM in alliance with Pid Thong Lang Phra Foundation under Royal Initiative held the exhibition titled “132 Royal Initiatives for Mitigating Sufferings of the People”.



### • Celebrative arches

At which well-wishing books were prepared to allow people to sign for extending their best wishes to His Majesty the King Rama X on the auspicious occasion of the royal coronation ceremony, held at Bangkok Expressway and Metro Public Company Limited and within the M.R.T. Chaloem Ratchamongkhon Line (MRT Blue Line) and the M.R.T. Chalong Ratchadham Line (MRT Purple Line) so that executives and staff, MRT passengers, including general public, jointly gave their blessings to the monarch from April to July 2019.

### • Volunteer activity

A group of executives and staff of the Company, along with CH. Karnchang Public Company Limited and the Mass Rapid Transit Authority of Thailand (MRTA) participated in the royal volunteer activity under the initiative “We Do Good By Heart”, by arranging for free food and beverage, which were jointly distributed by the executives and staff, together with first aids unit services at MRT Hua Lamphong Station, Lat Phrao Station, as well as providing the shuttle services to and from the waiting stops to facilitate the people’s travelling during such auspicious ceremony on May 4-6, 2019.



## Support for Other Social Activities

### ▼ Monetary and In-Kind Donations to Assist Disaster Victims



Monetary donation to flood victims under the project titled “Ruamjai Pi Nong Thai Chuai Phai Nam Tuam (Thai Hearts Together to Help the Flood Victims)”

Bangkok Expressway and Metro Public Company and CH. Karnchang Public Company Limited jointly made the monetary donation under the project titled “Ruamjai Pi Nong Thai Chuai Phai Nam Tuam” on 9 MCOT HD Channel which conducted fundraising for relief of the flood victims in Ubon Ratchathani Province.

### Monetary donation to storm victims under the project titled “Ruam Namjai Thai Chuai Watapai Tai (Thai Hearts Together to Help the Storm Victims)”

Bangkok Expressway and Metro Public Company Limited and CH. Karnchang Public Company Limited jointly made the monetary donation through the OPM Disaster Relief Fund under the project titled “Thai Hearts Together to Help the Storm Victims”, to assist the victims suffered from Tropical Storm Pabuk in the southern part of Thailand.



Activities for

## Development of Quality of Life on Public Health



### ◀ “M Care Activity”

The Company, in association with more than 10 hospitals and business alliances, organized the activities for health and public health promotion of communities through holding exhibition booths to provide free health checkup services by conventional medicine and alternative medicine, and to provide knowledge relating to health and safety of correct use of the MRT system to MRT passengers, residents surrounding the MRT routes, including nearby communities, comprising health checkup service by conventional medicine, namely, monitoring blood pressure, blood glucose test, pulmonary function test, screening for hepatitis B/C, exercise stress test, oral and dental checkup, initial visual test, demonstrating the Cardiopulmonary Resuscitation and choking first aid (CKP and Choking), demonstrating the use of AED, first aid as well as providing knowledge and suggestions by health specialists about breast cancer, health checkup service by alternative medicine, integrative medicine, and traditional Chinese medicine, namely, providing initial health checkup together with health care suggestion as well as providing service of body massage therapy on the physiological basis. Such activities were held at MRT Chatuchak Park Station and Bang Wa Station, with active participation witnessed by more than 1,500 participants.



# I. Business Policy and Overview

Bangkok Expressway and Metro Public Company Limited (the “Company”) was incorporated from the amalgamation, pursuant to the Public Limited Company Act, between Bangkok Expressway Public Company Limited (“BECL”) and Bangkok Metro Public Company Limited (“BMCL”) on December 30, 2015, and the Company has assumed all assets, rights, duties and responsibilities of both companies by operation of law. As of December 31, 2019, the Company’s registered and paid-up capital amounted to Baht 15,285,000,000 divided into a total of 15,285,000,000 ordinary shares, at the par value of Baht 1 per share.

The Company’s main businesses are the provision of the expressway and metro services, including commercial development relating to the expressway and metro systems, which will lay a foundation for business expansion through future extension of the routes and the service network, both in the expressway and metro systems, thereby enabling the Company to be a leading mass rapid transit and transportation service operator in Thailand and in the region. Moreover, the Company may extend its businesses to other fast-growing businesses with good returns, such as other infrastructure projects, commercial development or real estate development, both at home and abroad, etc.

## 1.1 Vision, Mission, Goals, Business Strategies and Business Overview

### Vision

The Company’s vision is to become a leading, fully-integrated transportation service provider in Thailand and ASEAN.

### Mission

The Company is committed to:

1. Providing services of the expressway and metro systems with safety, convenience, rapidity, reliability, punctuality, and efficiency, in order to improve the quality of people’s lives;
2. Improving the quality and efficiency of the modern and full-service transportation network in order to alleviate traffic problems, preserve the environment, and improve society and the country;
3. Creating value-added and utmost benefit to shareholders based on fairness to all stakeholders.

### Goals and Business Strategies

To achieve the Company’s objectives and mission, the Company has formulated major strategies in its business operations, as follows:

1. To invest in the transportation system projects, expressway and connecting road projects, metro system projects, and related projects under the government policy for public-private partnership (PPP) in respect of infrastructure, including related business, such as, various commercial development, taking into consideration the projects which are beneficial to society and the country, with reasonable business yields;
2. To strengthen the businesses by generating revenues for continued growth, and managing costs and expenses efficiently, in order to maintain good financial standing;
3. To build relationships with stakeholders through the corporate social responsibility process and communicate with internal and external personnel about it;
4. To develop personnel ready for the provision of quality services of the expressway and metro systems;
5. To build social recognition of the corporate good image.



## Business Overview of the Company

The Company is committed to being a leading, fully-integrated transportation service provider, which builds up a good journey for a better living. The Company's businesses comprise the provision of the expressway and metro services, including commercial development directly related to the main businesses. The Company's business overview is as follows:

### 1.1.1 Expressway Business

The Company and one of its subsidiaries, namely, Northern Bangkok Expressway Company Limited ("NECL"), have obtained concessions from the Expressway Authority of Thailand ("EXAT") for construction and operation of a total of four expressways, comprising:

#### 1) The Si Rat Expressway (Sectors A, B, and C)

The Si Rat Expressway (Second Stage Expressway) (Sectors A, B, and C) under the Second Stage Expressway Agreement with the Expressway Authority of Thailand ("EXAT") for a concession period of 30 years from March 1, 1990, comprising 3 Sectors, namely, Sector A (Rama 9-Ratchadapisek), Sector B (Phayathai-Bangkhlo), and Sector C (Ratchadapisek-Chaeng Watthana), covering a total distance of 29.8 kilometers.

#### 2) The Si Rat Expressway (Sector D)

The Si Rat Expressway (Sector D) is under the Agreement for the Extension of the Second Stage Expressway System (Sector D), with EXAT, for a concession period of 30 years from April 22, 1997. The route starts from Rama 9 Road to Srinagarindra Road, with a connection to Sector A at Rama 9 Road eastward to cut across Ramkhamhaeng Road and to end at Srinagarindra Road, covering a distance of 8.7 kilometers.

#### 3) The Si Rat - Outer Ring Road Expressway

The Si Rat - Outer Ring Road Expressway under the Concession Agreement for Investment, Design, Construction, Operation, Service, and Maintenance of the Si Rat - Outer Ring Road Expressway Project, with EXAT for a concession period of 30 years from December 15, 2012. The route starts from the Outer Ring Road (Khanapisek Road around Mahasawat Water Treatment Plant) heading eastbound along the right of way of the existing Southern railway, crossing the Chao Phraya River around the Rama VII Bridge, ending around Bang Sue Grand Station (Chatuchak), connecting with the Si Rat Expressway around the Bus Terminal (Mo Chit 2), running down to at-grade level around Kamphaeng Phet 2 Road, covering a total distance of 17 kilometers. The connection to the north heading to Chaeng Watthana was opened for service on September 30, 2018.

#### 4) The Udon Rattaya Expressway

The Udon Rattaya Expressway (Bang Pa-in - Pak Kret Expressway), operated by NECL under the Bang Pa-in - Pak Kret Expressway Agreement with EXAT for a period of 30 years from September 27, 1996, comprising 2 Stages, namely, Stage 1, Chaeng Watthana - Chiang Rak, and Stage 2, Chiang Rak - Bang Sai, connecting to the Si Rat Expressway around Chaeng Watthana Road, covering a total distance of 32 kilometers.

### 1.1.2 Rail Business

The Company has obtained concessions for the operation of two mass rapid transit rail system projects from the Mass Rapid Transit Authority of Thailand (“MRTA”), namely:

- 1) The M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line), by investment on a PPP Net Cost basis, whereby MRTA invests in all civil works and the Company shall supply, install the M&E Equipment, and provide the operation and maintenance services. The Company is entitled to farebox revenue and undertaking activities and commercial development, including advertising, leasing space and telecommunications services in the metro stations and in the trains of the MRT Blue Line for a period of 30 years from the date on which the whole MRT Blue Line is opened for full service, consisting of:
  - Hua Lamphong - Bang Sue Section, which is the first underground metro project of Thailand, covering a total distance of 20 kilometers, with 18 underground stations, opened for train operation service on July 3, 2004;
  - Hua Lamphong - Bang Khae Section, which is the underground and elevated route, covering a total distance of 16 kilometers, with 11 stations; and Bang Sue - Tha Phra Section, which is the entire elevated route, covering a total distance of 12 kilometers, with 9 stations, divided into 3 phases during the installation of the M&E Equipment for service opening, namely, Phase 1: Bang Sue Station - Tao Poon Station, opened for service on August 11, 2017; Phase 2: Hua Lamphong Station - Lak Song Station, opened for service on September 29, 2019; and Phase 3: Tao Poon Station - Tha Phra Station, to be opened for service by March 2020.

The M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line) has connected to the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line) at Tao Poon Station.

- 2) The M.R.T. Chalong Ratchadham Line Project or the MRT Purple Line Project, Bang Yai - Rat Burana, Bang Yai - Bang Sue Section (Klong Bang Phai Station - Tao Poon Station), Contract 4: Concession for Supply of M&E Systems and O&M Services, on a PPP Gross Cost basis, whereby MRTA invests in all civil works and the Company invests in the M&E Systems and the rolling stocks, as well as provides the operation and maintenance services in accordance with the specified service standards. MRTA is entitled to all farebox revenue and commercial development revenue from the utilization of the civil infrastructure and the railway systems and MRTA shall make a gradual repayment of the M&E Equipment to the Company on a monthly basis for a period of 10 years, and shall engage the Company for the O&M Services throughout the concession period of 30 years from September 4, 2013.

The M.R.T. Chalong Ratchadham Line Project (MRT Purple Line) is an elevated metro project, for a distance of 23 kilometers, with 16 stations and a connection to the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line) at Tao Poon Station, whereby the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line), was opened for service on August 6, 2016.

### 1.1.3 Commercial Development Business

The Company and one of its subsidiaries, namely, Bangkok Metro Networks Limited (“BMN”), operate the commercial development business of the MRT Blue Line Project, as follows:

- 1) Procurement and/or production of advertising media of various forms in the trains and metro stations;
- 2) Lease of retail spaces in the MRT Blue Line stations and spaces in the basement level of the Lat Phrao park and ride facility;
- 3) Provision of service and maintenance of telecommunications system equipment inside the metro stations.

In addition, as for the expressways, the Company and NECL have allowed private entities and individuals to use spaces for commercial operation for installation of Intelligent Traffic Signs and various advertising boards, including retail spaces around toll plazas, and other business activities, such as the use of the expressway areas for installation of 3G signal boosters, etc.



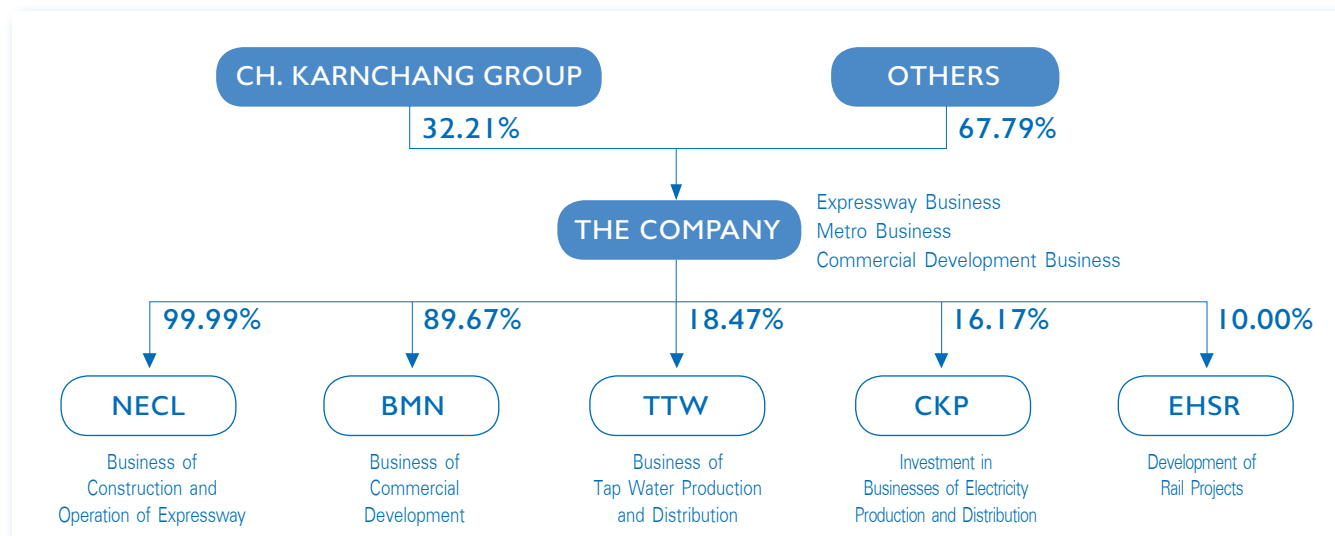
## 1.2 Significant Changes and Developments of the Company in 2019

March 18, 2019*	The Extraordinary General Meeting of Shareholders No. 1/2019 resolved to grant approval for the Company and the subsidiary to settle the disputes with EXAT by means of Amendment of the Second Stage Expressway Agreement, the Agreement for the Extension of the Second Stage Expressway System (Sector D), and the Bang Pa-in - Pak Kret Expressway Agreement, and in the case of any change in the agreement for settlement of the disputes, the Board of Directors shall be authorized to consider improvement, amendment in accordance with the results of the final negotiation and the resolution of the Council of Ministers.
March 27, 2019	The Company additionally purchased 5.08 million shares in Bangkok Metro Networks Limited (BMN), thereby rendering its shareholding percentage in BMN to 89.67 percent.
April 1, 2019	TRIS Rating Co., Ltd. reaffirmed the Company's rating at "A", with a "Stable" outlook.
April 29, 2019	The Company reclassified the investment in TTW Public Company Limited (TTW) to ensure consistency with the investment objective, thereby resulting in a decrease in its shareholding percentage in TTW to 18.47 percent.
May 9, 2019	The Company issued and offered for sale debentures No. 1/2019, with a maturity of 3-10 years, in the total amount of Baht 5,000 Million, at the fixed interest rate of 2.65 percent to 3.84 percent per annum, proceeds of which would be used for repayment of the matured existing debentures.
July 22, 2019	The Company received an "Excellent" rating with 98 scores in the assessment of the quality of the 2019 Annual Ordinary General Meeting of Shareholders (AGM Checklist) from the Thai Investors Association.
August 27, 2019	The Company received the Drive Award 2019 for Environment and Sustainability in Service Business, from MBA Chula Alumni, the Faculty of Commerce and Accountancy, Chulalongkorn University.
September 29, 2019	The Company opened for commercial service the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line), Section 2: Hua Lamphong Station to Lak Song Station, for 11 stations.
October 18, 2019	The Company received the Thailand Energy Awards 2019 in the category of energy conservation in transportation, showcasing its energy saving at national level, from the Department of Alternative Energy Development and Efficiency, Ministry of Energy.
October 24, 2019	Eastern High-Speed Rail Linking Three Airports Company Limited, with BEM holding its shares representing 10 percent of the registered capital, signed the Agreement for Joint Investment for the Hi-Speed Rail Linking Three Airports Project with the State Railway of Thailand.
October 28, 2019	The Thai Institute of Directors Association (IOD) announced the results of corporate governance survey of listed companies for 2019, in which the Company received the "Very Good" score level.
November 26, 2019	The Company was selected to enlist in Thailand Sustainability Investment 2019 for the third consecutive year as a listed company engaging in the businesses by taking into account environment, society and corporate governance.
December 23, 2019	The Company opened for the people to take free rides on the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line), Section 3: Bang Sue - Tha Phra Section, for 8 stations.

Remark: \* On February 18, 2020, the Council of Ministers' Meeting agreed to amend the Agreements for Settlement of the Disputes between the Company/the subsidiary and the Expressway Authority of Thailand (EXAT), and on February 20, 2020, the Company/the subsidiary and EXAT signed the Second Stage Expressway Agreement (Amendment) and the Bang Pa-in - Pak Kret Expressway Agreement (Amendment).

### 1.3 Shareholding Structure of Company Group

Chart of Shareholding Structure and the Company's Shareholding Percentage as of December 31, 2019



**Remark:** CH. Karnchang Group comprises  
1) CH. Karnchang Public Company Limited; and  
2) CH. Karnchang-Tokyu Construction Company Limited.

#### Investment in Subsidiaries and Other Companies

The Company has a policy on investment in businesses of infrastructure or businesses supporting the Company's operations and creating opportunity and long-term yields to the Company, including the sources of investment for future projects. The Company's investment as of December 31, 2019, was as follows:

#### 1) Names of Companies invested by the Company and its Shareholding Percentage

Unit: Million Baht

Names of Companies	Nature of Business	Registered Capital	Paid-up Capital	Shareholding Percentage	Investment Value at Cost
<b>Subsidiaries</b>					
Northern Bangkok Expressway Company Limited	Construction and operation of the Udon Ratthaya Expressway	6,000	5,250	99.99%	2,604
Bangkok Metro Networks Limited	Operation of the commercial development business	254	254	89.67%	495
<b>Other Companies</b>					
CK Power Public Company Limited	Investment by holding shares in other companies (Holding Company) operating business of electricity production and distribution	9,240	8,129	16.17%	2,929
TTW Public Company Limited	Tap water production and distribution	3,990	3,990	18.47%	4,061
Eastern High-Speed Rail Linking Three Airports Company Limited	Development of rail projects	4,000	4,000	10.00%	400



## 2) Details of Companies Invested by the Company

### Expressway Business

#### 1. Northern Bangkok Expressway Company Limited (“NECL”)

NECL’s registered capital amounts to Baht 6,000 Million, divided into 294 million ordinary shares and 306 million preferred shares, at the par value of Baht 10 per share, with the paid-up capital of Baht 5,250 Million. As of December 31, 2019, the Company’s shareholding was 99.99 percent of its registered capital. NECL entered into the Agreement with EXAT for construction and operation of the Udon Rattaya Expressway for a period of 30 years from September 27, 1996. The Udon Rattaya Expressway is northbound and continues from the Si Rat Expressway around Chaeng Watthana Road and passes Bang Phun, Chiang Rak and ends at Bang Sai.

### Commercial Development Business

#### 1. Bangkok Metro Networks Limited (“BMN”)

BMN has a total registered capital of Baht 254 Million, divided into 25.4 million ordinary shares, at the par value of Baht 10 per share, with the paid-up capital of Baht 254 Million. As of December 31, 2019, the Company’s shareholding in BMN was 89.67 percent of its registered capital.

The Company currently engages BMN to serve as its sole management representative for commercial development in the MRT Blue Line Project as operated by the Company and also entitles BMN to be its management representative for commercial development, namely, procurement and production of advertising media of various forms in the metro stations and trains, lease of retail spaces in stations of the M.R.T. Chaloem Ratchamongkhon Line Project and at the basement level of the park and ride facility at the Lat Phrao Station, as well as providing service and maintenance of telecommunications system equipment in the stations and tunnels.

### Other Infrastructure Businesses

#### 1. CK Power Public Company Limited (“CKP”)

CKP is a listed company on the Stock Exchange, operating its main business by investing in other companies (Holding Company) which operate the business of electricity production and distribution. CKP has a total registered capital of Baht 9,240 Million, divided into 8,129,382,039 ordinary shares, at the par value of Baht 1 per share, with the paid-up capital of Baht 8,129,382,039. As of December 31, 2019, the Company’s shareholding was 16.17 percent of its paid-up capital. CKP invests in companies operating the business of electricity production and distribution from three types of energy, namely, hydropower business, by investing in SouthEast Asia Energy Limited and Xayaburi Power Company Limited; thermal power business (cogeneration system), by investing in Bangpa-in Cogeneration Limited; and solar power business, by investing in Bangkhenchai Company Limited, Nakhon Ratchasima Solar Limited, and Chiangrai Solar Limited.

#### 2. TTW Public Company Limited (“TTW”)

TTW is a listed company on the Stock Exchange, having a total registered capital of Baht 3,990 Million, divided into 3,990 million ordinary shares, at the par value of Baht 1 per share, with the paid-up capital of Baht 3,990 Million. As of December 31, 2019, the Company’s shareholding was 18.47 percent of its registered capital. TTW operates the business of production and distribution of tap water to the Provincial Waterworks Authority in the areas of Nakhon Pathom Province and Samut Sakhon Province, under the Water Purchase and Sale Agreement with the Provincial Waterworks Authority for a period of 30 years from July 21, 2004. In addition, TTW invests in Pathum Thani Water Co., Ltd., representing 98 percent of its registered capital, which operates the business of tap water production and distribution in the areas of Pathum Thani and Rangsit, under the Water Purchase and Sale Agreement with the Provincial Waterworks Authority for a period of 25 years from October 15, 1998, and also invests in Thai Water Operations Company Limited, which operates the business of management and operation of tap water production and distribution systems and water treatment system, as well as invests in the energy business by holding shares in CKP representing approximately 25 percent of its registered capital.

### 3. Eastern High-Speed Rail Linking Three Airports Company Limited (“EHSR”)

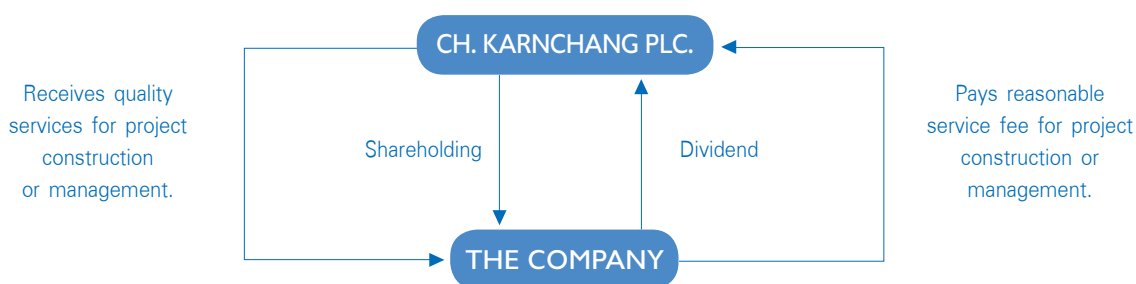
EHSR is a company established by CPH Group, with its registered capital of Baht 4,000 Million, divided into 40 million ordinary shares, at the par value of Baht 100 per share. As of December 31, 2019, the Company’s shareholding was 10 percent of its registered capital. EHSR carries out development of rail projects, design and construction works, civil work, in association with other projects, supply of the M&E Systems and rolling stocks, including provision of train operation and maintenance services, and development of areas supporting the rail services of the project for a period of 50 years (with the construction period of 5 years and operation period of 45 years).

## 1.4 Relationship with Business Alliance of Major Shareholder

CH. Karnchang Plc. is the Company’s major shareholder. As of December 31, 2019, CH. Karnchang Plc. was holding 4,787,121,829 shares in the Company, representing 31.32 percent of the Company’s paid-up capital. From the past until the present, the Company engaged CH. Karnchang Plc. for construction and operation of various projects, as CH. Karnchang Plc. is a large construction company in Thailand, with potential, knowledge, and expertise, and is thoroughly familiar with the civil infrastructure of the expressway and metro projects, as well as M&E Equipment. In addition, CH. Karnchang Plc. has experience in the contractual operations on a Lump Sum Turnkey basis, which enables it to deliver quality works timely, and is also the Company’s strategic investment partner, and as a result, CH. Karnchang Plc. has responsibility and commitment to operating the projects with success.

Therefore, in the future, it is possible that the Company will engage CH. Karnchang Plc. for project construction or management. However, in the execution of transactions with CH. Karnchang Plc., which may have a conflict of interest, the Company will comply with its policy on the execution of connected transactions per details as disclosed in Item 12. Connected Transactions.

Chart of Relationship with Business Alliance of Major Shareholder





## 2. Nature of Business Operations

The Company and its subsidiaries have operated the businesses as concessionaires awarded by the government sector, as follows: 1) concessionaires for the expressway construction and operation, namely, the Si Rat Expressway (Sectors A, B, and C), the Si Rat Expressway (Sector D), the Si Rat - Outer Ring Road Expressway and the Udon Rattaya Expressway; 2) concessionaires for operation of the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line) and the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line). Other than serving as the concessionaire, the Company has also operated the commercial development business pursuant to the relevant Concession Agreements. Currently, the revenue structure of the Company and its subsidiaries is set forth below.

(Unit: Million Baht)

Total Revenue Structure	Operated by	Shareholding Percentage of the Company	Consolidated Financial Information					
			For Year Ended December 31, 2019		For Year Ended December 31, 2018		For Year Ended December 31, 2017	
			Million Baht	%	Million Baht	%	Million Baht	%
<b>Revenue from expressway business</b>			<b>10,302</b>	<b>60.6 %</b>	<b>10,174</b>	<b>61.3 %</b>	<b>9,957</b>	<b>64.7 %</b>
Toll revenue	Company		8,852	52.1 %	8,718	52.5 %	8,573	55.7 %
Toll revenue	Subsidiary	99.99	1,450	8.5 %	1,456	8.8 %	1,384	9.0 %
<b>Revenue from rail business</b>			<b>5,022</b>	<b>29.5 %</b>	<b>4,736</b>	<b>28.6 %</b>	<b>4,521</b>	<b>29.3 %</b>
Farebox revenue and metro operation service charges	Company		5,022	29.5 %	4,736	28.6 %	4,521	29.3 %
<b>Commercial development revenue</b>			<b>783</b>	<b>4.6 %</b>	<b>705</b>	<b>4.2 %</b>	<b>675</b>	<b>4.4 %</b>
Commercial development revenue	Company		720	4.2 %	240	1.4 %	75	0.5 %
Commercial development revenue	Subsidiary	89.67	63	0.4 %	465	2.8 %	600	3.9 %
<b>Gain on sale of investments <sup>(1)</sup></b>			<b>181</b>	<b>1.1 %</b>	<b>499</b>	<b>3.0 %</b>	<b>12</b>	<b>0.1 %</b>
<b>Other income <sup>(2)</sup></b>			<b>707</b>	<b>4.2 %</b>	<b>477</b>	<b>2.9 %</b>	<b>228</b>	<b>1.5 %</b>
<b>Total revenues <sup>(3)</sup></b>			<b>16,995</b>	<b>100 %</b>	<b>16,591</b>	<b>100 %</b>	<b>15,393</b>	<b>100 %</b>

**Remarks:** <sup>(1)</sup> Gain on sale of investments includes gain on sales of investments in CKP, XPCL, TTW, and other temporary investments.

<sup>(2)</sup> Other income comprises interest income, gain on fair value adjustment of temporary investment.

<sup>(3)</sup> Gains on reclassification of investments in TTW and CKP in 2019 and 2018, respectively, are not included.

## 2.1 Nature of Business Operations of the Company

The Company is committed to be a leading, fully-integrated transportation service provider, which builds up convenient, rapid, reliable and safe journeys for a better living. The Company's businesses are composed of the expressway and metro system services, including commercial development business directly related to the main businesses. The Company's overall businesses are divided into three main sectors, as follows:

### 2.1.1 Expressway Business

#### 1) Nature of Services

The Company and one of its subsidiaries, i.e., Northern Bangkok Expressway Company Limited ("NECL"), have been granted concessions for construction and operation of a total of four expressways, namely, the Si Rat Expressway (Sectors A, B, and C), the Si Rat Expressway (Sector D), the Si Rat - Outer Ring Road Expressway, and the Udon Rattaya Expressway, as per the following details:

#### (1) The Si Rat Expressway (Sectors A, B, and C)

The Si Rat Expressway (Second Stage Expressway) under the Second Stage Expressway Agreement with the Expressway Authority of Thailand ("EXAT") for a concession period of 30 years from March 1, 1990.

The Si Rat Expressway is the first large-scale construction project in Thailand on the basis of public private partnership. This project is implemented on a BTO (Build Transfer Operate) basis, namely, the Company (formerly BECL) invested in the design, construction and operation of the Si Rat Expressway. In this regard, the title to various permanent constructions pertaining to or use of the Si Rat Expressway shall be vested in EXAT. This expressway comprises 3 Sectors, namely, Sector A (Rama 9 - Ratchadapisek), Sector B (Phayathai - Bangkhlo), Sector C (Ratchadapisek - Chaeng Watthana), covering a total distance of 29.8 kilometers. EXAT invested in the construction and operation of the Chalerms Mahanakorn Expressway (First Stage Expressway), covering a total distance of 27.1 kilometers. The Company has the right to receive toll revenue sharing in respect of the Chalerms Mahanakorn Expressway and the Si Rat Expressway in such proportions as specified in the Second Stage Expressway Agreement.

As for toll collection, expressway users shall pay tolls at the booths around the on-ramps of the Expressway. EXAT is responsible for the collection of all tolls and shares such toll revenue with the Company as specified in the Second Stage Expressway Agreement with effect from the Priority Component Opening Date. The toll revenue from the Chalerms Mahanakorn Expressway and the Si Rat Expressway shall be encompassed and shared as per rules of area zoning. This is to say that in the urban network, for the first nine years, the Company and EXAT shall receive the revenue sharing at 60 percent and 40 percent, respectively. For the last nine years, the Company and EXAT shall receive revenue sharing at 40 percent and 60 percent, respectively. As for the period between the first nine years and the last nine years, the Company and EXAT shall receive the revenue sharing at 50 percent each. For the suburban network, namely, the Si Rat Expressway (Sector C), all toll revenues shall belong to the Company throughout the period of the Agreement.

#### (2) The Si Rat Expressway (Sector D)

The Si Rat Expressway (Sector D) (Rama 9 - Srinagarindra) is under the Agreement for the Extension of the Second Stage Expressway System, Sector D, with EXAT, for a concession period of 30 years from April 22, 1997.

The Si Rat Expressway (Sector D) is implemented on a BTO (Build Transfer and Operate) basis, namely, the Company invested in design, construction and operation of the expressway system; however, the title to permanent constructions pertaining thereto shall be vested in EXAT, covering a distance of 8.7 kilometers. In this regard, the Company has the right to receive consideration from toll revenue as specified in the Agreement, and toll rates shall be revised under the same criteria as that of the Second Stage Expressway Agreement.

#### (3) The Si Rat - Outer Ring Road Expressway Project

The Si Rat - Outer Ring Road Expressway under the Concession Agreement for Investment, Design, Construction, Operation, Service, and Maintenance of the Si Rat - Outer Ring Road Expressway Project, with EXAT for a concession period of 30 years from December 15, 2012.

The Company has the duties to carry out design and construction, supply and installation of various equipment and systems, together with operation and maintenance of the expressway, including toll collection, in consideration of the right to receive toll revenue and other revenues (if any). The project is an elevated



six-traffic lane expressway, for a distance of 17 kilometers, with 10 toll plazas. The project's route starts from the Outer Ring Road (Kanjapisek Road around Mahasawat Water Treatment Plant) heading eastbound along the right of way of the existing Southern railway, crossing the Chao Phraya River around the Rama VII Bridge, ending around Bang Sue Grand Station (Chatuchak), connecting with the Si Rat Expressway to the north of the Mo Chit 2 Bus Terminal, and running down to at-grade level around Kamphaeng Phet 2 Road. Moreover, the Company opened the connection of the Si Rat - Outer Ring Road Expressway with the northern part of the Si Rat Expressway (heading to Chaeng Watthana) for service on September 30, 2018, in order to ensure the greater convenience in travelling to Chaeng Watthana and continuing along the Udon Rattaya Expressway. In this regard, the Company is responsible for investment and all operating expenses, as well as sharing returns with or providing benefits to EXAT as specified in the Agreement.

In management of this project, the Company is responsible to collect tolls and shall have the right to receive all toll revenue and other revenues (if any) throughout the concession period, whereby the toll rates and revisions shall be agreed upon in the Agreement.

(4) The Udon Rattaya Expressway

The Udon Rattaya Expressway (Bang Pa-in - Pak Kret Expressway) is operated by the subsidiary ("NECL") under the Bang Pa-in - Pak Kret Expressway Agreement with EXAT for a concession period of 30 years from September 27, 1996.

The Udon Rattaya Expressway is implemented on a BTO (Build Transfer Operate) basis like the Si Rat Expressway, namely, NECL invested in the design, construction, and operation of the Udon Rattaya Expressway, whereby the title to various permanent constructions pertaining to or use of the expressway shall be vested in EXAT, and EXAT is responsible to collect and deliver all tolls to NECL as specified in the Agreement. The Udon Rattaya Expressway comprises 2 Stages, namely, Stage 1, Chaeng Watthana - Chiang Rak, and Stage 2, Chiang Rak - Bang Sai, connecting to the Si Rat Expressway around Chaeng Watthana Road, covering a total distance of 32 kilometers. As for the inbound route, expressway users shall pay tolls at the booths around the on-ramps of the expressway while in respect of the outbound route, expressway users shall pay tolls at the off-ramps of the expressway. EXAT is responsible to collect and deliver all tolls to NECL. All toll revenue in respect of the Udon Rattaya Expressway shall belong to NECL.

2) The details of the expressway network connections are as follows:

Expressway Systems	Length (kilometers)	Constructed and Operated by
1. Chalerm Mahanakorn Expressway (First Stage Expressway) (Bang Na - Din Daeng - Dao Khanong)	27.1	EXAT
2. Si Rat Expressway (Second Stage Expressway) 2.1 Urban Network (Sectors A and B) (Prachachuen - Phayathai - Bangkhlo - Asoke) 2.2 Suburban Network (Sector C) (Prachachuen - Chaeng Watthana)	29.8	Company
3. Si Rat Expressway (Sector D) (Rama 9 - Srinagarindra)	8.7	Company
4. Udon Rattaya Expressway (Bang Pa-in - Pak Kret)	32.0	NECL
5. Uttaraphimuk Elevated Way (Don Muang Tollway)	28.0	Don Muang Tollway Public Company Limited
6. Chalong Rat Expressway including its Extension (Ramindra - At Narong and Ramindra - Outer Ring Road)	32.9	EXAT
7. Burapha Withi Expressway (Bang Na - Chonburi)	55	EXAT
8. Kanjanapisek Expressway (Bang Pli - Suksawad) and Highway No. 37 (Suksawad - Bang Khun Thien Section) including a connecting road to Bhumibol Bridge 1 and Bhumibol Bridge 2	37.8	EXAT
9. Si Rat - Outer Ring Road Expressway and Connection of the Si Rat - Outer Ring Road Expressway with the northern part of the Si Rat Expressway (heading to Chaeng Watthana)	16.7	Company
<b>Total Length</b>	<b>268</b>	

### 3) Toll Revenue Sharing

Effective from March 1, 2011, the Company and EXAT have received the toll revenue sharing in respect of the urban network at 40 percent and 60 percent, respectively, while the Company has received all toll revenues for the suburban network, in accordance with the terms of the Agreements.

Expressway	Network	Length (km.)	Opening Date	Revenue	Revenue Sharing Company : EXAT
<b>Chalerm Mahanakorn</b>					
Din Daeng - Port	Urban	8.9	January 4, 1981	Company and EXAT	- 60:40 for the first nine years
Bang Na - Port	Urban	7.9	January 17, 1983		- 50:50 for the period between the first nine years and the last nine years
Port - Dao Khanong	Urban	10.3	August 8, 1987		- 40:60 for the last nine years
<b>Si Rat</b>					
Sector A: Rama 9-Ratchadapisek	Urban	12.4	September 2, 1993	Company and EXAT	- 60:40 for the first nine years
Sector B: Phayathai-Bangkhlo	Urban	9.4	October 6, 1996		- 50:50 for the period between for the first nine years and the last nine years
					- 40:60 for the last nine years
<b>Sector C:</b>					
Ratchadapisek - Chaeng Watthana	Suburban	8.0	September 2, 1993	Company	- 100:0
<b>Si Rat (Sector D)</b>					
Rama 9 - Srinagarindra	Suburban	8.7	Section 1 December 2, 1998 Section 2 March 1, 2000	Company	- 100:0
Si Rat-Outer Ring Road	Suburban	17.0	August 22, 2016	Company	- 100:0
<b>Udon Ratthaya</b>					
Chaeng Watthana-Chiang Rak	Suburban	22.0	December 2, 1998	Subsidiary (NECL)	- 100:0
Chiang Rak - Bang Sai	Suburban	10.0	November 1, 1999		



## 4) Toll Rates

Expressway/Toll Plaza	Toll Rates (Baht/Trip)		
	4 wheels	6-10 wheels	More than 10 wheels
<b>Chalerm Mahanakorn Expressway (First Stage Expressway)</b>	50	75	110
Except: At Narong 1 Toll Plaza (to Bang Na)	40*	65*	100*
<b>Si Rat Expressway (Sectors A, B, and C) (Second Stage Expressway)</b>	50	75	110
Except: Prachachuen Toll Plaza (inbound)	60	90	140
Prachachuen Toll Plaza (outbound)	10	15	30
Prachachuen 1 Toll Plaza (from Prachachuen Road) Prachachuen 2 Toll Plaza (to Prachachuen Road) Ngam Wong Wan 1 Toll Plaza (outbound) Ngam Wong Wan 2 Toll Plaza (inbound)	15	20	35
<b>Si Rat Expressway (Sector D)</b>	25	55	75
<b>Si Rat - Outer Ring Road Expressway</b>	50	80	115
<b>Udon Ratthaya Expressway</b>	45	100	150
Except: Muang Thong Thani Toll Plaza	35*	90*	140*
Bang Pa-in Toll Plaza	55	120	180

Remark: \* This rate is the rate after Baht 10 discount for all types of vehicles.

The revision of the toll rates of the Chalerm Mahanakorn Expressway and the Si Rat Expressway is in accordance with the Second Stage Expressway Agreement, which shall be made every five years, and the calculation and revision shall be based on the most recent increase of the Consumer Price Index of Bangkok as issued by the Ministry of Commerce. Each increase shall be rounded up to the nearest whole multiple of Baht 5, provided that such revision shall not increase by more than Baht 10 during the first 15 years of the Contract Period. If there is an unusually high rate of inflation or an occurrence of Force Majeure or Exceptional Event, the Company and EXAT shall consider the toll revision as appropriate. The most recent revision of the toll rates was made on September 1, 2013. As for the revision of the toll rates in 2018, EXAT did not make such revision and continued to use the same toll rates as the year 2013.

The revision of the toll rates of the Si Rat - Outer Ring Road Expressway is in accordance with the Concession Agreement for Investment, Design, Construction, Management, Operation and Maintenance of the Si Rat - Outer Ring Road Expressway Project, which shall be made every five years from the date of service operation of the project for five years, at the rates of Baht 15, Baht 25 and Baht 35 for four-wheeled vehicles, six-wheeled to ten-wheeled vehicles; and more than ten-wheeled vehicles, respectively, as specified therein.

With respect to the Udon Ratthaya Expressway, the revision of toll rates every five years shall be based on the most recent increase of the Consumer Price Index of Bangkok as issued by the Ministry of Commerce. Each increase shall be rounded up to the nearest whole multiple of Baht 5, provided that such revision shall not increase by more than Baht 15 during the first 15 years of the Contract Period. The first toll revision was made on November 1, 2003, and the most recent revision of the toll rates was made on November 1, 2013. As for the revision of the toll rates in 2018, EXAT did not make such revision and continued to use the same toll rates as the year of 2013.

Despite EXAT's issuance of the Notifications of the Ministry of Transport with approval of the Deputy Minister of Transport in charge, namely, the toll rates for the Chalem Mahanakorn Expressway and the Si Rat Expressway were effective on September 1, 2018 and the toll rates for the Udon Rattaya Expressway were effective on November 1, 2018, the Company and one of its subsidiaries (NECL) were of the view that the revised toll rates under the said Notifications did not comply with the provisions of the relevant Agreements since they still remained the same rates as the year 2013 to which the Company and the subsidiary continued to object against EXAT.

## 5) Marketing and Competition of Expressway Business

- Customer Characteristics and Target Customers of Expressway Business

Target customers of the Chalem Mahanakorn Expressway, the Si Rat Expressway, the Si Rat - Outer Ring Road Expressway and the Udon Rattaya Expressway refer to those motorists who desire a convenient and rapid transportation or who desire to shorten the traveling distance to their destinations as well as to avoid the traffic congestion along the normal roads in Bangkok and its vicinity. The customers by the types of vehicles using the expressways may be divided into four-wheeled vehicles; six-wheeled to ten-wheeled vehicles; and more than ten-wheeled vehicles, which in 2019, accounted for 97.98 percent, 1.75 percent, and 0.27 percent, respectively. The traffic volume from January 1 to December 31, 2019, using the expressways may be described by areas as follows:

Expressway Systems	Average Traffic Volume (trips/day)	%
1. Chalem Mahanakorn Expressway (First Stage Expressway) (Bang Na - Din Daeng - Dao Khanong)	373,831	30.21
2. Si Rat Expressway (Second Stage Expressway)		
2.1 Urban Network (Sectors A and B) (Prachachuen - Phayathai - Bangkhlo - Asoke)	317,068	25.63
2.2 Suburban Network (Sector C) (Prachachuen - Chaeng Watthana)	187,663	15.17
3. Si Rat Expressway (Sector D) (Asoke - Srinagarindra)	203,168	16.42
4. Udon Rattaya Expressway (Bang Pa-in - Pak Kret)	91,253	7.38
5. Si Rat - Outer Ring Road Expressway	64,252	5.19
<b>Total Traffic Volume</b>	<b>1,237,235</b>	<b>100</b>

Given the fact that the provision of the expressway services is considered a form of public service for motorists requiring convenient, rapid and safe traveling, as target customers of the expressway systems, customers are broad depending on their destinations, residences, and workplaces. In this respect, the revenue of the expressway systems will not depend on any particular group of customers.

## 6) Marketing Policy and Strategies of Expressway Business

- Marketing Strategies of Expressway Business

The marketing highlight is that the Si Rat Expressway is designed to respond to the transportation needs through the expressway network which connects to and covers major areas in Bangkok, whether from the Chalem Mahanakorn Expressway and the Si Rat Expressway, as well as the Chalong Rat Expressway (Ramindra-At Narong) which cover the areas from the North to the South and from the West to the East of Bangkok. Motorists may use the expressway to connect to the Burapha Withi Expressway (Bang Na-Chonburi), and the Chalem Mahanakorn Expressway and the Chalong Rat Expressway, thereby rendering the service of the expressway systems to become more complete for users to reach their destinations more conveniently and rapidly than using at-grade roads.



In respect of the Si Rat - Outer Ring Road Expressway, a route connecting between the Bangkok-Thonburi sides, by connecting with the Si Rat Expressway in the area of Mo Chit Bus Terminal (Chatuchak), with the route crossing the Chao Phraya River at the Rama VII Bridge, continuing along in parallel to the Southern railway via the districts of Bang Phlat, Bang Bamru, Taling Chan, connecting to the Boromarajonani Elevated Road passing Ratchaphruek Road, and ending at the Outer Ring Road (the West), thereby enabling motorists to conveniently and rapidly commute from and to Bangkok-Thonburi sides. Moreover, for travelling to the urban area, the connection of the Si Rat - Outer Ring Road Expressway with the northern part of the Si Rat Expressway (Sector A) was opened for service to ensure the greater convenience in expressway users' travelling to Ratchadaphisek, Prachachuen, Chaeng Watthana, and Bang Pa-in, by using the Udon Rattaya Expressway.

The marketing disadvantage is the physical limitation which prevents the release of traffic around the expressway exits during rush hour, which depends on the traffic on at-grade roads, representing an uncertain factor beyond the Company's control. However, the Company continuously coordinates with traffic police in police stations of such areas, including linking video signal from CCTVs on the expressways to police stations of such areas, to provide assistance in releasing and facilitating traffic flow in the expressway systems by improving various on- and off-ramps for motorists to save time and facilitate motorists with more convenience and better quality of living in their commute in the downtown. Motorists should then appreciate these benefits over the price factor.

In view of various marketing strategies, the Company has proceeded as follows:

o Service and Product Strategies of Expressway Business

- The prime location and connections to major roads in the city allow the expressway network to respond to the transportation needs of motorists to reach their desired destinations. In this regard, the Company has improved the quality of the routes and its services and given priority to the customers' needs, which will be integrated as key strategies to efficiently accommodate the traffic volume flowing in the system.
- The feasibility study on improvement of the on- and off-ramps of the expressways serves as another measure to facilitate the traveling and to continually maintain the quality of the expressways in terms of engineering safety to meet international standards.
- The Company has continuously monitored the traffic volume statistics to enhance the efficiency of its Easy Pass service as appropriate in order to improve the service provision and accommodate the increased volume of expressway users. The Company has added Easy Pass lanes at various Toll Plazas on the Si Rat Expressway and the Si Rat - Outer Ring Road Expressway to accommodate the increased volume of Easy Pass users. In addition, the Company has moved the Easy Pass lanes for more convenience and safety of the Easy Pass service users and to minimize the cross traffic between the cash lanes and the Easy Pass lanes, which will mitigate the traffic congestion at the front of the toll plazas.
- The study on new routes in response to the urbanization in the future, particularly in Bangkok, as well as the study on traveling behavior of motorists, are conducted to prepare for the expansion of the scope of the expressway services, and serve well as additional channels of services in response to needs of the motorists in the future.
- The Company has added communication channels on traffic information via Smart Traffic and Variable Message Signs (VMS) to keep motorists informed of the traffic conditions on expressways, as well as suggesting routes on expressways for more convenience and rapidity.
- The Company has also improved signboards regarding the expressway usage on the at-grade main road and various alleys in Bangkok and its vicinity so as to facilitate motorists and boost confidence to access and use the expressways. To this effect, the Company focuses on introducing such landmarks adjacent to the on- and off-ramps of the expressways on the website, various public relations media, and social media to ensure that customers, as the expressway users, would travel more conveniently and rapidly.

- The Company has organized the public relations activity about the Si Rat - Outer Ring Road Expressway, including the connection with the Si Rat Expressway heading to Chaeng Watthana, at the places located along the Si Rat - Outer Ring Road Expressways and Chaeng Watthana in order to introduce the expressway users to the use of the routes, as well as getting to know needs and suggestions directly from the expressway users. Moreover, the Company has recommended directions to restaurants and tourist attractions via the facebook fanpage ขับ ชิม เที่ยว (Drive Taste Travel), with a great number of followers.
- The Company has also conducted a survey on the satisfaction of the toll collection of the Si Rat - Outer Ring Road Expressway with a result at the “Very Good” level.
- More Easy Pass lanes were added in response to the increased traffic volume in the Easy Pass lanes and after EXAT’s policy on cancellation of the Easy Pass card deposit, the use of Easy Pass service then increased, thereby necessitating more Easy Pass lanes to accommodate the increased traffic volume, and as a result, motorists can save their commute time and fuels.
- Easy Pass lanes at Asoke 4 Toll Plaza, Prachachuen Toll Plazas (inbound) and (outbound), were relocated to the farthest right lane for motorists to have more efficient and rapid access to the Easy Pass lanes.
- Easy Pass signboards were improved for expressway motorists’ convenient and rapid passage through the Easy Pass lanes.
- All Easy Pass lanes on the Si Rat Expressway were improved as fast lanes to accommodate more rapid passage and minimize slow traffic in front of the Easy Pass lanes.
- The project to enhance the efficiency of Easy Pass lanes was set up, the Company installed the second antennas in Easy Pass lanes to suit the convenience of the Easy Pass users in the event that a barrier gate is not opened despite their remaining credit adequate for passing through, in that case, the system will have the barrier gate opened without waiting staff to open it. Such system helps expedite the motorists’ travelling, save time waiting in a queue and reduce traffic congestion in front of the toll booths, as well as minimizing air pollution.
- The pilot project for the ETC Single Lane Free Flow Easy Pass system was introduced in accordance with the Policy of the Ministry of Transport, at Asoke 3 Toll Plaza, Asoke 4 Toll Plaza, and Rama 9 Toll Plaza, totaling 7 lanes, by automatically lifting the barriers during rush hours to ensure motorists’ more rapid passage and time saving in a queue in a front of the toll plazas, which would help minimize air pollution. Furthermore, the Company has used the Automatic License Plate Recognition (ALPR) technology to help monitor vehicles’ unpermitted passage without having an Easy Pass or in the case that the Easy Pass is unreadable by the system while passing through the toll lanes. The project has been started since August 27, 2019 until now.
- The project to top up reserve via Easy Pass account with credit card, debit card and Thai QR Payment was set up by the Company in collaboration with EXAT, and Krung Thai Bank to develop the top-up service, at the customer service center, the Si Rat Expressway Control Center Building, to accommodate top ups via credit, debit cards or Thailand QR Payment, with the activated service opening from June 1, 2019.
- The project for toll payment via Contactless EMV card at the toll lanes was set up by the Company, in collaboration with EXAT, and Khrung Thai Bank to develop the toll payment system with contactless-enabled credit or debit cards under the EMV standard for motorists’ convenience, with the trial run opening expected to take place in 2020.



o Price Strategies of Expressway Business

- Toll rates are agreed upon and specified in the Agreements, including the calculation for revisions of toll rates ahead of time. It is mutually agreed that the rates are considered reasonable and based on the feasibility study for the investment of each project. Under the Second Stage Expressway Agreement, the Agreement for the Extension of Second Stage Expressway (Sector D), and the Bang Pa-in - Pak Kret Agreement, toll rates shall be revised at every five years interval in accordance with changes in Consumer Price Index of Bangkok as announced by the Ministry of Commerce, which serves as the basis of calculation for the intrinsic value of the toll rates during the given periods under the Agreements. Furthermore, the revision of the toll rates of the Si Rat - Outer Ring Road Expressway is in accordance with the Concession Agreement, which shall be made every five years from the date of service operation of the project at the rates specified therein.
- The Company continues to provide discount on tolls on certain routes for a limited period of time to attract motorists to increasingly use the expressway services, especially such routes with connections between the expressway systems, e.g., At Narong 1 Toll Plaza (from the Chalong Rat Expressway to enter the Chalmr Mahanakorn Expressway around Bang Na), and Muang Thong Thani Toll Plaza of the Udon Raththaya Expressway, which the Company, together with EXAT, continued to provide discount.

o Distribution and Distribution Channel Strategies of Expressway Business

- Payment of Tolls
  - Users of the Chalmr Mahanakorn Expressway and the Si Rat Expressway may choose to use the expressway services from various on- and off-ramps covering major areas in Bangkok throughout the total distance of 65.6 kilometers. Expressway users shall pay tolls at the on-ramps of toll plazas, totaling 52 locations, 20 toll plazas of the Chalmr Mahanakorn Expressway (e.g., Din Daeng, Bang Na, Dao Khanong, Sukhumvit, Rama 4 Toll Plazas, etc.) and 32 toll plazas of the Si Rat Expressway (e.g., Asoke, Rama 9, Srinagarindra, Yommaraj, Surawong, Hua Lamphong, Khlong Prapa, Yan Phahon Yothin, Prachachuen, Rama 3, etc.). Users may pay tolls in two channels, in cash, or via Easy Pass.
  - Users of the Udon Raththaya Expressway which connects to the expressway system towards the North of Bangkok has a total distance of 32 kilometers, with 10 toll plazas, shall pay tolls at the on-ramps for the inbound direction and at the off-ramps for the outbound direction. There are five on-ramps and five off-ramps. Users may pay tolls in cash or via Easy Pass.
  - Users of the Si Rat - Outer Ring Road Expressway which connects to the Si Rat Expressway System towards the West of Bangkok has a total distance of 16.7 kilometers, with 9 toll plazas, shall pay tolls at the on-ramps in cash or via Easy Pass.

- Electronic Toll Collection System

The Company, in association with EXAT, introduces the Electronic Toll Collection system in the toll collection, in order to serve as an alternative channel for motorists and facilitate and speed up the toll payment at the front of the Toll Plazas during rush hours, as well as accommodating the increasing traffic volume in the future. Currently, there are Easy Pass users representing approximately 41.4 percent.

In the interest of convenience to the Easy Pass users, the Company has arranged for the Easy Pass Fast Service, including film cutting service for Easy Pass installation and testing, whereby the expressway users are able to bring their cars to use the services at the Easy Pass Fast Service, free of charge, at the Si Rat Expressway Control Center, Asoke - Dindaeng Road, every day during the office hours from 9:00 - 17:00 hours and Prachachuen Toll Plaza (out bound) on business days from 07.30 - 22.00 hours, on holidays form 9.00 - 22.00 hours. Moreover, the Company has added such Easy Pass Fast Service at the Si Rat - Outer Ring Road Expressway in the area of Chim Phli Toll Plaza, which would open for service on the first Saturday of every month. In this regard, the Company, in collaboration with EXAT and the Department of Highways, carried out integration between the Easy Pass system and the M-Pass system to enable the service users to pay tolls with only one pass for seven expressway routes and two of the Intercity Motorways (Motorways) of the Department of Highways.

o Marketing Promotion and Communication Strategies of Expressway Business

The Company provides a discount on tolls on certain routes within a limited period of time, aimed at attracting target customers to continue to use the expressway services and eventually become regular customers. In 2019, the Company continued to provide a discount on the Udon Rattaya Expressway of one of its subsidiaries (NECL), to motorists at Muang Thong Thani Toll Plaza.

Furthermore, during the remarkable festivals, such as, Songkran Festival and New Year's Festival, the Company also holds activities promoting the use of the expressways for motorists by cooperating with EXAT to distribute souvenirs to motorists, including arranging for motorist service points, demonstrating our positive image and good relationship with motorists under the theme that we provide the best services to customers throughout the routes, as well as educating them about applicable traffic laws during Songkran Festival. In addition, to celebrate on the occasion of the previous New Year's Eve, the Company jointly supported EXAT in public relations of offering a discount on application fee for Easy Pass, and also joined EXAT to give a discount of Baht 5/trip to the Easy Pass users at Prachachuen Toll Plaza (inbound) only on business days during peak hours in the morning (05.00 - 09.00 hours) from August 1, 2019 to September 30, 2019, in order to encourage the expressway users to use more Easy Pass, thereby reducing accumulated traffic congestion at the front of the toll plaza. The Company, as a private company that provides the expressway services, implemented in response to the government policy by participating in the drive safety campaign known as "Driving Slowly, Daytime Headlight Switching on, Seat Belt Fastening", for the motorists' facility and safety during the Songkran and New Year Festivals, and the Company promoted the drive safety campaign via social media on the expressways and traffic radio station to the target customers to raise awareness of safe journey among them, as well as resting assured of the quality service on the expressways, and activities supporting use of the services of the Company.

The activities on the occasion of the National Mother and Father Days were held for the lucky motorists, offering toll discounts, dissemination of the expressway network maps, including connections of the expressways with various routes in order to facilitate the expressway users' travelling. This year, the Company organized the Smart Drive activity on two occasions to promote safe driving and reduce accidents, as well as giving an advice on basic car care, including how to handle emergencies on the expressways.

The channels of public relations used by the Company to disseminate information comprise documentary programs on radio and television, radio spot, leaflets, Variable Message Signs (VMS), and our website: [www.bemplc.co.th](http://www.bemplc.co.th), as well as social media (facebook: Bangkok Expressway and Metro), including BEM Magazine bimonthly newsletters as a medium for sharing information and news between the Company and motorists, and to educate, satisfy and attract new customers to use the services more, as well as organizing various social activities throughout the year to ensure the positive attitude of our services towards customers and society.

## 7) Industrial Outlook and Competition of Expressway Business

In 2019, the country's overall economy slowed down due to the contracted export sector together with the Baht strength, low agricultural income as a consequence of drought and high household debt, which were a cause for concern about the people's purchasing power. As a result, the financial institutions imposed a stricter limit on extending loans to consumers, including car loans, thereby shrinking to the car sales, despite the fact that in the first half of 2019, the car sales were likely to well expand by 7 percent owing to the good economic condition in 2018 and the launch of new car models, let alone good sales promotion plan, thereby changing new cars. However, there was a slowdown in car sales in the second half of 2019, the car sales then declined by 14 percent. (Source: Money & Banking Magazine dated January 17, 2020)

Even if the said economic slowdown resulted in the shrunk car sales, basic needs for cars still existed because the cars running on the roads had an average age of 7 years, most of which were cars entitled under the government's first car program, and then, there remained needs for new cars, and when compared to the statistics, there were 10,686,442 registered vehicles in Bangkok in 2019, and it found that there were 975,204 new registered vehicles, a slight increase from that in the previous year and from that with the high volume of accumulated vehicles while the road distance in Bangkok was only 5,500 kilometers in length. Consequently, there remained the traffic congestion problems throughout Bangkok's areas where the number of vehicles exceeded the capacity that its roads could accommodate. As a result, the average speeds of vehicles in Bangkok were 5-11 kilometers per hour during peak hours in the morning and 5.1-13 kilometers per hour during peak hours in the evening (*Sources: TMB Analytics dated January 17, 2020, the website of the Transport Statistics Sub-Division, Planning Division, the Department of Land Transport on January 2020*). Moreover, in 2019, there was additional construction of the mass rapid transit systems in Bangkok and its surrounding provinces, together with infrastructure construction, along with the problem of on-street parking as a hindrance to the traffic and violation of traffic rules, the traffic congestion problems then continued endlessly and inevitably, thereby having an impact on the growth of the traffic volume on the expressways as a whole.

## 8) Procurement of Products and Services of Expressway Business

- Nature of Procurement of Products of Expressway Business

EXAT is an authority responsible for the construction of expressways to provide service for convenient, rapid and safe traffic, as well as to mitigate traffic problems. EXAT invited interested parties to submit investment proposals; the Company then conducted a feasibility study and submitted its proposals for investment in projects with appropriate returns and conditions.

The expressway projects under the Second Stage Expressway Agreement, the Bang Pa-in - Pak Kret Expressway Agreement, the Agreement for Extension of the Second Stage Expressway (Sector D), and the Concession Agreement for the Si Rat - Outer Ring Road Expressway Project are implemented on a BTO basis. According to the essence of the Agreements, EXAT shall have the duty to determine the characteristics of the expressways, expressway routes and areas to be used for construction and arrange for land expropriation for delivery to the Company for construction within the time specified in the Agreements. Thereafter, the Company would carry out construction in accordance with the designs approved by EXAT, subject to the supervision of the quality of construction work by EXAT's Consulting Engineer, Independent Certification Engineer, and Independent Design Checker. Upon completion of the construction, the Independent Certification Engineer shall inspect the work and issue Certificate of Completion to evidence that the construction work is completed in accordance with the specified standards and is ready for service, at which time, the Company shall be entitled to obtain toll revenue under the conditions of the Agreements. In the previous constructions, the Company engaged project managers to carry out construction and operate the Expressway Projects on a lump sum turnkey basis. This was due to the fact that the expressway projects are large-scale projects, which may sustain cost overrun issues and delayed completion of the construction. The lump sum turnkey engagement is intended to prevent such risk. In the engagement of project managers, the Company will select specialists with experience to act as project managers and construction contractor to ensure the accomplishment of quality work on time.

With respect to the Si Rat - Outer Ring Road Expressway Project, the Company and EXAT executed the Concession Agreement for Investment, Design, Construction, Operation, Service and Maintenance of the Project on September 14, 2012, for a concession period of 30 years from December 15, 2012 to December 15, 2042, and with a construction period of not exceeding 48 months. EXAT shall determine the expressway route and areas to be used for construction and arrange for land expropriation for delivery to the Company within the specified time. The Company shall have the duty to carry out the design and construction in accordance with the designs approved by EXAT, subject to the supervision of the quality of construction work by EXAT's Engineer and Independent Certification Engineer. Upon completion of the construction, the Independent Certification Engineer shall inspect the work and issue Certificate of Completion to evidence that the construction work is completed in accordance with the specified standards and is ready for service. The Company engaged CH. Karnchang Public Company Limited, which specializes and has extensive experience in construction and management of all expressway projects under the concessions of the Company, to act as project manager and construction contractor as well as the operator of the project on a lump sum turnkey basis.

Under this Concession Agreement, the Company shall have the right to manage and provide service, e.g., toll collection, rescue operation, and maintenance, whereby the Company shall be entitled to receive all tolls throughout the concession period.



## 9) Environmental Impact (Expressway Business)

The Company and its subsidiaries have always operated the construction and expressway business with environmental responsibility, by adhering to the business guidelines which can be summarized as follows:

In the construction of the expressways, the Company and its subsidiaries complied with the measures to prevent pollution in accordance with the regulations of the National Environment Committee and other relevant laws, which form an integral part of the Agreements. The Company and the subsidiaries implemented the measures and procedures as appropriate for the construction carried out in the urban areas with high populations. In so doing, the Company employed the Segmental Box Girder construction technique, which allowed it to complete the construction faster than other techniques in those days, so as to prevent any impact to nearby communities and affect the at-grade traffic at the least possible extent during the construction. Furthermore, the Company had no records of committing any environment-related offenses.

Even during the course of the operation of the expressway systems, the Company remained concerned about the eco-friendly business operations affecting the quality of life of staff, motorists and communities surrounding the expressways, including all groups of stakeholders. The Company improved and reviewed its internal procedures to conform to the environmental requirements for applying for the Certificate of ISO 14001 Environmental Management System. The Company has its commitment to ensuring environmental management in line with the following guidelines:

- To give priority to pollution prevention and control by managing and maintaining the expressways to meet international standards and keeping in mind the environmental impact on motorists, staff, and communities;
- To instill and encourage our staff with an awareness of efficient use of energy and natural resources;
- To comply with the environment-related laws and regulations;
- To review the purposes and goals for continued improvement of the environmental management system;
- To communicate our environmental policy to the public and all parties concerned.

Besides, the Company obtained certification from SGS (Thailand) Limited as follows:

- ISO 9001: 2015 Quality Management System; and
- ISO 14001: 2015 Environmental Management System.

In 2019, the Company continued to maintain the ISO 14001 Environmental Management System, by monitoring important environmental concerns, as well as optimizing the use of natural resources through its continued energy management measures, as follows:

1. Replacement of the existing lamps in the Toll Plaza of the Si Rat - Outer Ring Road Expressway (Sector D), thereby saving up to 45 percent of energy, when compared to the existing lamps.
2. The project to install solar cells on the Toll Plaza and the Control Center of the Si Rat Expressway - Outer Ring Road Expressway, thereby saving up to 25 percent of energy from the Metropolitan Electricity Authority for the Toll Plaza and 11 percent for the Control Center.

With respect to safety management, the Company had an engineering analysis agency comprising knowledgeable and skilled personnel in traffic engineering and safety on the expressways to conduct studies on impacts from various factors. A traffic simulation was made for study of the suitability in the improvement of physical characteristics at the front areas of toll plazas, as well as inspection of road safety; analysis of risk areas on expressways; study of features and patterns in the installation of safety equipment, in order to improve the expressways to ensure the maximum safety for motorists, as well as to minimize environmental impact. The Company then put such study results into practice as follows:

- The safety on expressways was improved by inspecting and assessing the safety of the gore areas and installing safety equipment, e.g., crash cushions, cushion tanks, flexible guide posts, red-colored cold plastic road paint to alert for high accident risk areas.

The Company continued to provide training for staff and executives on know-how and techniques for environmental management in accordance with the ISO 14001 : 2015 Environmental Management System, as well as various activities to raise awareness of environmental protection in the organization and social contributions in association with the communities nearby.

## 2.1.2 Rail Business

### 1) Nature of Services

The Company has been granted concessions for two mass rapid transit rail system projects by the Mass Rapid Transit Authority of Thailand (“MRTA”), as per the following details:

**(1) The M.R.T. Chaloe Ratchamongkhon Line Project (“MRT Blue Line Project”):** the Company executed the Concession Agreement with MRTA on March 31, 2017, for a period of 33 years from MRTA’s Notice to Proceed. The Company is entitled to fare box revenue as well as undertaking activities and commercial development, including advertising, leasing space and telecommunications services in the metro stations and in the trains of the M.R.T. Chaloe Ratchamongkhon Line Project, for a period of 30 years from the date the entire route is opened for service. This is to ensure the Through Operation, with the Company having entitlement to farebox revenue as well as commercial development throughout the concession period of the Project. The M.R.T. Chaloe Ratchamongkhon Line Project is consisted of Hua Lamphong-Bang Sue Section, Hua Lamphong-Bang Khae Section, and Bang Sue-Tha Phra Section, per the details below:

- o **Hua Lamphong - Bang Sue Section**, which is the first underground metro system of Thailand, covering the distance of 20 kilometers, with 18 stations, which was in service on July 3, 2004. The Company is entitled to farebox revenue as well as undertaking activities and commercial development, including advertising, leasing space and telecommunications services in the metro stations and in the trains.
- o **Hua Lamphong - Bang Khae Section and Bang Sue - Tha Phra Section**, covering the distance of 28 kilometers, which is the underground and elevated route, with a total of 20 stations, divided into 4 underground stations and 16 elevated stations, having a connection with the M.R.T. Chaloe Ratchamongkhon Line Project (MRT Blue Line) at Hua Lamphong Station and Bang Sue Station, as well as connecting with the M.R.T. Chaloe Ratchadham Line Project (MRT Purple Line) at Tao Poon Station. The Company is responsible for investment, supply, installation, testing and commissioning of the M&E Equipment, whereby the supply and installation of the M&E Equipment for opening for service are divided into three sections, namely:
  - Section 1: Bang Sue Station - Tao Poon Station, in service on August 11, 2017;
  - Section 2: Hua Lamphong Station - Lak Song Station, with a partial station phase starting to open for trial runs and connecting with Section 1 of the Project to allow the people to take free trial runs to Lak Song Station from July 29, 2019 for a period of two months; and with the official full service opening to Lak Song Station on September 29, 2019 at normal charges; and
  - Section 3: Tao Poon Station - Tha Phra Station, starting to open for the people to take free rides on December 23, 2019, with the official service opening scheduled to take place in March 2020, by having Tha Phra Station as the main interchange station which enables the passengers to change their destination from Tha Phra Station to travel to the suburban area westward via Bang Phai Station to Lak Song Station or travel to the urban area via Itsaraphap Station to Hua Lamphong Station, as well as travelling to Tao Poon Station connecting with the M.R.T. Chaloe Ratchadham Line Project (MRT Purple Line). Upon the full service opening of the M.R.T. Chaloe Ratchamongkhon Line Project (MRT Blue Line), a total of 54 trains would be available for service, every day from 06.00 - 24.00 hours.

- (2) The M.R.T. Chalong Ratchadham Line Project (“MRT Purple Line Project”)**, Khlong Bang Phai Station - Tao Poon Station, covering a distance of 23 kilometers, with a total of 16 elevated stations, where Tao Poon Station is located as an interchange station with Bang Sue Station of the M.R.T. Chaloe Ratchamongkhon Line, making it possible for passengers’ interchange from the MRT Purple Line to the MRT Blue Line at Tao Poon Station, which in the future, would be connected with the MRT Purple Line (Tao Poon - Rat Burana Section).

The Company has been granted the concession for investment, the supply of M&E Systems and O&M Services, on a PPP Gross Cost basis. That is, MRTA invests in all civil works and the Company invests in the M&E Systems and the rolling stocks, as well as provides the operation and maintenance services in accordance with the specified service standards. MRTA is entitled to all fare box revenue and commercial development revenue from the utilization of the civil infrastructure and the railway systems and MRTA shall make gradual repayment for the M&E Systems to the Company on a monthly basis for a period of 10 years, and engage the Company to conduct the operation and maintenance throughout the concession period of 30 years from September 4, 2013.

There is a total of 21 trains available every day without holiday, from 5.30 - 24.00 hours on Mondays - Fridays, and from 6.00 - 24.00 hours on Saturdays - Sundays and public holidays.

Projects	Chaloem Ratchamongkhon Line (MRT Blue Line)		Chalong Ratchadham Line (MRT Purple Line)
	(Hua Lamphong Station - Bang Sue Station)	(Hua Lamphong Station - Lak Song Station and Bang Sue Station - Tha Phra Station)	(Khlong Bang Phai Station - Tao Poon Station)
Concession Type	PPP Net Cost	PPP Net Cost	PPP Gross Cost
Concession Period	33 years (from MRTA’s Notice to Proceed)		30 years (2013-2043)
Number of Stations	18 stations	20 stations	16 stations
Distance	20 kilometers	28 kilometers	23 kilometers

## 2) Revenue

The Company’s revenues from the rail business can be divided into two categories, comprising farebox revenue and revenue from O&M services.

- Farebox revenue**

Pursuant to the Concession Agreement for the MRT Blue Line Project between the Company and MRTA, the Company has the right to operate the train and collect farebox revenue and undertake commercial development throughout the concession period. The Company is obliged to make payment of remuneration from fares and commercial development to MRTA at the rates as mentioned in the Concession Agreement.

The fare rates of the metro as of the commencement date would be in accordance with the basic reference fare rates in force at the time of the revenue service commencement date. Under the Concession Agreement, the reference fare rates would be adjusted every 24 months based on the actual changes of the Bangkok Non-Food Consumer Price Index compared to the basic reference fare rates.

The Company adjusted the fare rates under the terms of the Concession Agreement accordingly. The current fare rates in force were adjusted on July 3, 2018, which will remain in force until July 2, 2020.



- **Revenue from O&M Services**

The Company receives service fees for train operation and maintenance from the MRT Purple Line Project Concession Agreement, Contract 4, Concession for Supply of M&E Systems and O&M Services (Khlong Bang Yai Station – Tao Poon Station), Phase 2 (for a period of approximately 27 years). The service opening commenced on August 6, 2016.

### 3) Marketing and Competition of Rail Business

- **Customer Characteristics and Target Customers**

The Company's target customers can be divided into two groups, namely, residents nearby the metro routes and those who need to pass or head for other destinations along the metro routes, and categorized by purposes of journeys as follows:

1. Commute for work;
2. Commute to schools/educational institutes;
3. Commute by tourists/for leisure;
4. Commute for special activities, e.g., seminars or conferences; and
5. Commute for other purposes, e.g., business dealings.

### 4) Marketing Policy and Strategies of Rail Business

- **Service and Product Strategies of Rail Business**

- o Creativity and Development of Convenient Services for MRT Passengers

The M.R.T. Chaloem Ratchamongkhon Line (MRT Blue Line) has the route from Tao Poon Station to Hua Lamphong Station, and in the third quarter of 2019, Hua Lamphong Station until Wat Mangkon Station to Lak Song Station was opened for service, and in December 2019, Hua Lamphong - Bang Khae Section was opened for the people to take free trial runs. Upon the full service opening of the system, it would cover the total distance of 48 kilometers, passing through central business districts (CBD), residential areas, and connecting with the significant mass rapid transit systems which would result in an increase in the number of passengers, e.g., connection with the Green Line (BTS) at Silom Station, Sukhumvit Station, Chatuchak Park Station, and Bang Wa Station, the Red Line (Airport Rail Link) at Phetchaburi Station connecting with the Suvarnabhumi Airport and connecting with the M.R.T. Chalong Ratchadham Line (MRT Purple Line) at Tao Poon Station, together with connections with the SRT train stations at Hua Lamphong Station and Bang Sue. There are currently six transit connections between the metro stations and buildings, including:

- Chamchuri Square and Samyan Mitrtown (residential, office and edutainment complex) at Sam Yan Station;
- Union Mall at Phahon Yothin Station;
- Interchange 21 Tower (office building) and Terminal 21 Tower (shopping center, hotel, office, and residential building) at Sukhumvit Station;
- Central Plaza Grand Rama 9 and G Tower at Phra Rama 9 Station;
- Seacon Bangkai at Phasi Charoen Station; and
- The Mall Bangkai at Lak Song Station.

Traveling behavior of service users mostly accounts for work, followed by for education, which would be heavily travelled during rush hours. While in respect of off-peak journeys, the system still has the potential to accommodate a higher number of service users. The Company thus strategically reduces the density of the passengers during rush hours to be consistent with the factor for selection of use of service of the passengers; reduce time the service users take to use the service and provide greater convenience of travelling, by holding an activity with its effort to encourage passengers to adjust their travelling behavior to leave early, titled "MRT Lucky Hour for Early Birds", and also strategically increases the number of the service users using the metro cards to ensure convenient journeys, save time the service users take within the stations, and to increase revenues for the Company, by way of provision of additional privileges in the metro cards in alliance with various partners, such as, to provide a discount on a metro card issuance or top up or provide special benefits to the cardholder passengers.

o Quality Services

The Company focuses on quality services on the motto “Service above all else” so that the MRT service becomes “lifestyle of Bangkok residents” under the Company’s professional operations. Various activities have been undertaken to promote the image of the current MRT services and create value added to Bangkok residents’ lifestyle. Based on this policy, the Company sets out the following signs for quality services:

- Safety: The MRT passengers’ life and property safety is the Company’s top priority. All staff must be well aware of and expected to strictly follow the Company’s safety requirements. In the past, the Company conducted regular training on safety and supervised to ensure that the Company’s services meet Thailand’s safety standard requirements and comparable to those of the world’s leading mass rapid transit operators.
- Convenience: The Company takes care of all equipment and facilities in the MRT system to function properly, and proactively facilitates the passengers’ convenient commute during high seasons, such as festival events and activities or exhibitions along the routes, by arranging for more ticketing points to best serve the passengers.
- Fast: The Company keeps the average train speed aligned with the timetable in response to passengers’ needs during different periods.
- Reliability: The Company maintains the trains and signaling systems in good conditions without any impact on its services.
- Punctuality: The Company keeps the timetable and stops time at every station punctual with the least possible deviations.

o Metro Cards for Everyone

The Company analyzes the customer characteristics and target customers, both regular and non-regular passengers, and then plans for and produces various styles of metro cards to suit every group of customers and to attract non-regular passengers to increasingly use the MRT cards in travelling. These arrangements comprise keeping styles of metro cards modern to ensure conformity with technology and increase in efficiency of metro cards to ensure that metro cards can be commonly used with the MRT Blue Line and the MRT Purple Line; cooperation with financial institutions in issuing co-branded cards for financial transactions and travelling on the MRT system, namely, in alliance with KASIKORNBANK Public Company Limited to make cards for Chulalongkorn University and Chulalongkorn Hospital; to make co-branded cards with other institutions or agencies. Moreover, there was the launch of a product in a form of top up voucher for interested organizations, for instance, Ananda Development Public Company Limited to distribute as welfare for its staff to top up their metro cards.

• Price Strategy of Rail Business

The Company collects distance-related fares in fairness to passengers according to different distance of their journeys and provides discounts to school/college students, and children/elderly, by taking into account the fare rate collection of other mass rapid transit systems. The fare rates are adjusted in accordance with the relevant Concession Agreements.

- **Marketing Promotion Strategies of Rail Business**

The Company's classification of target customers is intended to draw up a strategy on sales promotion to effectively cover all target customer groups. As such, the Company's sales promotion and marketing plans based on target customers' lifestyle and settings are described as follows:

- o To promote the park and ride facilities to encourage more passengers to park their personal cars at the service locations and use the MRT service to commute to such business districts as Sukhumvit Road, Silom Road, Ratchadaphisek Road, in order to help alleviate traffic congestion and minimize global warming.
- o To accept credit card payments for passengers' greater convenience, collaborate with leading companies and banks, namely, Advanced Wireless Network Public Company Limited (AIS), Muang Thai Life Assurance Public Company Limited, FWD Life Insurance Public Company Limited, Ocean Life Insurance Public Company Limited, the Mall Group (M Card), Boonrawd Trading Co., Ltd. (Singha Rewards), to provide discounts on metro card top ups, provide cash back, including KTC, Citibank, UOB, Bank of Ayudhya credit card reward points in order to create value added to the MRT service, and offer special benefits to metro card holders with an aim to change passengers' behavior from using token to using metro cards for the sake of convenience and special benefits.
- o To increase the number of passengers or trips in the system through information services on highlighted events along the MRT routes, and offer various types of customized metro cards bearing specific logos or signs of agencies, organizations, office buildings or hotels both along and beyond the routes, for public relations and sales promotion, in order to distribute the metro cards to both current and new target customers.
- o To create the Customer Relations Management by carrying out management of the data system of MRT club members, and build a network and good relationship with the general service users under the CRM process, as a central mechanism for loyalty marketing, by focusing on efficient and effective response to ensure passengers' satisfaction by using social network channels and public relations media within the stations, including booths showcasing activities inside and outside the routes, as well as in alliance with partners on the win-win strategy to organize special activities for the passengers.
- o To create brand loyalty and awareness through various activities to promote marketing campaigns, rewards to customers and society, and corporate image towards young customers and passengers by creating value added collaboration on a regular basis, namely, building relationships with alliances to seek privileges for the cardholder passengers in a form of discounts on shops, restaurants, movie theaters or events surrounding the MRT route.
- o To develop the electronic payment system for online top-up and mobile payment with TrueMoney Wallet, and draw up a plan to develop the electronic payment system for retail shops within Metro Mall to make it more convenient and rapid for the MRT passengers.
- o To encourage the people to use government welfare smart cards in travelling with the MRT system, by improving the automatic fare collection systems (AFC) of the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line) and the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line) to accommodate usage of their government welfare smart cards.
- o To apply the EMV Contactless Transit system to the electronic payment with efficiency, safety and standard, via a credit or debit card with which the passengers can pay fares, in lieu of paying with metro cards. Nowadays, England and Singapore have adopted such EMV system to payment of electric train fares to ensure convenient and rapid journeys. Currently, the feasibility study of the system is pending.



- **Marketing Communication Strategies of Rail Business**

- o To select effective channels of communication and public relations which are accessible to target groups of different marketing events through management of space and flows in the MRT system, e.g., standees within the stations, visual display on the token machines, event calendar media on monitors, digital media, social network media, including external public relations media from the alliances to provide service users with journey information in the MRT system. The Company also has emphasized development of the Mobile Application titled Bangkok MRT Application to accommodate travelling plans of the passengers.
- o To focus on publicizing news and information to current service users, including new customers, via booths presenting the use of the service, both inside and outside the routes, with provision of useful advice and information, such as, information on privileges of the metro cards, application for the MRT club membership, introduction of the MRT lucky hour activity, contact channels via social media and Bangkok MRT Application, with an aim of stimulating provision of information on services and privileges to the service users. In 2019, the public relations for Happy Blue Line Again in 2019 were prioritized, by emphasizing the punctuality, convenience, fast journey, family time-saving, and definite timetable.
- o To create destinations via regular communication, public relations and journey information along the MRT routes via preparation of event calendar, route maps with attractive destinations, e.g., office buildings, schools, hotels, shopping centers, tourist attractions and other landmarks, information relating to convenient and rapid links to other mass rapid transit systems, which can be searched via the website and Bangkok MRT Application.
- o To assure the passengers and people of the safety in travelling and service provision through public relations via television, radio and other media, and organize activities for public relations of service provision and safety-related activities at various venues, e.g., schools, office buildings, to present the safety of the MRT system to the passengers and people for their understanding and confidence in the services.

- **Development Strategy of Rail Business**

The Company adopts a strategy for regular development of quality and its services to ensure service users' utmost satisfaction with convenience, rapidity, and safety, which would attract more users of the MRT service. At present, the Company collaborates with financial institutions to hold single co-branded cards for multi-transactions.

- **Distribution Strategies and Channels of Rail Business**

The Company provides more sales outlets in addition to the ticket vending machines and ticket offices in the stations, by means of direct sales to various agencies, organizations, banks, schools, hotels, and private sectors, etc., with customized cards on various occasions, such as, gifts for staff, customers or for brand promotion and public relations materials, as a result, the metro cards become even more flexible for various uses than just for the MRT service.

## 5) Industrial Outlook and Competition of Rail Business

### Mass Rapid Transit Systems in Bangkok and its Vicinity

Bangkok is a large capital city, with a dense population and various modes of transportation systems, for example, personal cars, public buses, passenger vans, metro, micro buses, taxis. The traffic problem in Bangkok has extremely intensified due to the increase in population in urban areas and the rising travel demand of people while the traffic area capacity and the public transport system are not enough to accommodate such increase, which is considered a major problem which is not different from the problem in other highly populated capital cities around the world. Thus, the government adopts a policy focusing on the development of various public transport networks to resolve the traffic problem to accommodate an increase in population and the economic growth of the country.

In this regard, traveling by residents in Bangkok can be divided into two modes of transport systems, namely, personal transport system and public transport system.

- **Personal Transport System**

People's residences in Bangkok and its vicinity are spread all over, traveling by personal cars thus is popular. The growing number of highly-paid or middle-class people and the inadequacy of the existing transport systems, and travelling expenses as compared with travelling by personal cars, as well as the service quality and safety, also have caused personal cars to become essential and convenient for traveling. In this connection, the expansion of traffic area in Bangkok remained limited and inadequate to accommodate the volume of vehicles.

- **Public Transport System**

As a result of the traffic congestion problem, particularly in peak hours, and the growth of the real estate projects surrounding the route, consumers' demand for the public transportation system of certain types was considerably high, especially for the metro system which was significantly expanding by reason of change in the urban people's behaviors of selection of residences and travelling by mainly focusing attention to convenience and rapidity in travelling.

- o **Public Bus Service**

At present, there are various types of public buses for service at different service rates, but the number of public buses in service in Bangkok and its vicinity remained inadequate, owing to the fact that a certain number of buses were undergoing improvement and rearrangement of bus routes was made, even if there was currently a total of 13,461 buses in service, let alone more than 4,000 passenger vans which became enormously popular among the people because of provision of its convenient and rapid service in travelling. In this regard, the Bangkok Mass Transit Authority (BMTA) launched its buses with development of technology to make it compatible with the GPS system and the E-Ticket system for service on many routes. Moreover, on October 1, 2019, the BMTA buses arranged for the service users' another optional method for payment of fares by welcoming the cashless payment to enable the service users to pay fares with government welfare smart cards, E-Ticket of the BMTA, QR Code via Mobile Banking (Application), and contactless-enabled credit or debit cards.

Nevertheless, as a result of the problem of the ongoing traffic congestion on roads, especially during rush hours in the morning from 6:30 to 8:30 hours, and in the evening from 16:30 to 18:30 hours, and in the rainy season, traveling is inefficient and time-consuming, not to mention the impacts from the safety issues in the services and the pollution produced by the vehicle exhaust system, including air pollution PM 2.5 in excess of the limited standards and detrimental to the people's health.

o **Trains**

In the past, the government sector formulated a policy to satisfy the low-income earners' requirements to use the government welfare smart cards for their spending, in a manner which the government welfare smart cardholders were able to use such card for travelling by buses, passenger vehicles served by The Transport Co., Ltd. and trains for free in the amount not exceeding Baht 500 per travelling mode per month. Unfortunately, there remained a lack of convenience and safety owing to unpleasant train condition and non-air conditioning of trains, let alone the limited routes not covering the entire city, as a result, the State Railway of Thailand (SRT) expedited additional dual track rail system construction projects on many routes, together with the new depot construction project in order to accommodate old and new locomotives and for the purpose of development of the Thai railway system in accordance with Thailand's transportation infrastructure development strategy. In this regard, the SRT's train service is not considered the Company's direct competitor due to different service routes, namely, the SRT aims to provide the service to suburban areas.

o **BTS**

BTS Skytrain was Thailand's first mass rapid transit rail system on the elevated dual tracks and directions. BTS opened for service on December 5, 1999, on 2 lines, namely, Sukhumvit Line and Silom Line, and currently, extended 50.85 kilometers, with a total of 44 stations. On December 6, 2018, the Green Line (South), Bearing - Samut Prakan Section, was opened for the people to take trial runs; and on August 9, 2019, it started to open Ha Yaek Lat Phrao Station for the people to take trial runs; and on December 5, 2019, it was opened for service until Kasetsart University Station, both of which were available for service at no charge. As such, traveling by BTS Skytrain was a convenient alternative for commuters. Moreover, BTS Skytrain is intended to provide service to the heart of the city, not to mention the real estate development around the routes and connection with the MRT system, which makes it enormously popular, and thus, such factors have caused an increase in service user volume.

o **ARL**

The Suvarnabhumi Airport Rail Link or Airport Rail Link or Airport Link is a special mass rapid transit rail system project, as part of the project for construction of suburban and commuter rail system, carried out and operated by the State Railway of Thailand (SRT). The structure of the Suvarnabhumi Airport Rail Link is both underground and elevated, with the alignment accommodating journeys from the eastern and northern outskirts, and passengers from the Suvarnabhumi Airport, to the center of Bangkok at Phaya Thai Station, covering a total of 8 stations, with a distance of 28.6 kilometers. Airport Link was opened for service on August 23, 2010. For the current service provision, a plan was set up to develop, improve the service, and the service capacity of a total of 9 Airport Rail Link trains showed the service stability, which could satisfy the growing needs of the passengers.

As a result of an ongoing increase in a number of the public transport system service users, it reflected the change in travel behavior of residents in Bangkok and its surrounding provinces from using personal car to use the public transport system. This indicated the development in terms of convenience, rapidity, safety and the extended coverage areas of travelling to ensure transit in the through operation system at present. However, owing to the traffic congestion, air and noise pollution, and potential accidents, the transit rail system is then regarded as a significant milestone for change and development of the mass rapid transit systems in Bangkok and its vicinity, which will help alleviate traffic problems, ensure safe, convenient and rapid journeys of service users, and result in a positive effect on the economy and environment. Therefore, the mass rapid transit system represented a traveling mode, which helped improve the quality of life of urban people and reduce the usage of national resources.



## 6) Industrial Outlook and Government Policy of Rail Business

Thailand's overall economic outlook in the third quarter of 2019 expanded by 2.4 percent, when compared to 2.3 percent of the previous quarter, therefore, in the first nine-month of 2019, the Thai economy grew by a total of 2.5 percent, significantly resulting from an expansion of consumption and investment of the private sector and the continued expansion of spending and investment of the government sector (*Source: Office of the National Economic and Social Development Board*).

In the field of development of the transport system, the Ministry of Transport took a step forward to develop Thailand's transportation system to be a mechanism in driving the country's steady economic growth. In so doing, the infrastructure development in terms of transportation would be aimed to cover the nationwide areas to enable it to seamlessly accommodate the multimodal transportation and journeys; with the significant strategic plan for transport development, particularly the metro projects, to solve traffic problems in Bangkok and its vicinity. The government sector has given priority and managed to ensure each metro project's opening for service according to schedule. That was, on September 29, 2019, the M.R.T. Chaloem Ratchamongkhon Line (MRT Blue Line), Section 2: Hua Lamphong - Bang Khae was opened for the full service with charge; and on December 23, 2019, Section 3: Tao Poon - Tha Phra was opened for the people to take free trial runs, with its full service opening on a circle line basis to take place in March 2020. Moreover, the government sector has expedited construction of another three MRT projects, namely, the MRT Orange Line, Thailand Cultural Centre - Min Buri (Suwinthawong) to open for service in 2023, Bang Khun Non - Thailand Cultural Centre to open for service in 2026; the MRT Pink Line, Khae Rai - Min Buri; and the MRT Yellow Line, Lat Phrao - Samrong to open for service in 2021. The MRT projects to be proposed for the Council of Ministers' approval of construction or pending design study included four projects, i.e., the MRT Purple Line (South), Tao Poon - Rat Burana (Khanapisek Road), the MRT Pink Line Extension, Si Rat - Mueang Thong Thani; the MRT Yellow Line Extension, Yaek Ratchada - Lat Phrao - Yaek Ratchayothin; and the MRT Brown Line, Khae Rai - Lam Sali (Bueng Kum). Furthermore, another three projects to be pushed forward by the Bangkok Metropolitan Administration were the MRT Grey Line, Section 1: Watcharaphon - Thong Lor; the MRT Grey Line, Section 2: Phra Ram 3 - Tha Phra; and the Bangna-Suvarnabhumi Line Project, due to such three projects' location in the areas which have encountered the traffic problems and needed to be provided with the public transportation system with greater convenience and connectivity. Currently, it is in the process of budgetary proposal for study and review of the projects' details, including a form of investment, with its conclusion expected to achieve in 2020. All of the projects have been accelerated by the government sector in accordance with the Strategic Development of Transport Infrastructure of Thailand, with an aim of building the metro networks which cover more service areas and serves as alternative means of travelling with definite timetable, convenience, rapidity and safety, as well as helping reduce environmental problems, improve the quality of people's life, thereby allowing the country's continuous and sustainable development.

In this regard, the government sector's role in stimulating the economy through its expenditure and investment was considered the most crucial factor which would have an influence on the future economic situation. Giving priority to investment in infrastructure projects, particularly in the transportation system, would help make travelling and transport of goods convenient, which would attract Thai and foreign investments from the private sector and strengthen the economy conducive to the sustainable growth in the future.

### Real estate development around the metro routes

As a result of the continued economic growth in 2019, the real estate market continued to grow, especially the real estate market surrounding the metro routes which became hugely popular. Nevertheless, there remained less land left and land prices were rising dramatically during the previous year, resulting in the real estate development to ensure the optimal benefit. While development of the mixed-use real estate project started to play a key role and seemed massively popular among the large real estate operators, whereby many of the projects are located along the MRT routes. Moreover, it was evidenced by a diverse selection of new condominium launches, particularly those which were around the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line), Hua Lamphong - Bang Khae Section and Bang Sue - Tha Phra Section, as opened for service in 2019. It also included development of areas surrounding the MRT stations, namely, on December 13, 2018, there was the grand opening of Singha Complex, the Luxury Mixed Use Complex, on Asoke-Phetchaburi Road, connecting to Phetchaburi Station, regarded as the potential landmark and new transportation hub; and on September 20, 2019, Samyan Mitrtown, new mixed use project, was officially opened for service, connecting to Sam Yan Station and serving as one of the tourism destinations, which would become attractive to investors.

The development of the public transport system to cover the wide-areas of Bangkok and its surrounding provinces became a key factor in accelerating the real estate development in various forms, such as, condominiums, building offices, shopping centers, markets, most-visited tourist attractions, hotels, apartments, restaurants and supermarkets, to ensure that they were growing rapidly accordingly.

## 7) Progress of Development of the Mass Rapid Transit Systems under the Government Policy

Project	Current Status of Project
<b>SRT Dark Red Line</b> <b>(North - South)</b> Suburban railway system, divided into 4 phases, covering a total distance of 80.5 km.: <u>Phase 1:</u> Bang Sue - Thammasat (Rangsit campus) <u>Phase 2:</u> Bang Sue - Hua Lamphong <u>Phase 3:</u> Hua Lamphong - Bang Bon <u>Phase 4:</u> Bang Bon - Mahachai	<p><b>Bang Sue - Rang Sit, with a distance of 26 km.</b></p> <ul style="list-style-type: none"> <li>- SRT is proceeding with the following:</li> </ul> <p><u>Contract 1:</u> Civil Work for Bang Sue Station and Depot, SRT executed the agreement for engagement of SU Joint Venture (Sino-Thai Engineering &amp; Construction Public Company Limited and Unique Engineering and Construction Public Company Limited) on January 18, 2013.</p> <p><u>Contract 2:</u> Civil Work for Bang Sue - Rang Sit Section, SRT executed the agreement for engagement of Italian-Thai Development Public Company Limited on January 31, 2013.</p> <p><u>Contract 3:</u> M&amp;E System, including the supply of carriages SRT executed the agreement for engagement of MHSC Joint Venture (MITSUBISHI Heavy Industrial Ltd., Hitachi and Sumitomo Corporation) on March 29, 2016.</p> <ul style="list-style-type: none"> <li>- On November 1, 2019, SRT and MHSC Joint Venture accepted the delivery of the first two trains with 10 bogies, which would gradually accept the delivery until completion of a total of 25 trains in and around mid-2020, with the trial run to be taken in October 2020. Currently, SRT is conducting the unofficial test runs.</li> <li>- It was expected to open for service in January 2021.</li> </ul> <p><b>Rangsit - Thammasat, with a distance of 8.84 km.</b></p> <ul style="list-style-type: none"> <li>- The project was already approved on February 26, 2019. Currently, the Royal Decree on Land Expropriation is being prepared. The construction was expected to complete in and around 2023.</li> </ul>
<b>SRT Light Red Line</b> <b>(West - East)</b> SRT's suburban railway system, Bang Sue - Taling Chan, Taling Chan - Salaya, and Bang Sue - Makkasan - Hua Mak, covering a total distance of approximately 48 km.	<p><b>Bang Sue - Taling Chan, with a distance of 15 km.</b></p> <ul style="list-style-type: none"> <li>- SRT engaged Unique - Chun Wo Joint Venture to carry out the construction. The construction was 100% completed.</li> <li>- It is in the process of system installation and the trains would be accepted in June-July 2020, with the service opening expected to take place in January 2021.</li> </ul> <p><b>Bang Sue - Phaya Thai - Makkasan - Hua Mak, with a distance of 19 km.</b></p> <ul style="list-style-type: none"> <li>- The project was in the process of design revision to make it compatible with the hi-speed rail linked 3 airport projects, whereby both projects would use the foundation together in the area of Chitralada Royal Villa.</li> </ul> <p><b>Taling Chan - Salaya, with a distance of 14.8 km.</b></p> <ul style="list-style-type: none"> <li>- The project was already approved on February 26, 2019.</li> <li>- Currently, it is in preparation for a bid, with a qualified contractor expected to acquire in June-July.</li> </ul> <p><b>Taling Chan - Siriraj, with a distance of 5.7 km.</b></p> <ul style="list-style-type: none"> <li>- The project was already approved by the Council of Ministers on March 5, 2019. Currently, it is in preparation for a bid, with a qualified contractor expected to acquire in June-July 2020.</li> </ul>

Project	Current Status of Project
MRT Blue Line Extension	<p><b>Bang Sue - Tha Phra and Hua Lamphong - Bang Khae, with a distance of 28 km.</b></p> <ul style="list-style-type: none"> <li>- Hua Lamphong - Bang Khae was opened for official service on September 29, 2019.</li> <li>- Bang Sue - Tha Phra was opened for the people to take free trial runs on December 23, 2019, with the official service opening scheduled to take place in March 2020.</li> </ul> <p><b>Bang Khae - Phutthamonthon Sai 4 (with a distance of 8 km.)</b></p> <p>It was in the process of consideration and review of passenger volume and justification of the project by the Ministry of Transport.</p>
MRT Green Line	<p><b>Mo Chit - Saphan Mai - Khu Kot, with a distance of 18.4 km.</b></p> <ul style="list-style-type: none"> <li>- MRTA executed the civil work contracts, Contracts 1-4, on April 3, 2015, as follows: <ul style="list-style-type: none"> <li><u>Contract 1:</u> (Civil Works), Mo Chit - Saphan Mai, with a distance of 12 kilometers, operated by Italian-Thai Development Public Company Limited;</li> <li><u>Contract 2:</u> (Civil Work), Saphan Mai - Khu Kot, with a distance of 7.5 kilometers, operated by UN-SH-CH Joint Venture (Unique Engineering and Construction Public Company Limited, Sinohydro Corporation Limited, and China Harbour Engineering Company Limited);</li> <li><u>Contract 3:</u> (Depot and Park &amp; Ride Facilities) operated by STEC-AS-3 Joint Venture (SINO-Thai Engineering and Construction Public Company Limited, A.S. Associated Engineering (1964) Co., Ltd.);</li> <li><u>Contract 4:</u> (Design and Construction of Trackwork) operated by STEC-AS-3 Joint Venture (SINO-Thai Engineering and Construction Public Company Limited, A.S. Associated Engineering (1964) Co., Ltd.).</li> </ul> </li> <li>- On August 9, 2019, another station, namely, Ha Yaek Lat Phrao Station, was opened for service.</li> <li>- On December 5, 2019, another four stations were opened for service, namely, Phahonyothin 24 Station, Ratchayothin Station, Sena Nikhom Station, and Kasetsart University Station.</li> </ul> <p><b>Bearing - Samut Prakan, with a distance of 12.8 km.</b></p> <ul style="list-style-type: none"> <li>- On April 1, 2017, one station, namely, Samrong Station, was opened for service.</li> <li>- On December 6, 2018, the project was opened for free trial runs from Samrong Station - Kheha Samut Prakan Station, with fares charged according to distance expected to collect in 2020.</li> </ul>



Project	Current Status of Project
MRT Orange Line	<p><b>MRT Orange Line, Bang Khun Non - Min Buri (Suwinthawong)</b></p> <ul style="list-style-type: none"> <li>- On January 28, 2020, the Council of Ministers resolved to approve the MRT Orange Line Project, Bang Khun Non - Min Buri (Suwinthawong), on a PPP Net Cost basis, for a period of 30 years.</li> </ul> <p><b>Thailand Cultural Centre - Min Buri, with a distance of 20 km.</b></p> <ul style="list-style-type: none"> <li>- On December 9, 2017, the contract signing ceremony was held for the civil work construction of the MRT Orange Line Project between MRTA and contractors as winning bidders in Contracts 1, 2, 3, 4, 5 and 6, as follows:</li> </ul> <p><u>Contract 1:</u> (Civil Work), Thailand Cultural Centre - Soi Ramkhamhaeng 12, operated by CKST Joint Venture (CH. Karnchang Public Company Limited and Sino-Thai Engineering &amp; Construction Public Company Limited);</p> <p><u>Contract 2:</u> (Civil Work), Soi Ramkhamhaeng 12 - Hua Mak, operated by CKST Joint Venture (CH. Karnchang Public Company Limited and Sino-Thai Engineering &amp; Construction Public Company Limited);</p> <p><u>Contract 3:</u> (Civil Work), Hua Mak - Khlong Banma, operated by Italian-Thai Development Public Company Limited;</p> <p><u>Contract 4:</u> (Civil Work), Si Yaek Banma - Suwinthawong, operated by Unique Engineering and Construction Public Company Limited;</p> <p><u>Contract 5:</u> (Civil Work), Depot and Park &amp; Ride Facilities, in the area of MRTA's office, Phra Ram 9 Road, operated by CKST Joint Venture (CH. Karnchang Public Company Limited and Sino-Thai Engineering &amp; Construction Public Company Limited);</p> <p><u>Contract 6:</u> Design and Construction of Trackwork, operated by Unique Engineering and Construction Public Company Limited.</p>
MRT Yellow Line	<p><b>Lat Phrao - Samrong, with a distance of 30.4 km.</b></p> <ul style="list-style-type: none"> <li>- On May 30, 2017, the Council of Ministers resolved to approve the results of selection of the private entity and draft Concession Agreement for the MRT Yellow Line Project, in collaboration with BSR Joint Venture (comprising BTS Group Holdings Public Company Limited, Ratchaburi Electricity Generating Public Company Limited and Sino-Thai Engineering &amp; Construction Public Company Limited).</li> <li>- On June 16, 2017, MRTA signed the Concession Agreement with BSR Joint Venture.</li> <li>- On August 27, 2018, the construction of the project officially commenced, for a construction period of 39 months (3 years and 3 months). It was expected to complete and open for service in 2021.</li> </ul>
MRT Pink Line	<p><b>Khae Rai - Min Buri, with a distance of 34.5 km.</b></p> <ul style="list-style-type: none"> <li>- On May 30, 2017, the Council of Ministers resolved to approve the results of selection of the private entity and draft Concession Agreement for the MRT Pink Line Project, in collaboration with BSR Joint Venture (comprising BTS Group Holdings Public Company Limited, Ratchaburi Electricity Generating Public Company Limited and Sino-Thai Engineering &amp; Construction Public Company Limited).</li> <li>- On June 16, 2017, MRTA signed the Concession Agreement with BSR Joint Venture.</li> <li>- On August 27, 2018, the construction of the project official commenced, for a construction period of 39 months (3 years and 3 months). It was expected to complete and open for service in 2021.</li> </ul>

## 8) Procurement of Products or Services of Rail Business

### • Nature of Procurement of Products

The mass rapid transit system projects were awarded to the Company by the way of concessions from MRTA, a state agency established and existing under the “Mass Rapid Transit Authority of Thailand Act B.E. 2543 (2000)” to operate the mass rapid transit systems in Bangkok and its vicinity, including other designated provinces, with safety and efficiency. MRTA is a state enterprise under the supervision of the Minister of Transport. The Company specializes in the metro business, conducts the project feasibility studies, and submits its investment proposals for such projects with appropriate returns and conditions. The existing concession projects were awarded for investment, supply of rolling stocks, operation and maintenance, whereby the government sector invests in all civil infrastructure, namely, stations and facilities, tunnels, ventilation systems and trackwork, etc., while the Company invests in the railway systems, namely, rolling stocks, signaling and operation systems, communications and SCADA systems, power supply, automatic fare collection, platform screen door, and depot workshop systems, etc.

#### The M.R.T. Chaloen Ratchamongkhon Line Project (MRT Blue Line)

The Company engaged Joint Venture CKET as the MRT project manager (Project Manager) for the MRT Blue Line, Bang Sue - Hua Lamphong Section (from August 2000 to July 2009) to manage technical operations, such as procurement of the M&E Equipment as ordered from manufacturers and liaison with contractors and relevant authorities regarding the installation of the M&E Equipment. Upon expiration of the engagement agreement of CKET for the project management, the Company was able to efficiently administer and manage the MRT Project, as well as improve and develop the efficient service provision on its own. In regard to the supply and maintenance of the M&E Equipment, the Company engaged Lincas and Siemens to manufacture the M&E Equipment. Lincas and Siemens are responsible for the design, manufacture, supply, installation, testing, and commissioning of the M&E Equipment. The Company also engaged Siemens as a contractor for maintaining the M&E Equipment. In respect of the MRT Blue Line Extension Project, Hua Lamphong - Bang Khae Section and Bang Sue - Tha Phra Section, the Company engaged CH. Karnchang Public Company Limited as Project Manager, with Siemens having the duty to supply rolling stocks, power supply equipment, signaling system, control, and communications system. Moreover, the Company engaged Siemens as a contractor for maintaining the M&E Equipment of the MRT Blue Line Project for the whole route.

#### The M.R.T. Chalong Ratchadham Line Project (MRT Purple Line), Bang Yai - Rat Burana, Bang Yai - Bang Sue Section, (Khleng Bang Phai Station - Tao Poon Station)

The Company executed the Concession Agreement for the MRT Purple Line Project, Bang Yai - Rat Burana, Bang Yai - Bang Sue Section, (Khleng Bang Phai Station - Tao Poon Station), with MRTA, on a PPP Gross Cost basis, namely, the government sector invests in all civil works and the Company invests in the M&E Systems and the rolling stocks. The government sector shall make repayment in installments to the Company for the costs of the M&E Systems after the delivery of the ownership. In this regard, the Company will provide the operation and maintenance services according to standards as specified in the Agreement. In addition, the government sector is entitled to all fare box revenue and commercial development revenue from the utilization of the civil infrastructure and the railway systems and the government sector shall make repayment to the Company in the form of service fee for the O&M Services, for a contractual period of 30 years, divided into two phases, namely, Works under Phase 1: Design, supply, installation, testing of the M&E Systems and other related systems, including trial run to ensure its readiness for public service until the commencement of the Operation Service, by means of engagement of CH. Karnchang Public Company Limited as Project Manager. As for the implementation of Works under Phase 1 of the Concession Agreement, the Company, and CH. Karnchang Public Company Limited engaged MTJV (Marubeni-Toshiba Joint Venture) for the supply of rolling stocks, power supply equipment, signaling system, control, and communications systems, as well as maintenance service.

## 9) Environmental Impact of Rail Business

In respect of the metro business, the Company is committed to continue its environment-related activities in accordance with ISO 14000 standards, by implementing pollution prevention and control measures, mitigation of environmental impact and sustainable use of resources on the basis of three aspects of sustainable development, namely, society, economy, and environment. In addition, the Company reported its operational results in line with the index on the operational results regarding energy conservation and environmental preservation in accordance with the Energy Conservation Promotion Act (No. 2) B.E. 2550 (2007), the ministerial regulations on standards, criteria and procedures for energy management in designated factories and buildings B.E. 2552 (2009), as well as the energy management manual for sustainable development.

Regarding the proportion of electricity utilization in the metro business, the energy-saving management measure was then taken in 2019, in order to reduce emissions of carbon dioxide (CO<sub>2</sub>), the Company has adopted various measures, including public relations promotion measure, control measure, and technical change measure, namely, replacement of existing lamps with more efficient ones within MRT stations and Rama 9 Depot, etc. In 2019, a measure for use control and a measure for LED replacement for the existing lamps in Rama 9 Depot, and a control measure were implemented, as follows:

- Replacement of the existing lamps in Rama 9 Depot with LED lamps, thereby saving up to 65 percent of energy.

There was a measure to control the switching on and off of the light system, the seasonal air conditioned system to ensure that electricity would be utilized seasonably and efficiently for the M.R.T. Chaloem Ratchamongkhon Line (MRT Blue Line) and the M.R.T. Chalong Ratchadham Line (MRT Purple Line). Also, this was be provided greater convenience in services to the increasing MRT passengers.

Moreover, to alleviate the traffic problems, help preserve environment, and uplift the quality of people's life, the Company has further improved its operations in terms of management, as follows:

- Strictly complying with relevant legal provisions;
- Improving the train operations timetable to make it suitable for the increased number of the passengers;
- Making the public relations to support everyone's participation in energy saving;
- Controlling and improving risks or whatever which may be harmful to safety on the basis of risk assessment;
- In 2019, adding the number of trains for transporting the passengers with more efficiency according to the expanded route of the MRT Blue Line.
- Continuously reviewing the operating process in terms of policies, goals, action plans, and internal and external audits to ensure efficiency in the operating process.

Regarding the energy conservation and environmental preservation in the metro business, the Company has strictly complied with the government's relevant laws, such as, governing energy conservation and environment, and also adopted the Energy Management System (ISO 50001) and the International Environmental Management System (ISO 14001) from the opening of the MRT service, as well as simultaneously organizing relevant activities, participating in and listening to related parties' opinions to ensure proper understanding which would lead to sustainable development. It was for this reason that the Company received the standard management certifications as follows:

- ISO 9001:2015 Quality Management System;
- ISO 14001:2015 Environmental Management System;
- OHSAS 18001:2007 and TIS 18001:2001 Occupational Health and Safety Management Systems;
- Safety Management System from Ricardo Rail Limited.



Moreover, in 2019, the Company carried out the continuous and systematic energy management to achieve efficiency in the metro system through energy management which was suitable for the business and to ensure the environmental preservation on a concrete basis in the pursuit of sustainable development. For this reason, the Company was presented with the Thailand Energy Award in the category of transportation, by the Department of Alternative Energy Development and Efficiency, Ministry of Energy, showcasing its outstanding performance and playing a part in supporting the energy saving at the national level and serving as a role model for various organizations, as well as actively encouraging all relevant personnel's participation.

In addition, the Company has been paying attention to the potential environmental impact from the MRT services on the environment, quality of life, and lives of people and nearby communities, by strictly monitoring, preventing and mitigating the environmental impact, in accordance with the Environmental Impact Mitigation Measures and Monitoring Program-EMP, during the implementation of the MRT projects in service, namely, the M.R.T. Chaloem Ratchamongkhon Line Project and the M.R.T. Chalong Ratchadham Line Project, as well as submitting reports on its compliance with such measures to the Office of Natural Resources and Environmental Policy and Planning (ONEP) to monitor and follow up the environmental quality in key environmental issues as follows:

#### **(1) Air Quality**

The results of air quality measurement in the atmosphere around the projects showed that the total suspended particulate (TSP), particulate matter (PM10) and carbon monoxide (CO), nitrogen dioxide (NO2), and the total hydrocarbons (THC) did not exceed normal level.

#### **(2) Air Quality in MRT Stations and Trains**

The results of air quality measurement in the MRT stations and trains, during both peak and off-peak hours, showed that the total bacterial and fungal volume, ventilation rate, temperature, and relative humidity did not exceed normal level.

#### **(3) General Noise Level**

The results of general noise level measurement showed that the average noise did not exceed 70 dB(A), with the maximum level not exceeding 115 dB(A), which met the standard requirements.

#### **(4) Vibration Level**

The results of vibration level measurement did not exceed normal levels.

#### **(5) Effluent Quality**

The results of effluent quality measurement in stations, depot and administration building did not exceed normal levels. The wastewater treatment system could work efficiently according to its design.

#### **(6) Waste Management**

The results of waste management were found that segregation, collection and transport of waste for disposal were made efficiently in accordance with the management plan and applicable laws.

In addition to the environmental quality measurements, maintenance vehicles used in the depot area meet the EURO IV Standard, an emission standard for vehicles, which provides assurance that the use of such maintenance vehicles and the maintenance operations will in no way give rise to pollution at a hazardous level.

### 2.1.3 Commercial Development Business

The Company has carried out commercial development in relation to the expressway system by allowing the private entities and individuals to use the space for commercial operations in the vicinity of the expressway system for installing Intelligent Traffic Signs and advertising boards in various forms and for installing shops in the areas of toll plazas and engaging in other business, such as, use of the areas in the expressway system for installing 3G signal boosters, etc. In respect of commercial development of the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line), the Company also has operated and appointed its subsidiary, namely, Bangkok Metro Networks Limited (“BMN”), as the management representative in the commercial development of such MRT project, per the following details:

#### 1) Nature of Services

- **Commercial Development Relating to Expressway System**

As for the commercial development in the area of the expressway system, the Company and one of its subsidiaries, namely, NECL, allowed private entities and individuals to take on the lease of spaces for commercial operation, as follows:

- o Installation of Intelligent Traffic Signs and Advertising Boards

Private entities were allowed to install Intelligent Traffic Signs on the main routes and in front of toll plazas, and install advertising boards in various areas, such as, in front of toll plazas, toll booths, expressway columns, and expressway barriers, etc.

- o Retail Areas around Toll Plazas

Private entities and individuals were allowed to take on the lease of retail areas for providing service to expressway service users around Prachachuen, Srinagarindra, and Bang Pa-in Toll Plazas.

- o Other Business Operations

Private entities were allowed to use the expressway areas for installation of 3G signal boosters, etc.

- **Commercial Development Relating to Metro System**

The Company has appointed its subsidiary, namely, BMN, as the sole management representative in the commercial development of the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line), per the following details:

- o Procurement and/or Production of Advertising Boards

BMN, as the Company’s representative, has developed a variety of advertising media in terms of format, creative thinking, use of various innovations to make sure that the advertising media attract interest, create value added to advertisers’ products, enhance images of products and services, and build up recognition among consumers. As for the Modern Customer Journey which would evolve to the point of making a decision to buy a product and service (Individual Decision), the product owners must then create brand awareness as much as possible (Brand Awareness) through many different channels in this modern era. The selection of channels to create brand awareness depends on many factors, for instance, target group, convenient and rapid access, worthiness, attractiveness, etc. Therefore, the Company’s guidelines for development of advertising media have been given priority to media format development to ensure brand awareness attractive to the MRT service users and to maximize the use of customers’ budgets. Other than the development of advertising media, creation of value added to the Prime Areas also would be made, including creation of new environment in the existing areas to make them have high value, e.g., integrated use of air ventilations of the MRT stations together with passenger elevators or space on the roofs (Integrated Media) to enable such areas to create value for the Company.

o Lease of Retail Areas in MRT Stations

Nowadays, the behavior of traveling by the MRT system is increasing every year. The Company has recognized and placed importance on the development of retail space at the stations by developing the areas to be more beautiful, selecting the tenants with commitment to responding to the travelling behavior of the service users. Other than the commitment to response to the travelling behavior, the Company has also realized that the MRT system is an important part of travelling in Bangkok, therefore, the area development model does not only focus on selection of shops, but also includes the design which make the service users accessible and feel convenient, safe, comfortable, or choose as a meeting place or rest area for travelling.

o Provision of Service and Maintenance of Telecommunications System Equipment

In 2019, the Company additionally installed the telecommunications system equipment at another four underground stations, namely, Wat Mangkon Station, Sam Yot Station, Sanam Chai Station, and Itsaraphap Station, thereby rendering the total service stations in the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line) to 22 stations. In this regard, the Company boosted the efficiency in the signal receiving, distribution and transmission to become faster, as a consequence of the rapid change in technology.

## 2) Marketing and Competition of Commercial Development Business

### • Customer Characteristics and Target Customers

As a result of a variety of commercial services in the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line), different groups of customers or target customers vary according to service types, however, our top priority is ended customers or the MRT service users, therefore, customer characteristics and target customers for commercial development can be classified, as follows:

o Procurement and/or Production of Advertising Media of Various Forms

The rapid change in technology leads to change in consumer behavior. That is, consumers can have a quick access to information and highly rely on information in making decisions. In the selection of advertising media to create brand awareness, there are two main channels, i.e., use of service via agencies and purchase of advertising media from brand owners, depending on many different factors, for instance, objectives of the brand owners, requirement for other additional services, benefits and worthiness, relationship, etc. As for the advertising media customer groups in the MRT system, it results from purchase of advertising media via both channels. Currently, the percentage of advertising media purchase via agencies is higher than that from the brand owners. However, the percentage of the brand owner customers increased from 40 percent to 45 percent in 2019.

The top five groups of goods and services using the MRT advertising media are comprised of group of communications equipment (mobile phone), followed by groups of food and beverage, financial institutions, entertainment business and health and beauty business.

o Lease of Retail Areas in MRT Stations

Currently, the retail spaces in the MRT stations are popularly attractive to well-known brands which are more famous, as a result of rapid change in the growth rate of passengers and consumer behavior, together with needs for convenience, rapidity, easy access to services, brand owners have then improved service formats to be in line with behavior of the MRT service users.



o Provision of Service and Maintenance of Telecommunications System Equipment

The Company's customer groups are those who have obtained licenses to operate the telecommunications business from the Office of the National Broadcasting and Telecommunications Commission (the Office of the NBTC) to provide mobile phone services, both public and private sectors, comprising AIS, DTAC, TRUE MOVE, TOT, and CAT, each of which would hold the license to provide the service under the frequency category. The frequency services provided in the M.R.T. Chaloe M Ratchamongkhon Line Project (MRT Blue Line) include 850, 900, 1800, 2100, and 2300 MHz.

### 3) Marketing Policy and Strategies of Commercial Development Business

- **Service and Product Strategies of Commercial Development Business**

Commercial Development Relating to Expressway System

- o Intelligent Traffic Signs in the form of maps and text messages are provided to give traffic updates to expressway users, including advertising boards in front of toll plazas, barriers, expressway columns, and in front of toll booths.
- o Shops and public restrooms are provided to expressway users in 4 toll plazas of the Si Rat Expressway and the Udon Rattaya Expressway, namely, Srinagarindra Toll Plaza, Prachachuen Toll Plaza (inbound), Bang Pa-in Toll Plaza (inbound), and Bang Pa-in Toll Plaza (outbound).

Commercial Development Relating to Metro System

As a consequence of the rapid changes in society and technology by entering the era which technology plays a key role in everything, resulting in the change in consumer behavior, including the MRT service users, therefore, various commercial services in the MRT system have to be developed, improved and changed to be in line with the aforesaid changes accordingly, as follows:

- o In 2019, the Company modernized the advertising media by using digital media in lieu of static media in the prime areas and replaced sticker media in certain areas with Special Light Box to create value added and lift image for the brand owners, which built trust and reliability in the Company in a manner which the Company played a part in taking care of brand value of its customers, thereby resulting in the long-term customer relations management. Moreover, an addition of creative and innovative thinking enabled the MRT advertising media to raise awareness and reminder due to its format which could distinguish from other general media. This was a strategic key to differentiate itself from competitors in the market.
- o In development of retail areas, strategies to organize various activities in the areas of the Company's partners have been adopted, including activities useful to the service users, for example, book fair, artwork event, etc. Moreover, marketing communication was made via social media of various types or creative clip videos were produced to make the areas publicly known and to create the image of the retail areas in the MRT stations to be a part of daily journeys of Bangkok residents.
- o The rapid change in technology aroused the expectation and requirement of high efficiency in mobile phone service from service providers and service receivers. In 2019, the Company expanded the service areas to the M.R.T. Chaloe M Ratchamongkhon Line Project (MRT Blue Line), Hua Lamphong - Bang Khae Section and Bang Sue - Tha Phra Section (underground stations), to fulfill with their expectation and requirement of the efficient services. Furthermore, the Company drew up a plan to increase efficiency in the services to 18 stations which have been available in service to ensure that the services meet the same standard.

In addition to provision of the commercial services as mentioned above, provision of the event marketing service in the forms of public relations and sale of goods and services became highly popular since it did not require a high budget, and could specify the short-term use of the area, whereby the Company has designated the service areas in all MRT stations.

- **Corporate Image Promotion Strategies**

- o Giving back to the society, support of the government policies are regarded as an important mission which has been realized and prioritized by the Company through, such as, organizing activities to broaden knowledge of the youths, activities for reading promotion, provision of support to the government sector in public relations about its services, etc.

- **Distribution Strategies and Channels of Commercial Development Business**

- o The commercial services in the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line) have varied according to the service types, distribution channels are then differentiated by the service types.
  - Public relations media have sale channels via business alliances as agencies together with direct presentation to the brand owners.
  - Spaces for lease and service and telecommunications service are presentation of the spaces direct to the brand owners.

#### 4) Industrial Outlook and Competition of Business Development Business

- **Advertising Media**

The economic slowdown both at home and abroad was resulted from various factors in terms of economy, politics, natural disasters, budgets for advertising media must be therefore utilized carefully. As a result, the overall economy in 2019, when compared to that in the previous year, slightly grew by approximately 0.28 percent, whereby traditional media, namely, television, newspaper, and magazine, had the lower growth rate; however, the out of home media had the higher growth rate, due to the consumer behavior of more outdoor living. The media which had the highest growth rate included cinema, followed by transit media and outdoor media, respectively. That was, the growth rate of the transit media represented 5.87 percent resulting from more outdoor living, particularly during commuting time. For this reason, brand owners used an increase in budget to create brand awareness via this channel. Currently, the growth rate of the passengers using the mass rapid transit system was constantly high, including passengers of the MRT system, which has presently expanded its service to the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line), Hua Lamphong - Bang Khae Section and Bang Sue - Tha Phra Section, with greater service expansion from the suburban areas into the urban areas. Therefore, it was expected that in 2020, the number of service uses would be continuously high, which would have a positive effect on the business operations in the field of advertising media service.

- **Spaces for Lease and Service**

Despite the fact that technology nowadays plays a more key role in influencing consumer behavior in spending, together with goods service expansion to provide more rapid and convenient services to consumers, for instance, various kinds of delivery services which have been expanded rapidly.

Demand for spaces for provision of goods and services still continues to be high, evidenced by development of various projects (supply) as opened for service this year, and future projects, especially spaces of the projects surrounding the MRT routes, due to the conveniently accessible location. In this regard, the large project spaces mostly incur high rate of rental and service fees, brand owners then made an effort to look for new platforms to be easily reachable to consumers, but with incurring rental and service fee rates which allow the sustainable business operations in the long run and which would become potential spaces in the future. Hence, the retail shops in the MRT stations are more extremely attractive to renowned brand owners and SMEs because they are situated in the potential location. Also, a group of service users would be likely to grow every year, resulting from behavior of more frequently travelling by the mass rapid transit system and the expansion of the electric train routes to ensure connectivity of travelling with greater convenience and rapidity.

## 5) Procurement of Products and Services of Business Development Business

- **Nature of Procurement of Products**

The Company has obtained the concession from the Mass Rapid Transit Authority of Thailand (MRTA) for operation and commercial development in the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line), with the Company conducting commercial development in respect of 1) procurement and/or production of advertising media of various forms; 2) lease of retail areas in the MRT stations; 3) provision of service and maintenance of telecommunications system equipment; and 4) other commercial activities, by authorizing Bangkok Metro Networks Limited as the Company's representative to conduct the commercial development.

With respect to the expressways, the Company and one of its subsidiaries (NECL) allowed private entities and individuals to take on lease of expressway areas for installation of Intelligent Traffic Signs and various advertising boards, including retail areas around toll plazas, and other business activities, such as, the use of the expressway areas for installation of 3G signal boosters, etc.

## 6) Environmental Impact of Commercial Development Business

The Company also cares for and takes into account the environmental impact on the retail shop floors in the MRT system in order to prevent any impact on the environment, quality of life, and livelihood of people and communities, per details in Item 9: Environmental Impact of Rail Business.

## 2.2 Work Pending Delivery

- None -



### 3. Risk Factors

The Company realizes the significance of the management of risks from business operations under the changes of internal and external factors affecting its operational results. Risk management is considered a key instrument for business administration to ensure efficient and effective achievements and promote its competitiveness, as well as a key factor of the Good Governance. The Company thus arranges for the systematic risk management, monitoring, and measures to minimize risks continuously. The Board of Directors has appointed the Corporate Governance and Risk Management Committee for policy-level consideration on the adequacy and appropriateness, with the Management to supervise the overall risk management process of the organization and perform daily routine work on behalf of the Corporate Governance and Risk Management Committee to monitor, evaluate and prepare a report on risk management to the Board of Directors for information.

In addition, the Company has also prepared an annual risk management plan, a risk management handbook as guidelines in the operations, and regularly monitors, evaluates, reviews risks every quarter to be in line with the ever-changing internal and external circumstances, including a backup plan in case of emergency, in order to ensure prompt action in solving problems and coordination with relevant units at all times. The risk management policy of the Company is as follows:

1. To adopt a risk management process in accordance with international standards or practices to ensure the efficiency of risk management, implementation and development in the same direction on an enterprise level in line with the business operation policy of the Company.
2. To treat the risk management as part of work, significant decision-making regarding management, and strategic plan to achieve the specified objectives, goals, missions and vision of the Company.
3. To carry out proactive risk management to manage risks which may result in the Company's loss of interests and opportunities.
4. To delegate risk management as the staff's responsibility at all levels and manage risks within their work units and the organization to contain risks at an adequate and appropriate level.
5. To determine guidelines for prevention or reduction of risks at a level acceptable to the Company in order to formulate plans to manage and control risks in an acceptable level. All work units must consider the justification of expenses or costs to implement risk management measures in comparison with expected benefits.
6. To efficiently communicate the risk management within the Company for staff's effective learning, development, and compliance.
7. To prepare an annual risk management plan subject to consideration and approval of the Corporate Governance and Risk Management Committee in respect of sufficiency and appropriateness to the current business circumstances.
8. To regularly follow up and assess the results of risk management to make sure that risk management is duly and properly conducted.

Risk factors which may materially affect the Company's business operations are as follows:

### 3.1 Systematic Risk

#### 3.1.1 Risk from Business Operations under Agreements with Government Sector and Government Policy

The Company operates its businesses under the relevant Concession Agreements subject to the supervision of the government agencies, differences in the contractual parties' interpretations in terms and conditions of the Concession Agreement may arise in various matters, such as, revisions of toll or MRT fare rates, consideration to extend the concession periods under the Concession Agreements and responsibility for costs under the Agreements, which may require a certain period of time to come to a solution, and may impact the Company's business operations.

Moreover, the political uncertainty and changes in government administration from the political party in charge may result in changes in policies, relevant laws or regulations, that possibly affect consideration to extend the concession periods under the Concession Agreements or terms and conditions stated, thereby rendering EXAT or MRTA unable to perform its obligations under the relevant Agreements or may require the Company to proceed beyond those specified in the relevant Agreements or undertakings.

The Company's core revenue is partial from the expressway business under the Second Stage Expressway Agreement, together with its concession terms of 30 years ending in February 2020. Despite the conditions of the Agreement specifying that prior to the termination of the contract term of 30 years, the Agreement may be renewed twice of 10 years each, subject to the conditions to be agreed upon between EXAT and the Company.

The Company submitted a request for renewal of the Second Stage Expressway Agreement to EXAT in 2015.

Subsequently, in September 2018, the Supreme Administrative Court rendered the judgment requiring EXAT to compensate NECL for the impact from the competing road. The Council of Ministers' Meeting resolved on October 2, 2018 to acknowledge the report on the judgment of the Supreme Administrative Court, whereby the Council of Ministers was of the opinion that to mitigate the loss and damage which would occur to the state and to protect the utmost benefits of the government sector, such government agency may enter into negotiation with the disputing parties to mitigate the damage of the state. To ensure the justice for the people, provided that such negotiation shall be conducted transparently and legitimately by mainly taking into account the benefits of the nation.

EXAT negotiated with the Company and NECL to solve the disputes of the Second Stage Expressway Project (the Si Rat Expressway, including Sector D) and the Bang Pa-in - Pak Kret Expressway Project (the Udon Rattaya Expressway) until the settlement could be reached, and complied with the process in Section 47 of the Private Investment in State Undertakings Act B.E. 2556 (2013). The agreement for settlement of the disputes has already been approved by EXAT's Board of Directors and the Supervisory Committee for the Second Stage Expressway Project and the Supervisory Committee for the Bang Pa-in - Pak Kret Expressway Project. Furthermore, the Office of the Attorney General already completed review and consideration of the draft Second Stage Expressway Agreement (Amendment) and the draft Bang Pa-in - Pak Kret Expressway Agreement (Amendment), without raising any objection to the amendment of the draft agreements as submitted by EXAT for its review and consideration.

On February 18, 2020, the Council of Ministers' Meeting has resolved to approve the amendment of the Agreements to settle the disputes of the Second Stage Expressway Project (the Si Rat Expressway, including Sector D) and the Bang Pa-in - Pak Kret Expressway Project. In this regard, the Company and EXAT have already signed the Second Stage Expressway Agreement (Amendment) while NECL and EXAT have already signed the Bang Pa-in - Pak Kret Expressway Agreement (Amendment) on February 20, 2020.

In addition, the Company has established a joint operating system with the government agencies both the administrative and operation levels, by sharing sufficient information to ensure good understanding towards each other, as well as closely and regularly monitoring the political situations and changes in policies, and reasonably reviewing the strategies and operational plans to be suitable for the situations and their mutual interest in the long run.

### 3.1.2 Risk Relating to Revenues less than Projections

The Company provides both expressway and metro services, therefore, the Company's core revenues are tolls and fares, which may be affected by several external factors beyond the Company's control, such as metro network expansion, improved feeder systems, fare rates of other available alternative transit systems, road traffic congestion, oil prices, and growth of real estate and condominium projects as well as other businesses surrounding the metro routes, which would serve as people's destinations, etc., all of which will affect the volume of service users. Moreover, the Company generates commercial development revenue, which may vary depending on the local and overseas economic conditions, competition in advertising media and retail space lease business, as well as the progress in opening of retail shops in the stations, several factors of which are beyond the Company's control. Therefore, should the Company's revenues differ from study results or projections, it may affect the liquidity and serviceability management with respect to the existing obligations owed to the lending financial institutions or creditors according to the mutually agreed schedule, such as, interest expenses, scheduled repayment of loans, operating expenses under the Agreements, as well as remuneration payable to MRTA, etc.

To minimize such risk, the Company has established a unit to closely monitor any impact which may affect various and formulated appropriate strategies. In addition, the Company can limit potential impacts from risk factors, such as oil prices, road traffic congestions, and fare rates of other available alternative transit systems, due to the Company's full services of expressways and metro, both of which are considered substitute products. With respect to the commercial development, the Company will develop new advertisement media to increase its commercial development revenue, such as advertisement media management via the Passenger Information Display System (PIDs), platform billboard, and digital media, including development of more retail space.

### 3.1.3 Risk from Interest Rate and Foreign Exchange Rate Fluctuations

Given that the Company remains obliged to service interest-bearing liabilities to lenders, and the Company plans for future investment in many projects, therefore, it may require a large amount of long-term loans. Thus, interest expenses are considered the significant expenditures for the Company. The increased interest rates on loans may affect the Company's operational results due to the floating interest cost in respect of the certain credit facility, thereby putting the Company at risk by bearing an increase in expenses from interest rate fluctuation or increase in the money market. However, the Company has managed such risk from interest rate fluctuation, by arranging for the loan structure, divided into loans at floating interest rates and loans at fixed interest rates including plans to issue debt instruments or debentures as suitable to the economic conditions and the Company's view of the future interest rates.

In 2019, the Company issued and offered for sale debentures in the total amount of Baht 5,000 Million in replacement of the matured existing debentures, at the fixed interest rate, to reduce the risk from interest rate fluctuation which may increase in the future.

Moreover, the Company entered into a conversion contract for partial floating interest rates to fixed interest rates during the period which the interest rates in market had gradually declined, in order to reduce the potential risk from interest rate fluctuation in the future. However, the Company still maintained a partial loan bearing the floating interest rate to ensure consistency with the presently economic condition which has not yet given a signal of an increase in interest rate, thereby resulting in a decrease in financial cost. In this regard, the floating interest rate would be converted into fixed interest rate to minimize the risk in the future in due course.

In addition, the Company incurred expenses in foreign currencies, for example, the maintenance cost of the M&E Equipment, and insurance premiums, part of which had to be paid in foreign currencies. Thus, should the Baht value depreciate, the Company's expenses will increase accordingly. However, the proportion of its expenses in foreign currencies is low. The Company will still consider reducing risk from the exchange rate, such as negotiations for reduction of foreign currency expenses and buying forward, etc.



#### 3.1.4 Risk from Serious Accidents, Public Unrest, or Natural Perils

The Company's businesses of both construction and management of the expressways and metro are exposed to an event or external factor which results in an emergency, for example, perils, serious accident, earthquake and such events which may be caused by terrorism, sabotage as bombing, riot, including gathering of insurgent groups, which may force the Company to suspend its services, thereby giving rise to loss of revenue, damaging assets, tarnishing image and destroying reliability of the Company. For this reason, the Company has set forth emergency plans in response to any such events which may suddenly occur, for example, removing various significant and essential M&E equipment for management of the expressways for storage at the safe place, as well as arranging for staff training to ensure that the staff in charge will be able to take prompt actions to resolve such emergency, for instance, practicing emergency drills of all relevant units inside and outside the Company by the way of simulation of such various situations as emergency in the metro stations from bomb threat and bomb blast in the metro stations, train breakdown and stop inside the tunnel, fire in the rolling stock, metro stations or tunnel, etc., as well as establishes a unit for monitoring, alerting and coordinating with relevant agencies to prevent the occurrence of any serious accident and to be ready for rescue operations; installation of metal detectors, CCTVs, and provision of security staff in all areas.

The Company has taken out insurance against property all risks, business interruption, public liability, and terrorism in respect to the metro service business.

#### 3.1.5 Risk in respect of Personnel

As the government realizes the significance for solving problems on traveling and traffic in Bangkok by using the mass rapid transit system, it thus expedited the expansion of the metro network and the connecting system to other transportation systems. Therefore, it would be highly possible that there would be governmental organizations or private agencies operating the mass rapid transit system business which require additional personnel with knowledge, expertise, and skills in the technical field in the rail business. As a result, it would be likely that the Company's main personnel would be enticed away from the Company.

The risk from a shortage of competent personnel is considered as one of the Company's main risks, as they are a key factor to drive our organization to success. The Company gives priority to the personnel risk management, starting from the nomination and selection of good and qualified personnel suitable for the Company; continuous staff training courses to improve knowledge, skills, and abilities in various fields necessary for the performance of work based on each staff's position and designated duties; encouragement of the staff morale; consideration of appropriate and fair remuneration and welfare; organizing outing activities to encourage staff to love, unite, feel connected with the organization; review and revisions of the operation process and work system to ensure readiness at all times, as well as preparation of the succession plan, whereby the Company has prepared the succession plan and appointment of a working group comprising high-level executives to set up guidelines in the selection of staff to ensure the availability of personnel, both in the executive and supervisor levels, in order to prevent the risk from a shortage of personnel having knowledge, expertise and technical skills for specific work. The Company has arranged for collection of the body of knowledge for specific work and extended the results to the knowledge management program, in order to continuously improve the work process.

#### 3.1.6 Risk in respect of Information Technology Security

With the Company's commitment to providing the services of the expressway system and the mass rapid transit system with safety, convenience, rapidity, reliability, punctuality and efficiency, the Company then needs to employ the cutting-edge technology to support its operations, including the provision of the services with the highest efficiency in a constant manner, which there may be a risk from disruption of main work systems, such as the collection control system, traffic control system, electricity system, and equipment (electrical power system, signaling system, communications system, SCADA system, platform screen door system, automatic fare collection system, signage system) and the Company's internal computer system (Back Office). If there is an attempt to have unauthorized or unapproved access to the information technology system of the Company, from both internal and external persons, including computer virus attacks, there is a risk which the fare collection system may break down; the fare management system may be disrupted and out of service.

The Company sets up an emergency plan to deal with possible incidents which may have an impact on system equipment, comprising preventive and corrective plans for system equipment, on a regular basis, for prevention and arranging for staff in charge to ensure their access to tackling problems immediately in case of emergency in the work systems; there is a process of replaceable cards management in the case where the fare management system is not able to record entry-exit to and from the gates. The system is designed to enable all fare collection equipment to collect information in a stand-alone manner in the case where the server is not able to collect information on traveling of passengers. Manuals are prepared to specify procedures and methods for the safety of the information technology system. Furthermore, the Company formulates the policy to improve the toll collection system at the control center level in accordance with the ISO/IEC 27001:2013 Information Security Management System standard in order to provide a higher degree of security to the information technology of the toll collection system at the control center level, and also defines a standard for critical information management to ensure the business continuity, enhancement of the trust in the organization on the global stage. The Company has obtained certification of the ISO/IEC 27001:2013 standard for development of the process and Information Security Management System (ISMS) in accordance with the ISO/IEC 27001:2013 international standard for the toll collection systems at the Si Rat Expressway Control Center (CCB 2) and the Si Rat - Outer Ring Road Expressway Control Center (CCB7), as well as developing personnel in the field of information technology security management to enable them to perform works under the work process / system so developed, including following up news on cyber threats for taking precautions and making preparedness to handle at all times.

## 3.2 Corporate Specific Risk

### 3.2.1 Risk from Legal Disputes

The Company and NECL had a total of 19 disputes with EXAT on a different interpretation of several matters, such as adjustment of toll rates and responsibility for costs under the Agreements. The disputes were referred to the Arbitral Tribunal in accordance with the dispute settlement procedures under the Agreements and in the Administrative Court.

On February 18, 2020, the Council of Ministers' Meeting has resolved to approve the amendment of the Agreements to settle the disputes of the Second Stage Expressway Project (the Si Rat Expressway, including Sector D) and the Bang Pa-in - Pak Kret Expressway Project. In this regard, the Company and EXAT have already signed the Second Stage Expressway Agreement (Amendment) while NECL and EXAT have already signed the Bang Pa-in - Pak Kret Expressway Agreement (Amendment) on February 20, 2020.

### 3.2.2 Risk from Return on Investments in Companies less than Projections

The Company may be exposed to a risk from return on investments in companies less than projections in the event that the operational results of such companies whose shares were held by the Company do not meet the projections. To minimize such risk, the Company will take into account the proportion of investments in companies in line with the Company's investment policy whereby those investments can be converted into cash when there are appropriate business opportunities and occasions.

In 2019, the Company sold 32.9 million shares in TTW Public Company Limited in the amount of Baht 399 Million, as a result, its shareholding percentage therein decreased from 19.29 percent to 18.47 percent, and also reclassified investments from investments in associates recognizing share of profit or loss according to the shareholding percentage to other long-term investments in available-for-sale securities, which a change in market capitalization would be recorded on the end date of the accounting period. The price difference is treated as unrealized gain or loss indicated in the shareholders' equity.

In this regard, the decrease in the shareholding percentage to be the investment in the available-for-sale securities shall be deemed to minimize a risk from return on investments in companies less than projections in the event that such company's operational results fail to meet the projections. However, the Company sent its representatives to be members of the board of directors of the companies invested by the Company to ensure the Company's participation in their management and acknowledge the operational results of the companies invested by the Company on a regular basis.

### 3.2.3 Risk Relating to Fluctuation of Cost of Rail Business

Costs of rail business comprise the cost of farebox and cost of train service, which are deemed the main expenditure of the Company's business operations, comprising repairs and maintenance costs for the metro and civil infrastructure, public utility cost, personnel cost, and payment of remuneration from fare revenue.

As for the maintenance costs under the M&E contract, the Company's contract is in foreign and Baht currencies, subject to adjustment based on the Consumer Price Index as specified in the contract. Given the long-term contract, the Company will be then exposed to risk due to changes in such indices.

The public utility cost mainly comprises the cost of electricity used at the metro stations and for train operations. The cost of electricity may be adjusted according to the electricity rates of the Metropolitan Electricity Authority, which may result in the Company's increased cost.

Therefore, the Company's costs of rail business in respect of the cost of farebox vary according to the aforesaid costs. However, in the past, the Company remained able to effectively control its cost of farebox. Besides, the cost of farebox is mostly fixed cost, not varying directly according to the increased volume of passengers, provided that there is no material change in the volume of passengers to the extent that the Company is required to add the number of trains for service to enhance the capacity to accommodate the passengers.

In the Concession Agreement for the MRT Blue Line Project, the service fees for the O&M Services payable by MRTA to the Company are calculated and based on the projections of operating expenses estimated by the Company, whereby such service fees may be adjusted only based on the actual inflation rate and electricity charge rate under the method specified in the Concession Agreement. Therefore, profits from the Operation Service will vary according to the Company's ability to manage the actual costs and expenses to mirror the specified projections. Should the actual costs and expenses be different from the projections, the Company's operational results may be affected since the Company is not able to request compensation or increase the service fees from MRTA.

However, with the expertise and experience in the management of the MRT Blue Line Project, the Company is confident in its ability to efficiently manage costs and expenses for operations to be close to the projections.

### 3.2.4 Risk from Engagement of Outsourced Experts as Main Contractors for Supply and Maintenance of the M&E Equipment

The Company has accepted the transfer of the agreement for the procurement of the M&E Equipment and an agreement for maintenance of the M&E Equipment with main contractors, namely, Siemens Limited, Thailand, and Japan Transportation Technology (Thailand). Thus, in the event that such outsourced expert group, as such main contractors, is unable to provide services under the agreements to the Company or there is any change in the maintenance agreement, the Company's business operation may be affected and in the event that the trains cannot be opened for service, the Company's image may be affected.

In this regard, the Company has managed the risk by study information from the members of the international federations of public transport operators, e.g., UITP, APTA, NOVA Group of Metros, including the advice from Lloyd's Register Rail, the highly experienced consultant, it is then possible for the Company to select and procure other manufacturers' M&E Equipment which is compatible with its existing system. The Company also formulates the strategic plan in developing the quality of its personnel to ensure they have sufficient capabilities for working with local and overseas equipment manufacturers and contractors in the maintenance and repair of the M&E Equipment and the rail system to ensure efficiency without reliance on the sole existing manufacturer.



### 3.2.5 Risk from Work Operations of Expressway Construction and Management Business

The Company takes into account the risk from operations of expressway construction and management business which may be resulted from primary factors, i.e., personnel, work system, operation system and external factors, which cause error or insufficiency of work procedures, employees, work system or information technology system, including employees' fraud and events or external factors, which may give rise to monetary and non-monetary damage, namely, damage to reputation or security of the Company. Therefore, it is greatly necessary to have a thorough supervision system with due care. The Company has then arranged for a specific unit having duties to monitor and maintain the routes and toll collection system in accordance with the operation standards, which can be assured by the experience and expertise of staffs in charge from all divisions, thereby leading to the quality and availability of efficient, complete and continued service.

In addition, the Company has also established the preventive measure for the significant structures of the expressway systems so as to be available for full-time service by way of drawing up a plan for inspection of the structures of the Si Rat Expressway, the Udon Rattaya Expressway, and the Si Rat - Outer Ring Road Expressway to be in line with the inspection by JMI Pacific Co., Ltd., a designing company with expertise in structural inspection. The monitoring, surveillance, and maintenance were conducted to ensure that there would be no impact on the use of the expressways. As for to the toll collection, communication and traffic control systems, which are important to its operations, the Company has provided the preventive maintenance as well as the data backup system, the power backup system and the management of purchase of spare materials.

Moreover, the Company may be exposed to the risk from non-functional toll collection equipment which may arise from various causes, such as, inoperative electrical system due to a power failure on the part of the Metropolitan Electricity Authority, error processing by the operating system, etc. In this regard, the Company gives high priority to such risk management by arranging for power backup system, a security system for prevention of access to significant work systems by any third parties, determination of authorization levels of access to information and equipment, and installation of virus scan software and data backup in the operating system to ensure instant substitution.

### 3.2.6 Risk from Delayed Construction and Operation of the Projects

The Company executed the Concession Agreement for the MRT Blue Line Extension Project with the Mass Rapid Transit Authority of Thailand (MRTA) on March 31, 2017, whereby the Company shall have duties in supply, installation, and test run and commissioning of the M&E Systems for the MRT Blue Line Extension Project, provided that such M&E Systems shall be connected with those of the M.R.T. Chaloem Ratchamongkhon Line Project in order to provide the train operation service in phases as planned. The Company managed such risk by entering into an agreement engaging CH. Karnchang Public Company Limited as Project Manager, as well as for supply, installation, and test run and commissioning of the M&E Systems for the Project. At present, there remained the risk from the operation of Phases 2 and 3 of the Project. Nevertheless, the overall progress of the MRT Blue Line Extension Project was currently as planned, with three phases specified as follows:

- Phase 1: Bang Sue Station - Tao Poon Station, under the Agreement scheduled for service opening by August 15, 2017, was already opened for service on August 11, 2017;
- Phase 2: Hua Lamphong Station - Lak Song Station, under the Agreement scheduled for service opening within 30 months, was already opened for service on September 29, 2019; and
- Phase 3: Tao Poon Station - Tha Phra Station, scheduled for service opening within 36 months (in March 2020), was opened for a trial run in December 2019, with the official service opening expected to take place in March 2020.

## 4. Property Used in Business Operations

### 4.1 Main Assets

As of December 31, 2019, the Company and its subsidiaries had main assets used in business operations, as follows:

(Unit: Million Baht)

Class of Assets	Net Book Value
1. Building and equipment	311
2. Rights to operate completed expressway sectors	32,253
3. Rights to use sites for expressway construction	62
4. Intangible assets under the Concession Agreement for the MRT Blue Line Project	42,339
<b>Total</b>	<b>74,965</b>

The main assets of the Company and its subsidiaries as indicated above can be classified into class of assets and companies, as follows:

#### 4.1.1 Building and Equipment

As of December 31, 2019, the book value of the building and equipment as per the consolidated financial statements of the Company and its subsidiaries was as follows:

(Unit: Million Baht)

Company	Net Book Value	Ownership	Encumbrance
The Company	269	Owner*	None
NECL	17	Owner**	None
BMN	25	Owner	None
<b>Total</b>	<b>311</b>		

**Remarks:** \* This refers to the building, construction improvement, and certain structures of the Second Stage Expressway System. Despite the fact that the title to such building is owned by EXAT, the Company is granted the right to use such building to operate the Second Stage Expressway Project under the conditions as specified in the Agreement. The Company takes on the lease of a building for use as its head office located at No. 587 Sutthisarn Road, Ratchadaphisek Subdistrict, Dindaeng District, Bangkok 10400, at the rental rate of Baht 10,000 per month.

\*\* NECL does not own any property, plant, and equipment but takes on the lease of a building for use as its head office located at No. 587 Sutthisarn Road, Ratchadaphisek Subdistrict, Dindaeng District, Bangkok 10400, at the rental rate of Baht 10,000 per month. NECL uses the Bang Pa-in - Pak Kret Expressway Control Center Building, which is part of the Bang Pa-in - Pak Kret Expressway Project, to supervise the operations. Despite the fact that the title to such building is owned by EXAT, NECL is granted the right to use such building to operate the Bang Pa-in - Pak Kret Expressway Project under the conditions as specified in the Agreement.

#### 4.1.2 Rights to Operate Completed Expressway Sectors

As of December 31, 2019, the book value of the rights to operate completed expressway sectors as per the consolidated financial statements of the Company and its subsidiary was as follows:

(Unit: Million Baht)

Company	Net Book Value
The Company	27,249
NECL	5,004
<b>Total</b>	<b>32,253</b>

The rights to operate completed expressway sectors are considered the costs of construction of the Si Rat Expressway, the Si Rat - Outer Ring Road Expressway, and the Udon Rathaya Expressway, with the details as of December 31, 2019, comprising:

(Unit: Million Baht)

Class of Assets	Net Book Value	Ownership	Encumbrance
Si Rat Expressway (Sectors A, B and C)	400	EXAT	None
Si Rat Expressway (Sector D)	2,960	EXAT	None
Si Rat - Outer Ring Road Expressway	23,456	EXAT	None
Udon Rathaya Expressway	5,000	EXAT	None
Project costs during construction	437	EXAT	None
<b>Total Net Book Value</b>	<b>32,253</b>		

Given that the Expressway Agreements above are on a BTO (Build, Transfer and Operate) basis, the title to all expressways, including various permanent constructions in relation to or used in connection with the expressway systems, shall be vested in EXAT immediately upon construction by the Company and NECL. Upon opening for service, the Company and NECL are entitled to utilize such property and shall have the duty to keep such property maintained throughout the terms and conditions of the Agreements. The Second Stage Expressway Agreement (Si Rat Expressway) has a term of 30 years from March 1, 1990, and may be renewed twice of 10 years each, subject to the conditions to be further agreed upon. The Agreement for the Extension of the Second Stage Expressway System (Sector D) has a term of 30 years from April 22, 1997. The Si Rat - Outer Ring Road Expressway has a term of 30 years from December 15, 2012. The Bang Pa-in - Pak Kret Expressway Project Agreement (Udon Rathaya Expressway) has a term of 30 years from September 27, 1996, and may be renewed twice of 10 years each. These Agreements require the Company and NECL to be responsible for expenses relating to toll collection, traffic management and rescue operation on the expressways, including the costs of maintenance of the expressways under the relevant Agreements throughout the terms and conditions of the Agreements.

On February 18, 2020, the Council of Ministers' Meeting agreed to amend the Agreements for Settlement of the Disputes between the Company/the subsidiary and the Expressway Authority of Thailand (EXAT), and on February 20, 2020, the Company/the subsidiary and EXAT signed the Second Stage Expressway Agreement (Amendment) and the Bang Pa-in - Pak Kret Expressway Agreement (Amendment), which significantly amended as follows:



Expressway	Toll revenue sharing EXAT : the Company / the subsidiary	Renewal period	Remaining period of time for entitled to renewal *
The Second Stage Sector A B C	The First Stage and the Second Stage Sector A B 60 : 40 Sector C 0 : 100	15 years 8 months to October 2035	4 years 4 months
The Second Stage Sector D	0 : 100	8 years 6 months to October 2035	11 years 6 months
Bang Pa-in – Pak Kret	0 : 100	9 years 1 month to October 2035	10 years 11 months

\* The remaining periods of time entitled to renewal under the existing Agreements

Revision of fixed toll rates every 10 years from September 1, 2018 for the Second Stage Expressway Agreement, and revision of toll rates every 10 years from November 1, 2018 for the Bang Pa-in - Pak Kret Expressway Agreement, in accordance with the agreements.

#### 4.1.3 Rights to Use Sites for Expressway Construction

As of December 31, 2019, the book value of the rights to use sites for expressway construction as per the consolidated financial statements of the Company was as follows:

(Unit: Million Baht)

Company	Net Book Value
The Company	62

The rights to use sites for expressway construction are considered as a part of the rights to operate completed expressway sectors. The Company recorded the initial costs of the rights to use sites for expressway construction at the costs equivalent to the present value of the encumbrance in payment of compensation for site acquisition cost to EXAT under the Second Stage Expressway Agreement after initial recognition of the rights to use sites for expressway construction which showed the value at costs, less accumulated amortization. The Company amortized the rights to use sites for expressway construction as expenses in the income statement based on the volume of vehicles using service.

#### 4.1.4 Intangible Assets under the Concession Agreement for the MRT Blue Line Project

As of December 31, 2019, the book value of intangible assets under the Concession Agreement for the MRT Blue Line Project as per the consolidated financial statements of the Company and its subsidiary were as follows:

(Unit: Million Baht)

Company	Net Book Value
The Company	41,999
BMN	340
<b>Total</b>	<b>42,339</b>

The intangible assets under the Concession Agreement for the MRT Blue Line Project are considered the costs of construction of the MRT Blue Line Project, with the details as of December 31, 2019, comprising:

(Unit: Million Baht)

Company	Class of Assets	Net Book Value	Ownership	Encumbrance
The Company	M&E Equipment	28,324	Owner	None
The Company	M&E Equipment and leasehold improvements, telecommunications system equipment, and advertising system equipment in metro stations	929	Owner	None
BMN	M&E Equipment and leasehold improvements, telecommunications system equipment, and advertising system equipment in metro stations	338	Owner	None
The Company	Project costs during construction	12,746	Owner	None
BMN	Project costs during construction	2	Owner	None
	<b>Total Net Book Value</b>	<b>42,339</b>		

## 4.2 Investments in Other Companies

### 4.2.1 Summary of Investments as per the Financial Statements

As of December 31, 2019, the book value of investments in other companies as per the Company's separate financial statements was as follows:

(Unit: Million Baht)

Company	Book Value under Cost Method	Portion of Investment in each Company (percent)	Paid-up Capital	Type of Investments	Nature of Business Operations
1. Northern Bangkok Expressway Company Limited	2,604	99.99	5,250	Subsidiary	- Construction and operation of the Bang Pa-in - Pak Kret Expressway Project
Less: Provision for impairment of investments	(2,450)				
Net investments	154				
2. Bangkok Metro Networks Limited	495	89.67	254	Subsidiary	- Development of lease retail spaces in the metro stations and the basement level of the park and ride facility
Less: Provision for impairment of investments	(16)				- Procurement of advertising boards or media in the metro stations and inside the trains
Net investments	479				- Provision of service and maintenance of telecommunications system equipment in the metro stations
3. TTW Public Company Limited	4,061	18.47	3,990	Other Company	- Production and distribution of tap water
4. CK Power Public Company Limited	2,929	16.17	8,129	Other Company	- Investment in other companies (Holding Company) operating the energy business
5. Eastern High-Speed Rail Linking Three Airports Company Limited	400	10.00	4,000	Other Company	- Development of electric railway projects

#### 4.2.2 Policy on Investment and Management in the Subsidiaries

The Company has the policy to invest in businesses which are related, similar, or beneficial, and support the Company's business operations, in order to provide opportunities and long-term yields, and strengthen the Company's stability and operational results. The investment policy shall be as follows:

1. To invest in projects or acquire ordinary shares in project operators, in a manner of long-term investments;
2. To invest up to the minimum proportion to allow the Company to participate in setting out policies, monitoring and reviewing operations of such companies so invested;
3. Not to invest in any project giving rise to environmental impact or contrary to the good moral of the society.

As of December 31, 2019, the Company invested in the subsidiaries and other companies, as follows:

##### 1) Northern Bangkok Expressway Company Limited ("NECL")

The Company established NECL in 1996, by holding 99.99 percent of its shares. The benefits to be derived shall be in the form of a dividend from investment in shares of NECL. Due to the impact on NECL from the government policy for construction of the competing road, NECL's revenue did not meet its projection. In this regard, NECL's operational results continued to sustain a loss to the extent that the accumulated loss exceeded its equity, resulting in shareholders' deficit. In 2003, NECL, therefore, increased its registered capital by Baht 3,000 Million to become the registered capital of Baht 6,000 Million. At present, NECL called for share payment of 75 percent of the increased registered capital of Baht 3,000 Million. NECL has started to generate profits since 2013 onwards. The Company has assigned its five executives to be members of NECL's board of directors, from a total of six directors of NECL. In case NECL would take any actions which may significantly affect the Company, NECL would be required to seek prior approval from the Company's Board of Directors' Meeting. Furthermore, the Company is also the service provider for all operations of NECL.

As of December 31, 2019, NECL's registered and paid-up capital was Baht 5,250 Million. The Company's shareholding in NECL was 99.99 percent of its registered capital.

##### 2) Bangkok Metro Networks Limited ("BMN")

The Company established BMN on February 25, 2009, to operate the businesses of procurement and production of advertising media in various forms inside the metro stations and inside the trains, lease of retail spaces in the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line) stations and spaces in the basement level of the Lat Phrao park and ride facility. In addition, BMN also provides service and maintains telecommunications system equipment inside the metro stations. Subsequently, in October 2018, the Company, who shall be exclusively entitled to commercial development in the M.R.T. Chaloem Ratchamongkhon Line Project in accordance with the Concession Agreement for the MRT Blue Line Project dated March 31, 2017, entered into an agreement engaging BMN as a management representative for all commercial development in lieu of granting of the commercial development right.

As of December 31, 2019, BMN's registered and paid-up capital was Baht 254 Million, whereby the Company holds shares in BMN representing 89.67 percent of all BMN's shares sold.

In this regard, the Company has a control policy or participates in setting out the significant policies on the business operations by assigning its five representatives to be members of BMN's board of directors, from a total of seven directors of BMN.



### 3) TTW Public Company Limited (“TTW”)

The Company invested in TTW which operates the business of production and distribution of tap water to the Provincial Waterworks Authority in the vicinity of Nakhon Pathom Province and Samut Sakhon Province, under the Water Purchase and Sale Agreement with the Provincial Waterworks Authority with a 30-year contract term from July 21, 2004. TTW invested in Pathum Thani Water Co., Ltd., representing 98 percent of its registered capital, whereby such company operates the business of production and distribution of tap water in the vicinity of Pathum Thani and Rangsit, under the Water Purchase and Sale Agreement with the Provincial Waterworks Authority with a 25-year contract term from October 15, 1998. TTW also invested in Thai Water Operations Company Limited which operates the business of operation and management of tap water production and distribution systems and wastewater treatment service provisions, whereby TTW holds shares representing 68 percent of its registered capital. In addition, TTW invested in the energy business by holding 24.98 percent of shares in CK Power Public Company Limited, a company investing in other companies operating the energy business. The benefits to be derived by the Company from investment in TTW shall be in the form of dividend income.

The Company, as a shareholder, assigned its representative to be a member of the board of directors of TTW. As of December 31, 2019, the Company held shares in TTW representing 18.47 percent of its registered capital.

### 4) CK Power Public Company Limited (“CKP”)

The Company invested in CKP, which operates core business by investing in other companies (Holding Company) operating the business of production and distribution of electricity from various types of energy. As of December 31, 2019, CKP invested by holding shares representing 61.33 percent in SouthEast Asia Energy Limited; 30 percent in Nakhon Ratchasima Solar Limited; 30 percent in Chiangrai Solar Limited; 100 percent in Bangkhenchai Company Limited; 65 percent in Bangpa-in Cogeneration Limited; and 37.50 percent in Xayaburi Power Company Limited. The benefits to be derived by the Company shall be in the form of a dividend from the investment.

The Company, as a shareholder, assigned its representative to be a member of the board of directors of CKP. As of December 31, 2019, the Company held shares in CKP representing 16.17 percent of its registered capital.

### 5) Eastern High-Speed Rail Linking Three Airports Company Limited (“EHSR”)

The Company invested in EHSR, which was established by CPH Group to carry out the development of electric railway projects, design and construction works, civil works, in association with other projects, supply of M&E Systems and rolling stocks, including provision of train operations and maintenance services, and development of areas for support the electric railway services of the project, for a period of 50 years (with the construction period of 5 years and the operation period of 45 years). The benefits to be derived by the Company shall be in the form of a dividend from the investment.

The Company, as a shareholder, assigned its representative to be a member of the board of directors of EHSR. As of December 31, 2019, the Company held shares in EHSR representing 10 percent of its registered capital.

## 5. Legal Disputes

### 5.1 Disputes with the Expressway Authority of Thailand (“EXAT”)

The Company and the subsidiary had a total of 19 disputes with EXAT, which were referred to the Panel and the Arbitral Tribunal in accordance with the dispute settlement procedures under the Agreements and in the Administrative Court. Currently, EXAT and the Company/the subsidiary have reached an agreement to settle all disputes between each other. The essence of each dispute was as follows:

#### 5.1.1 Disputes submitted by the Company and the subsidiary claiming damages in 11 disputes, with the total amount until the date of submission of the disputes of approximately Baht 54,503.77 Million

##### 1. Priority Component Opening Date under the Second Stage Expressway Agreement

On July 9, 2001, the Company submitted a statement of claim requiring EXAT to compensate for the deficient revenue, together with interest, due to different opinions as to which the date was the Priority Component Opening Date, which affected the commencement of the toll revenue sharing with the Company under the Agreement. The Arbitral Tribunal rendered its arbitral award on the dispute requiring EXAT to pay the toll revenue sharing as claimed by the Company, together with interest under the Agreement.

The Central Administrative Court rendered the judgment on September 13, 2013 enforcing under the Company’s petition requiring EXAT to compensate the Company, with additional calculation until the date of the plaint, in the total amount of Baht 5,021.1 Million. Subsequently, on October 11, 2013, EXAT lodged an appeal against the Central Administrative Court’s judgment with the Supreme Administrative Court. This case is pending the Supreme Administrative Court’s consideration.

The Company and EXAT have reached an agreement to settle this dispute.

##### 2. Issuance of variation orders by EXAT

On December 9, 2009, the Company submitted a statement of claim requiring EXAT to compensate the Company for damages caused by EXAT’s issuance of additional variation orders for certain construction work of the Si Rat Expressway in the total amount of Baht 209.1 Million (excluding interest). The Arbitral Tribunal unanimously rendered its arbitral award requiring EXAT to pay the construction costs and expenses as per the Notice of Variation in the total amount of Baht 382.5 Million, including interest under the Agreement.

EXAT submitted a petition to the Central Administrative Court requesting the Court to revoke the arbitral award while the Company submitted a petition for enforcement of the arbitral award. On September 19, 2019, the Central Administrative Court adjudged to revoke the arbitral award and dismiss the Company’s petition for enforcement of the arbitral award.

The Company lodged an appeal against the Central Administrative Court’s judgment with the Supreme Administrative Court on October 18, 2019. This case is pending the Supreme Administrative Court’s consideration.

The Company and EXAT have reached an agreement to settle this dispute.

### 3. Revision of toll rates of the Chalerm Mahanakorn Expressway and the Si Rat Expressway for the year 2003

On May 14, 2008, the Company submitted a statement of claim requiring EXAT to compensate the Company for damages caused by the revision of toll rates of the Chalerm Mahanakorn Expressway and the Si Rat Expressway for 2003, which was not in accordance with the Agreement, thereby causing the damages, including interest, in the total amount of Baht 4,368 Million. The Arbitral Tribunal, by the majority of votes, rendered its arbitral award requiring EXAT to compensate the Company for damages as claimed by the Company in the amount of Baht 4,368 Million, together with interest under the Agreement.

A) EXAT submitted a petition requesting revocation of the arbitral award, and on May 14, 2019, the Central Administrative Court adjudged to dismiss EXAT's petition requesting revocation of the arbitral award, and on June 12, 2019, EXAT lodged an appeal against the Central Administrative Court's judgment with the Supreme Administrative Court.

The company and EXAT have reached an agreement to settle this dispute.

B) The Company filed a petition for enforcement of the arbitral award with the Central Administrative Court on February 12, 2019. At present, this case is pending the Central Administrative Court's consideration. The Company and EXAT have reached an agreement to settle this dispute.

### 4. Revision of toll rates of Sector D of the Si Rat Expressway for the year 2003

On July 24, 2008, the Company submitted a statement of claim requiring EXAT to compensate the Company for damages caused by the revision of toll rates of Sector D of the Si Rat Expressway for the year 2003, which was not in accordance with the Agreement. The Arbitral Tribunal rendered the final award requiring EXAT to compensate the Company for damages, together with interest, in the total amount of Baht 1,048.2 Million, together with interest under the Agreement on the principal of the damages of Baht 914.3 Million from June 1, 2008 until EXAT would make such payment in full, and compensate for damages representing the difference between the toll rates under the Ministry of Transport's Announcement dated August 29, 2003 and the toll revenue sharing entitled to the Company under the Agreement, from June 1, 2008 until August 31, 2008, including default interest under the Agreement from June 1, 2008 onwards until EXAT would pay the damages, together with interest to the Company in full.

On July 25, 2019, EXAT filed a petition requesting the Court to revoke such arbitral award with the Central Administrative Court. At present, this dispute is pending the Central Administrative Court's consideration.

The Company and EXAT have reached an agreement to settle this dispute.

### 5. Revision of toll rates of the Chalerm Mahanakorn Expressway and the Si Rat Expressway for the year 2008

On June 13, 2013, the Company submitted a statement of claim requiring EXAT to compensate the Company for damages caused by the revision of toll rates (of the Chalerm Mahanakorn Expressway and the Si Rat Expressway) for the year 2008, which was not in accordance with the Agreement. The Arbitral Tribunal unanimously rendered the final award requiring EXAT to compensate the Company for damages, together with interest, in the total amount of Baht 9,091.8 Million, together with interest under the Agreement on the principal of the damages of Baht 7,909.6 Million from June 1, 2013 until EXAT would make such payment in full, and also compensate for damages representing the difference between the toll rates under the Ministry of Transport's Announcement dated August 15, 2008 and the toll revenue sharing entitled to the Company under the Agreement, from June 1, 2013 onwards, including default interest under the Agreement.

On January 25, 2019, EXAT filed a petition requesting to revoke the arbitral award with the Central Administrative Court. At present, this case is pending the Central Administrative Court's consideration.

The Company and EXAT have reached an agreement to settle this dispute.

### 6. Revision of toll rates of Sector D of the Si Rat Expressway for the year 2008

On June 28, 2013, the Company submitted a statement of claim to the Arbitral Tribunal requiring EXAT to compensate the Company for damages caused by the revision of toll rates of Sector D of the Si Rat Expressway for the year 2008, which was not in accordance with the Agreement, in the total amount of Baht 4,062.8 Million, including interest under the Agreement. At present, this dispute is pending the arbitration proceedings.

The Company and EXAT have reached an agreement to settle this dispute.



**7. Increase in toll rates of the Chalerm Mahanakorn Expressway and the Si Rat Expressway for the year 2013**

On August 16, 2018, the Company submitted a statement of claim to the Arbitral Tribunal requiring EXAT to compensate the Company for damages caused by the revision of toll rates (of the Chalerm Mahanakorn Expressway and the Si Rat Expressway) for the year 2013, which was not in accordance with the Agreement, in the total amount of Baht 14,662.7 Million, together with interest under the Agreement. At present, this dispute is pending the arbitration proceedings.

The Company and EXAT have reached an agreement to settle this dispute.

**8. Increase in toll rates of Sector D of the Si Rat Expressway for the year 2013**

On August 21, 2018, the Company submitted a statement of claim to the Arbitral Tribunal requiring EXAT to compensate the Company for damages caused by the revision of toll rates of Sector D of the Si Rat Expressway for the year 2013, which was not in accordance with the Agreement, in the total amount of Baht 6,936.4 Million, together with interest under the Agreement. At present, this dispute is pending the arbitration proceedings.

The Company and EXAT have reached an agreement to settle this dispute.

**9. Revision of toll rates of the Udon Ratthaya Expressway for the year 2003**

On October 22, 2013, the subsidiary submitted a statement of claim to the Arbitral Tribunal requiring EXAT to compensate the subsidiary for damages caused by the revision of toll rates of the Udon Ratthaya Expressway for the year 2003, which was not in accordance with the Agreement, in the amount of Baht 908.7 Million, together with interest under the Agreement. At present, this dispute is pending the arbitration proceedings.

The subsidiary and EXAT have reached an agreement to settle this dispute.

**10. Revision of toll rates of the Udon Ratthaya Expressway for the years 2008 and 2013**

On August 21, 2018, the subsidiary submitted a statement of claim to the Arbitral Tribunal requiring EXAT to compensate the subsidiary for damages caused by the revision of toll rates of the Udon Ratthaya Expressway for the years 2008 and 2013, which was not in accordance with the Agreement, in the amount of Baht 4,724.8 Million, together with interest under the Agreement. At present, this dispute is pending the arbitration proceedings.

The subsidiary and EXAT have reached an agreement to settle this dispute.

**11. Competing road with the Udon Ratthaya Expressway for the years 1999-2000**

On December 20, 2004, the subsidiary submitted a statement of claim requiring EXAT to compensate for the deficient revenue, based on the grounds that the Government granted permission for construction of the Extension of the Don Muang Tollway Project, from the National Memorial to Rangsit Section, which constituted a competing road under the Agreement, and also be affected the financial position of the subsidiary, thereby rendering such damages until the date of submission of the dispute (excluding interest) to Baht 1,790 Million. The Arbitral Tribunal rendered its arbitral award on November 27, 2008 requiring EXAT to compensate the subsidiary for such deficient revenue as claimed by the subsidiary, together with interest.

EXAT refused to comply with the arbitral award and filed a petition for revocation of the arbitral award with the Central Administrative Court while the subsidiary filed its petition for enforcement of the arbitral award with the Central Administrative Court in the disputed amount of Baht 3,296 Million. Subsequently, the Central Administrative Court rendered the judgment on May 3, 2013 dismissing EXAT's petition for revocation of the arbitral award and adjudged to enforce the arbitral award.

On May 31, 2013, EXAT lodged an appeal against the judgment of the Central Administrative Court with the Supreme Administrative Court. On September 21, 2018, the Supreme Administrative Court affirmed the judgment of the Administrative Court of First Instance enforcing compliance with the arbitral award requiring EXAT to compensate for the revenue which decreased from the estimate under the Bang Pa-in - Pak Kret Expressway Agreement to the subsidiary in the amount of Baht 1,790 Million, comprise of the compensation for revenue in 1999 in amount of Baht 730.8 Million with interest from June 14, 2000 until EXAT would make such payment in full, and the compensation for revenue in 2000 in the amount of Baht 1,059.2 Million with interest from March 22, 2001 until EXAT would make such payment in full. EXAT shall completely comply with the judgment within 90 days from the date of the Supreme Administrative Court's judgment, which expired on December 20, 2018.

On October 2, 2018, the Council of Ministers' Meeting resolved that in order to alleviate the loss and damage which would occur to the state and to protect the utmost benefits of the government sector in the case that the state agency has the dispute under the Court of Arbitration or is filed a lawsuit with the Administrative Court as one or several cases in the same issue or as connected thereto, for instance, the case under the responsibility of the Ministry of Transport (Expressway Authority of Thailand), on which the Arbitral Tribunal rendered its arbitral award, thereby giving rise to the case proceedings in the Supreme Administrative Court, in which case, the Arbitral Tribunal rendered its arbitral award requiring the state agency to compensate for the damages or others; as a result, the resolution was passed to require that such state agency may conduct a negotiation with its disputing party to alleviate the damages of the state and to ensure the justice for the people, provided that such negotiation shall be conducted transparently and legitimately by mainly taking into account the benefits of the nation.

Subsequently, EXAT issued a letter dated October 31, 2018 to the subsidiary informed that EXAT's Board of Directors appointed a subcommittee to consider determining the guidelines for compliance with the judgment of the Supreme Administrative Court of the dispute in the case of the competing road (the Subcommittee) between EXAT and the subsidiary, so as to consider determining the guidelines for compliance with such judgment of the Supreme Administrative Court, as well as conducting a negotiation with the subsidiary.

On December 19, 2018, EXAT and the subsidiary issued a letter to the Administrative Case Execution Bureau reply to the Administrative Case Execution Bureau's letter dated October 11, 2018 regarding compliance with the judgment of the Supreme Administrative Court that it was in the process of negotiation to reach a settlement in complying with the judgment of the Supreme Administrative Court.

On December 20, 2018, EXAT's Board of Directors and the Company/the subsidiary negotiated and came to the conclusion about guidelines for the dispute settlement of all cases between EXAT and the Company/the subsidiary under the Second Stage Expressway Agreement (Sectors A, B, and C), the Agreement for the Extension of the Second Stage Expressway System (Sector D), and the Bang Pa-in - Pak Kret Expressway Agreement. On December 21, 2018, the Company and the subsidiary reached the mutual agreement with EXAT for conciliation and settlement of all disputes, including the disputes regarding competing road, in which the Notice of claim has been issued to require EXAT to comply with the Agreements, in the amount of Baht 74,590 Million.

**The aforesaid mutual agreement could be summarized as follows:**

- A) EXAT and the Company/the subsidiary agreed to settle all disputes which already took place or would take place in the future in connection with the Concession Agreements in the same disputed issues.
- B) EXAT and the Company/the subsidiary mutually agreed to amend the Concession Agreements, as follows:
  - B1. The respective periods of time of the Second Stage Expressway Agreement (Sectors, A, B, and C), the Agreement for the Extension of the Second Stage Expressway System (Sector D), and the Bang Pa-in - Pak Kret Expressway Agreement, shall be extended from which would formerly end in 2020, 2027, and 2026, respectively, to end on April 21, 2057.
  - B2. The Company shall provide the O&M Services of the Second Stage Expressway and the subsidiary shall provide the O&M Services of the Bang Pa-in - Pak Kret Expressway, provided that the Company and the subsidiary are entitled to receive toll revenue sharing throughout the respective concession agreement periods at the rate of 40 to 100 percent according to the routes specified therein.
  - B3. Revision of toll rates shall be revised to increase at the fixed rate every 10 years.
  - B4. The Company shall have the duty to invest, construct and improve the Second Stage Expressway in the total amount of approximately Baht 31,500 Million to solve the traffic problem.

Thereafter, in 2019, EXAT additionally negotiated with the Company and the subsidiary until the mutual agreement could be achieved on May 15, 2019. Moreover, the additional negotiation was conducted under the Ministry of Transport's intention requiring EXAT to carry out review until the settlement could be reached on January 6, 2020. The results of the additional negotiation for settlement of the disputes can be summarized as follows:

- EXAT and the Company/the subsidiary have agreed to settle all disputes under the existing agreements between each other, whether it be past, present or future disputes.
- The settlement of the disputes by way of extension of the Concession Agreements shall be made without requiring investment in improvement of the expressways and construction of the Double Deck, provided that the three agreements shall be extended to end on October 31, 2035.
- The Company and the subsidiary shall remain entitled to the full renewal of the Agreements as specified in the existing Agreements, namely, the respective remaining periods of time entitled to renewal under the existing Agreements shall be 4 years and 4 months for the Second Stage Expressway Agreement; 11 years and 6 months for the Agreement for the Extension of the Second Stage Expressway System (Sector D) and 10 years and 11 months for the Bang Pa-in - Pak Kret Expressway Project Agreement from the end of the term of the amended Agreement.

On February 18, 2020, the Council of Ministers has resolved to approve the amendment of the Agreements for settlement of the disputes, and on February 20, 2020, the subsidiary and EXAT have signed the Bang Pa-in - Pak Kret Expressway Agreement (Amendment).

The subsidiary and EXAT have reached an agreement to settle this dispute by issuing a letter to Administrative case Execution Bureau in order to disclaim the compulsory executive.

### **5.1.2 Disputes submitted by EXAT claiming damages in 3 disputes, with the total amount until the date of submission of the disputes of approximately Baht 1,589.2 Million**

#### **1. Cost of arrangements of the entrance - exit and resolution of complaints**

On May 11, 2007, EXAT submitted a statement of claim requiring the Company to be responsible for the cost of arrangements of the entrance - exit claimed by complainants, and the cost of free flow drains, in the total amount of Baht 0.4 Million, which the Arbitral Tribunal rendered its arbitral award ruling that EXAT had no right to claim such costs.

EXAT submitted a petition for revocation of the arbitral award to the Central Administrative Court. Subsequently, the Central Administrative Court rendered the judgment on August 30, 2017 revoking the arbitral award, only in respect of the Arbitral Tribunal's acceptance for consideration of the second disputes in case of free flow drains, as EXAT submitted the statement of claim after the statute of limitations of such dispute had expired.

On September 29, 2017, the Company lodged an appeal against the Central Administrative Court's judgment with the Supreme Administrative Court. At present, this case is pending the Supreme Administrative Court's consideration.

EXAT and the Company have reached an agreement to settle this dispute.

#### **2. Construction of the Udon Raththaya Expressway, Phase 2**

On January 29, 2016, EXAT submitted a statement of claim to the Arbitral Tribunal requiring the subsidiary to complete the construction of the Udon Raththaya Expressway, Phase 2 in accordance with the Bang Pa-in - Pak Kret Expressway Agreement, and to compensate in the amount of Baht 1,587.7 Million, together with interest under the Agreement. The Agreement specifies that although the conditions under the Agreement have been completed for construction commencement, should EXAT breach the Agreement that gives rise to the subsidiary's serious financial impact, and as a result, the subsidiary has not yet been required to commence the construction. In this regard, EXAT breached the Agreement on the competing road and the revision of toll rates, the subsidiary then shall have the right not to commence the construction yet, and EXAT shall not have the right to claim any fines. At present, this dispute is pending the arbitration proceedings.

EXAT and the subsidiary have reached an agreement to settle this dispute.



**3. Cost of utilization of the Control Center Building (Bang Phun)**

On February 27, 2009, EXAT submitted a statement of claim to the Arbitral Tribunal requiring the subsidiary to be responsible for the cost of utilization of the Control Center Building (Bang Phun) in the amount of Baht 1.1 Million, which the subsidiary was of the view that such cost claimed by EXAT was not within its scope of responsibility under the Agreement. At present, this dispute is pending the arbitration proceedings.

EXAT and the subsidiary have reached an agreement to settle this dispute.

**5.1.3 Disputes submitted to the Panel where the Company/the subsidiary are pending submission to the Arbitral Tribunal claiming damages in 4 disputes, and another dispute is pending the Panel, with the total of disputed amount until the date of submission of the disputes of approximately Baht 78,181.9 Million.**

**1. Revision of toll rates of the Chalerm Mahanakorn Expressway and the Si Rat Expressway for the year 2018**

On November 16, 2018, the Company requested EXAT to compensate for the damages from September 1, 2018 to October 31, 2018, together with the interest, in the amount of Baht 592.9 Million, and the interest on the principal of the damages in the amount of Baht 590.8 Million on a daily basis from November 1, 2018 onwards, and compensate for damages representing the differences of toll revenue under the Ministry of Transport's Announcement dated August 2, 2013, from November 1, 2018, onwards together with the default interest under the Agreement.

On July 5, 2019, EXAT and the Company could not amicably reach an agreement on the scheduled meeting date, the Panel then deemed appropriate to settle consideration and required the dispute to be referred to the arbitration proceedings. The dispute has not been submitted to the Arbitral Tribunal.

The Company has agreed to settle this dispute by not submitting it to the Arbitral Tribunal.

**2. Revision of toll rates of the Si Rat Expressway Sector D for the year 2018**

On November 16, 2018, the Company requested EXAT to compensate for the damages from September 1, 2018, to October 31, 2018, together with the interest, in the amount of Baht 289.3 Million, and the interest on the principal of the damages in the amount of Baht 288.3 Million on a daily basis from November 1, 2018, onwards, and compensate for damages representing the differences of toll revenue under the Ministry of Transport's Announcement dated August 2, 2013, from November 1, 2018, onwards together with the default interest under the Agreement. On July 5, 2019, EXAT and the Company could not amicably reach an agreement on the scheduled meeting date, the Panel then deemed appropriate to settle consideration and required the dispute to be referred to the arbitration proceedings. The dispute has not been submitted to the Arbitral Tribunal.

The Company has agreed to settle this dispute by not submitting it to the Arbitral Tribunal.

**3. Revision of toll rates of Udon Raththaya Expressway for the year 2018**

On November 16, 2018, the subsidiary requested EXAT to compensate for the damages from November 1, 2018 to November 11, 2018, together with the interest, in the amount of Baht 24.92 Million, and the interest on the principal of the damages in the amount of Baht 24.90 Million on a daily basis from November 12, 2018, onwards, and compensate for damages representing the differences of toll revenue under the Ministry of Transport's Announcement dated August 2, 2013, from November 12, 2018, onwards together with the default interest under the Agreement. On July 5, 2019, EXAT and the subsidiary could not amicably reach an agreement on the scheduled meeting date, the Panel then deemed appropriate to settle consideration and required the dispute to be referred to the arbitration proceedings. The dispute has not been submitted to the Arbitral Tribunal.

The subsidiary has agreed to settle this dispute by not submitting it to the Arbitral Tribunal.

#### 4. Competing road with the Udon Rattaya Expressway for the years 2001 - 2017

Based on the grounds that the Government granted permission for construction of the Extension of the Don Muang Tollway Project, from the National Memorial to Rangsit Section, which was adjudged by the Supreme Administrative Court to constitute a competing road for the years 1999 - 2000 on September 17, 2018 requiring EXAT to compensate the subsidiary for the decreased revenue, it was obvious and settled that the subsidiary was actually affected by such construction of the competing road. Therefore, on May 3, 2019, the subsidiary requested EXAT to compensate for the toll revenues for the years 2001 - 2017 which decreased from the forecast under the Agreement in the amount of Baht 46,300.2 Million, together with interest based on the accumulated calculation until April 30, 2019 in the amount of Baht 25,925.3 Million, and compensate for the interest on the principal of the damages in the amount of Baht 46,300.2 Million calculated from May 1, 2019 until EXAT would compensate the subsidiary for the principal together with interest in the amount of Baht 72,225.5 Million in full. On December 4, 2019, EXAT and the subsidiary could not amicably reach an agreement, the Panel then deemed appropriate to settle consideration and required the dispute to be referred to the arbitration proceedings. The dispute has not been submitted to the Arbitral Tribunal.

The subsidiary has agreed to settle this dispute by not submitting it to the Arbitral Tribunal.

#### 5. Competing road with the Udon Rattaya Expressway for the year 2018

On October 29, 2019, the subsidiary requested EXAT to compensate for the toll revenue for the year 2018 which decreased from the forecast under the annex of Bang Pa-in - Pak Kret Expressway Agreement in the amount of Baht 4,771 Million, together with interest based on the accumulated calculation until October 29, 2019 in the amount of Baht 278.3 Million, and compensate for the interest on the principal of the damages in the amount of Baht 4,771 Million calculated from October 30, 2019 until EXAT would compensate the subsidiary for the principal together with interest in the amount of Baht 5,049.3 Million in full. At present, this dispute is pending the Panel's consideration.

The subsidiary has agreed to settle this dispute.

All disputes are part of negotiation for the amendment of the Agreements to settle the disputes of the Second Stage Expressway Project (the Si Rat Expressway, including Sector D), and the Bang Pa-in - Pak Kret Expressway Agreement (the Udon Rattaya Expressway) between EXAT and the Company/the subsidiary, and on February 18, 2020, the Council of Ministers has resolved to approve the amendment of the Agreements to settle the disputes, and on February 20, 2020, the Company/the subsidiary and EXAT have already signed the Second Stage Expressway Agreement (Amendment) and the Bang Pa-in - Pak Kret Expressway Agreement (Amendment).

## 6. General Information and Other Significant Information

### 6.1 General Information

#### (1) General information of the Company

<b>Company Issuing Securities</b>	: <b>Bangkok Expressway and Metro Public Company Limited (“BEM”)</b>
Business Operation	: Construction and management of the expressways and the rail mass rapid transit system projects, including other related businesses
Company Registration No.	: 0107558000491
Registered Capital	: Baht 15,285 Million, which is fully paid up.
Head Office	: 587 Sutthisarn Road, Ratchadaphisek Subdistrict, Dindaeng District, Bangkok 10400
Telephone	: 0 2641 4611 and 0 2354 2000
Fax	: 0 2641 4610 and 0 2354 2040
Website	: <a href="http://www.bemplc.co.th">www.bemplc.co.th</a>
Branch Office (1)	: 238/7 Asoke-Dindaeng Road, Bangkapi Subdistrict, Huai Khwang District, Bangkok 10310
Telephone	: 0 2641 4611
Fax	: 0 2641 4610
Branch Office (2)	: 189 Rama IX Road, Huai Khwang Subdistrict, Huai Khwang District, Bangkok 10310
Branch Office (3)	: 189/1 Rama IX Road, Huai Khwang Subdistrict, Huai Khwang District, Bangkok 10310
Branch Office (4)	: 189/2 Rama IX Road, Huai Khwang Subdistrict, Huai Khwang District, Bangkok 10310
Telephone	: 0 2354 2000
Fax	: 0 2354 2040

#### (2) Legal entities in which the Company holds 10 percent of shares or more

<b>Company Issuing Securities</b>	: <b>Northern Bangkok Expressway Company Limited (“NECL”)</b>
Business Operation	: Construction and management of the Udon Rattaya Expressway
Head Office	: 587 Sutthisarn Road, Ratchadaphisek Subdistrict, Dindaeng District, Bangkok 10400
Registered Capital	: Baht 6,000 Million, Baht 5,250 Million of which is paid up.
Shareholding Percentage	: 99.99 percent
Telephone	: 0 2641 4647
Fax	: 0 2641 4646
<b>Company Issuing Securities</b>	: <b>Bangkok Metro Networks Limited (“BMN”)</b>
Business Operation	: Procurement and production of advertising media in various forms in the MRT stations and inside the MRT trains, lease of retail space in the MRT stations, the MRT Blue Line Project and the basement level of the Lat Phrao park and ride facility, including provision of service of telecommunications system in the MRT stations and inside the MRT trains.

Head Office : 832 Sutthisarn Road, Ratchadaphisek Subdistrict,  
Dindaeng District, Bangkok 10400  
Registered Capital : Baht 254 Million, which is fully paid up.  
Shareholding Percentage : 89.67 percent  
Telephone : 0 2690 8200  
Fax : 0 2690 8212  
Website : [www.bmn-mrt.com](http://www.bmn-mrt.com)

**Company Issuing Securities** : **TTW Public Company Limited (“TTW”)**  
Business Operation : Production and distribution of water supply to the Provincial Waterworks Authority and investment in companies operating the business of other public utilities  
Head Office : 30/130 Moo 12, Buddhamonthon 5 Road, Tambon Rai Khing, Amphoe Samphran, Nakhon Pathom Province 73210  
Registered Capital : Baht 3,990 Million, which is fully paid up.  
Shareholding Percentage : 18.47 percent  
Telephone : 0 2811 7526  
Fax : 0 2420 6064  
Website : [www.ttwplc.com](http://www.ttwplc.com)

**Company Issuing Securities** : **CK Power Public Company Limited (“CKP”)**  
Business Operation : Investment by holding shares in other companies (Holding Company) operating the business of production and distribution of electricity from various types of energy  
Head Office : 587 Viriyathavorn Building, 19th Floor, Sutthisan Winitchai Road, Ratchadaphisek Subdistrict, Dindaeng District, Bangkok 10400  
Registered Capital : Baht 9,240 Million, Baht 7,370 Million of which is paid up.  
Shareholding Percentage : 16.17 percent  
Telephone : 0 2691 9720  
Fax : 0 2691 9723  
Website : [www.ckpower.co.th](http://www.ckpower.co.th)

**Company Issuing Securities** : **Eastern High-Speed Rail Linking Three Airports Company Limited (“EHSR”)**  
Business Operation : Development of railway projects, performance of design and construction, civil works in association with other projects, supply of M&E Systems and rolling stocks, including provision of train operation and maintenance services, and development of areas for supporting the rail services of the project.  
Head Office : 313 C.P. Tower, 14th Floor, Silom Road, Silom Subdistrict, Bangrak District, Bangkok 10500  
Registered Capital : Baht 4,000 Million, which is fully paid up.  
Shareholding Percentage : 10.00 percent  
Telephone : 0 2858 3149



**(3) Reference****Securities Registrar****: Thailand Securities Depository Company Limited**

The Stock Exchange of Thailand  
 93 Rachadapisek Road, Dindaeng Subdistrict,  
 Dindaeng District, Bangkok 10400  
 Telephone : 0 2009 9382  
 Fax : 0 2009 9476

**Auditor****: EY Office Limited**

193/136-137 Lake Rajada Office Complex, 33rd Floor, New Rajadapisek Road  
 Klongtoey District, Bangkok 10110  
 Telephone : 0 2264 0777  
 Fax : 0 2264 0789

**Legal Advisor****: The Legists Group**

Abdulrahim Place, 9th Floor  
 No. 990 Rama IV Road, Silom Subdistrict  
 Bangrak District, Bangkok 10500  
 Telephone : 0 2636 1111  
 Fax : 0 2636 0000

**Financial Advisor****: Advisory Plus Company Limited**

1550 Thanapoom Tower, 10th Floor  
 New Petchburi Road, Makkasan Subdistrict  
 Ratchathewi District, Bangkok 10400  
 Telephone : 0 2652 7858-64  
 Fax : 0 2652 7867

**Debenture Registrars****: Siam Commercial Bank Public Company Limited**

1060 New Phetchaburi Road, Makkasan Subdistrict  
 Ratchathewi District, Bangkok 10400  
 Telephone : 0 2544 3924  
 Fax : 0 2937 7783

**: Krung Thai Bank Public Company Limited**

977/2 Phaholyothin Road, Samsen Nai Subdistrict  
 Phayathai District, Bangkok 10400  
 Telephone : 0 2298 0831  
 Fax : 0 2298 0835

**Debenture Holders' Representative : Siam Commercial Bank Public Company Limited**

1060 New Phetchaburi Road, Makkasan Subdistrict  
 Ratchathewi District, Bangkok 10400  
 Telephone : 0 2128 2316-7  
 Fax : 0 2128 4621

**Regularly Contacted Financial Institutions : Krung Thai Bank Public Company Limited**

35 Sukhumvit Road, Khlong Toei Nuea Subdistrict

Wattana District, Bangkok 10110

Telephone : 0 2208 4631-9

Fax : 0 2256 8619

**: Siam Commercial Bank Public Company Limited**

9 Ratchadaphisek Road, Chatuchak Subdistrict

Chatuchak District, Bangkok 10900

Telephone : 0 2256 2323

**: TMB Bank Public Company Limited**

3000 Phaholyothin Road, Chom Thong Subdistrict

Chatuchak District, Bangkok 10900

Telephone : 0 2299 2511-2

Fax : 0 2299 2752

**: Bangkok Bank Public Company Limited**

333 Silom Road, Silom Subdistrict

Bang Rak District, Bangkok 10500

Telephone : 0 2230 1036

Fax : 0 2230 2722

## 6.2 Other Significant Information

- None -

## 7. Information on Securities and Shareholders

### 7.1 Number of Registered Capital and Paid-up Capital

- 7.1.1 The Company has the registered capital of Baht 15,285 Million, comprising 15,285 million ordinary shares at the par value of Baht 1 per share, Baht 15,285 Million of which has already been paid up, divided into 15,285 million ordinary shares at the par value of Baht 1 per share.
- 7.1.2 As of December 30, 2019, the Company's 1,284,541,769 ordinary shares were used as underlying securities for the issuance of Non-Voting Depository Receipt or NVDR, representing 8.4 percent of all shares in the Company. Such shares entitle their holders to receive dividends from investment in NVDR in the same amount as such dividend received by Thai NVDR Company Limited from the Company, provided that NVDR holders shall not be entitled to vote at any shareholders' meeting of the Company. Investors may check the number of NVDR from the Stock Exchange of Thailand's website at [www.set.or.th/nvdr](http://www.set.or.th/nvdr).

### 7.2 Shareholders

#### 7.2.1 List of Major Shareholders

As of August 23, 2019, which was the latest closing date of the share register book, the first 10 major shareholders were as follows:

No.	Shareholders	Number of Shares (shares)	Shareholding Percentage (percent)
1	Group of CH. Karnchang Public Company Limited <sup>(1)</sup>	4,923,781,781	32.21
2	Mass Rapid Transit Authority of Thailand	1,256,259,584	8.22
3	Thai NVDR Company Limited	1,074,957,976	7.03
4	Krung Thai Bank Public Company Limited	1,047,025,175	6.85
5	Mr. Wichai Wachiraphong	390,678,757	2.56
6	STATE STREET EUROPE LIMITED	314,102,298	2.05
7	Bangkok Bank Public Company Limited	303,448,709	1.99
8	Social Security Office	296,545,458	1.94
9	SOUTH EAST ASIA UK (TYPE C) NOMINEES LIMITED	282,104,674	1.85
10	Mr. Min Tieworn	204,000,000	1.33
	Total	10,092,904,412	66.03
	Others	5,192,095,588	33.97
	Grand Total	15,285,000,000	100.00

**Remarks:** (1) CH. Karnchang Group's shareholding in the Company represented 32.21 percent of the paid-up capital, with the details as follows:

CH. Karnchang Group	Number of Shares	% of Paid-up Capital
1. CH. Karnchang Public Company Limited <sup>(2)</sup>	4,787,121,829	31.32
2. CH. Karnchang-Tokyu Construction Company Limited <sup>(3)</sup>	136,659,952	0.89
	<u>4,923,781,781</u>	<u>32.21</u>

(2) CH. Karnchang Public Company Limited ("CH. Karnchang Plc.") operates the general construction business, with Trivisvavet Group holding shares of 31.18 percent of the paid-up capital (information as of September 4, 2019), with the details as follows:

Trivisvavet Group	Number of Shares	% of Paid-up Capital
1. Mahasiri Siam Co., Ltd. <sup>(4)</sup>	237,512,365	14.022
2. CH. Karnchang Holding Co., Ltd. <sup>(5)</sup>	171,396,530	10.118
3. CK. Office Tower Co., Ltd. <sup>(6)</sup>	86,048,212	5.080
4. Mr. Plew Trivisvavet	13,631,497	0.805
5. Mrs. Saikasem Trivisvavet	6,061,142	0.358
6. Mrs. Pranee Tongkittikul	9,214,342	0.544
7. Miss Supamas Trivisvavet	1,700,000	0.100
8. Mr. Puwanet Trivisvavet	1,089,255	0.064
9. Mrs. Korakot Trivisvavet	930,000	0.055
10. Miss Sawanya Trivisvavet	477,225	0.028
11. Mr. Prasert Trivisvavet	204,285	0.012
12. Mr. Nattavut Trivisvavet	5,785	0.000
	<u>528,270,638</u>	<u>31.187</u>

Shareholders may refer to additional information of CH. Karnchang Plc. in the Annual Registration Statement (Form 56-1) on the website of the SEC Office ([www.sec.or.th](http://www.sec.or.th)) or the Stock Exchange of Thailand ([www.set.or.th](http://www.set.or.th)).

- (3) CH. Karnchang-Tokyu Construction Company Limited operates the business of construction of all types, having a total of 1,000,000 shares, with 549,999 shares representing 55 percent held by CH. Karnchang Plc.
- (4) Mahasiri Siam Co., Ltd. operates the investment business, having a total of 9,000,000 shares, with 7,782,987 shares representing 86.48 percent held by Trivisvavet Group.
- (5) CH. Karnchang Holding Co., Ltd. operates the investment and consultation business, having a total of 8,400,000 shares, with 2,100,000 shares representing 25 percent held by Mahasiri Siam Co., Ltd., and 5,250,000 shares representing 62.50 percent held by Trivisvavet Group.
- (6) CK. Office Tower Co., Ltd. operates the business of investment and consultancy, having a total of 3,000,000 shares, with 750,000 shares representing 25 percent held by Mahasiri Siam Co., Ltd., and 2,250,000 shares representing 75 percent held by Trivisvavet Group.



### 7.2.2 The Company's Free Float Percentage

According to the report on the shareholding distribution of strategic shareholders as of March 13, 2019, as submitted to the Stock Exchange by the Company, the percentage of the non-strategic shareholders was 52.93 percent of all issued and paid-up shares.

### 7.2.3 Shareholders' Agreement

There was no shareholders' agreement between the Company and its major shareholders.

## 7.3 Issuance of Other Securities

### 7.3.1 Long-Term Loans

In 2019, the Company made repayment of the long-term loan according to the payment schedule in the amount of Baht 2,316 Million, and the Company made the long-term loan drawdown during the year for the MRT Blue Line Extension Project in the amount of Baht 4,500 Million, and as a result, as of December 31, 2019, the Company and its subsidiaries had long-term loans amounting to Baht 14,830 Million.

### 7.3.2 Debentures

In 2019, the Company issued debentures at the total value of Baht 5,000 Million, proceeds of which were used for repayment of the existing matured debentures. As of December 31, 2019, the Company's outstanding debentures were as per the following details:

Details of Debentures	Debentures No. 1/2016 Series 2	Debentures No. 1/2016 Series 3
Debenture Symbol	BEM216A	BEM236A
Total Value of Debentures	Baht 1,615 Million	Baht 2,000 Million
Type of Debentures	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative
Number of Debentures	1,615,000 units	2,000,000 units
Par Value per Unit	Baht 1,000	Baht 1,000
Interest Rate per annum	2.52%	3.00%
Maturity	5 years	7 years
Issue Date of Debentures	June 24, 2016	June 24, 2016
Maturity Date	June 24, 2021	June 24, 2023
Registrar	SCB	SCB
Early Redemption Right	- None -	
Repayment of Principal	The issuer of debentures shall repay the principal in full on the maturity date.	
Rating	A	A

Debentures (continued)

Details of Debentures	Debentures No. 1/2016 Series 4	Debentures No. 1/2016 Series 5	Debentures No. 2/2016
Debenture Symbol	BEM266A	BEM286A	BEM286B
Total Value of Debentures	Baht 3,335 Million	Baht 2,750 Million	Baht 500 Million
Type of Debentures	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative
Number of Debentures	3,335,000 units	2,750,000 units	500,000 units
Par Value per Unit	Baht 1,000	Baht 1,000	Baht 1,000
Interest Rate per annum	3.30%	3.61%	3.61%
Maturity	10 years	12 years	11.9 years
Issue Date of Debentures	June 24, 2016	June 24, 2016	August 11, 2016
Maturity Date	June 24, 2026	June 24, 2028	June 24, 2028
Registrar	SCB	SCB	SCB
Early Redemption Right	- None -		
Repayment of Principal	The issuer of debentures shall repay the principal in full on the maturity date.		
Rating	A	A	A

Debentures (continued)

Details of Debentures	Debentures No. 3/2016 Series 1	Debentures No. 3/2016 Series 2	Debentures No. 3/2016 Series 3
Debenture Symbol	BEM200A	BEM250A	BEM270A
Total Value of Debentures	Baht 2,500 Million	Baht 2,500 Million	Baht 3,000 Million
Type of Debentures	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative
Number of Debentures	2,500,000 units	2,500,000 units	3,000,000 units
Par Value per Unit	Baht 1,000	Baht 1,000	Baht 1,000
Interest Rate per annum	2.62%	3.78%	3.95%
Maturity	4 years	9 years	11 years
Issue Date of Debentures	October 21, 2016	October 21, 2016	October 21, 2016
Maturity Date	October 21, 2020	October 21, 2025	October 21, 2027
Registrar	SCB	SCB	SCB
Early Redemption Right	- None -		
Repayment of Principal	The issuer of debentures shall repay the principal in full on the maturity date.		
Rating	A	A	A

## Debentures (continued)

Details of Debentures	Debentures No. 1/2017 Series 1	Debentures No. 2/2017 Series 2
Debenture Symbol	BEM229A	BEM249A
Total Value of Debentures	Baht 2,000 Million	Baht 3,000 Million
Type of Debentures	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative
Number of Debentures	2,000,000 units	3,000,000 units
Par Value per Unit	Baht 1,000	Baht 1,000
Interest Rate per annum	2.65%	3.10%
Maturity	5 years	7 years
Issue Date of Debentures	September 7, 2017	September 7, 2017
Maturity Date	September 7, 2022	September 7, 2024
Registrar	KTB	KTB
Early Redemption Right	- None -	
Repayment of Principal	The issuer of debentures shall repay the principal in full on the maturity date.	
Rating	A	A

## Debentures (continued)

Details of Debentures	Debentures No. 1/2018 Series 1	Debentures No. 1/2018 Series 2	Debentures No. 1/2018 Series 3
Debenture Symbol	BEM214A	BEM234A	BEM254A
Total Value of Debentures	Baht 3,000 Million	Baht 3,500 Million	Baht 3,500 Million
Type of Debentures	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative
Number of Debentures	3,000,000 units	3,500,000 units	3,500,000 units
Par Value per Unit	Baht 1,000	Baht 1,000	Baht 1,000
Interest Rate per annum	2.05%	2.46%	3.01%
Maturity	3 years	5 years	7 years
Issue Date of Debentures	April 5, 2018	April 5, 2018	April 5, 2018
Maturity Date	April 5, 2021	April 5, 2023	April 5, 2025
Registrar	SCB	SCB	SCB
Early Redemption Right	- None -		
Repayment of Principal	The issuer of debentures shall repay the principal in full on the maturity date.		
Rating	A	A	A

Debentures (continued)

Details of Debentures	Debentures No. 1/2019 Series 1	Debentures No. 1/2019 Series 2
Debenture Symbol	BEM225A	BEM245A
Total Value of Debentures	Baht 1,000 Million	Baht 2,000 Million
Type of Debentures	Unsubordinated and unsecured debentures bearing names of the holders	Unsubordinated and unsecured debentures bearing names of the holders
Number of Debentures	1,000,000 units	2,000,000 units
Par Value per Unit	Baht 1,000	Baht 1,000
Interest Rate per annum	2.65%	3.18%
Maturity	3 years	5 years
Issue Date of Debentures	May 9, 2019	May 9, 2019
Maturity Date	May 9, 2022	May 9, 2024
Registrar	SCB	SCB
Holders' Representative	SCB	SCB
Early Redemption Right	- None -	
Repayment of Principal	The issuer of debentures shall repay the principal in full on the maturity date.	
Rating	A	A

Debentures (continued)

Details of Debentures	Debentures No. 1/2019 Series 3	Debentures No. 1/2019 Series 4
Debenture Symbol	BEM265A	BEM295A
Total Value of Debentures	Baht 1,000 Million	Baht 1,000 Million
Type of Debentures	Unsubordinated and unsecured debentures bearing names of the holders	Unsubordinated and unsecured debentures bearing names of the holders
Number of Debentures	1,000,000 units	1,000,000 units
Par Value per Unit	Baht 1,000	Baht 1,000
Interest Rate per annum	3.59%	3.84%
Maturity	7 years	10 years
Issue Date of Debentures	May 9, 2019	May 9, 2019
Maturity Date	May 9, 2026	May 9, 2029
Registrar	SCB	SCB
Holders' Representative	SCB	SCB
Early Redemption Right	- None -	
Repayment of Principal	The issuer of debentures shall repay the principal in full on the maturity date.	
Rating	A	A



## 7.4 Policy on Dividend Payment

The Company has the policy to pay a dividend at not less than 40 percent of the net profit of each year, taking into account the operational results, financial structure and obligations, investment, as well as regular payment of dividend to shareholders.

In this regard, the Board of Directors may pay an interim dividend to shareholders when it is of the view that the Company has sufficient profit and cash flow to pay a dividend. Once the dividend payment has been made, such dividend payment shall be reported to the following shareholders' meeting.

The Company's dividend payment in the previous years was as follows:

Dividend from Operations	Dividend Declared (Million Baht)	Dividend per share (Baht)	Net Profit (Million Baht)		Percentage of Dividend to Net Profit	
			Separate Financial Statements	Consolidated Financial Statements	Separate Financial Statements	Consolidated Financial Statements
2016						
- First half	764	0.05	1,218	1,206		
- Second half	917	0.06	1,345	1,400		
Total in 2016	1,681	0.11	2,563	2,606	65%	65%
2017						
- First half	917	0.06	1,442	1,425		
- Second half	1,070	0.07	1,533	1,698		
Total in 2017	1,987	0.13	2,975	3,123	67%	64%
2018						
- First half	917	0.06	1,695	1,714		
- Second half	1,376	0.09	1,412	3,603		
Total in 2018	2,293	0.15	3,107	5,317	74%	43%
2019						
- First half	917	0.06	1,626	3,977		
- Second half <sup>(1)</sup>	1,376	0.09	1,298	1,458		
Total in 2019	2,293	0.15	2,924	5,435	79%	42%

Remark: <sup>(1)</sup> This is put on the Agenda of the 2020 Annual Ordinary General Meeting of Shareholders for consideration.

## 7.5 Policy on Dividend Payment of the Subsidiaries

NECL has the policy on dividend payment at the rate of approximately 40 percent of net profit after deducting statutory reserves, by taking into consideration the operational results in the fiscal year of the separate financial statements as at the end of the fiscal year and under the conditions of the credit facility agreement, subject to the investment plan, necessity and appropriateness in other aspects as the board of directors of the subsidiary deems appropriately.

BMN has the policy on dividend payment at the rate of not less than 40 percent of net profit each year, by taking into account the operational results, financial structure and obligations, investment, as well as regular payment of dividend to shareholders.

## 8. Management Structure

The Company has established and reviewed the Company's management structure by realizing the organizational leadership roles and responsibilities of the Board of Directors in achieving the sustainable value creation for the business. The Company has also assigned the Board of Directors to ensure that all directors and executives discharge their duties with duty of care and duty of loyalty and to ensure that the Company's operations have been carried out in compliance with applicable laws, articles of association and resolutions of the shareholders' meeting. Currently, the Company's management structure comprises of the Board of Directors and another four subcommittees, namely, the Audit Committee, the Executive Board, the Nomination and Remuneration Committee, and the Corporate Governance and Risk Management Committee.

The structure of the Board of Directors has been reviewed as scale, composition, proportion of independent directors, skill, experience, education, capability and character traits, together with gender and age as appropriate and necessary to lead the organization to meet the objectives and goals specified by the Company, consisting of 16 qualified persons, namely, five executive directors, six independent directors and five non-executive directors. To ensure that the entire Board of Directors has suitable qualifications, can understand and satisfy the needs of stakeholders, as well as enabling the Board of Directors to carry out operations by exercise of their discretion to make decisions independently.

The lists of names of the Board of Directors, the four subcommittees and executives were described as follows:

### 8.1 Board of Directors

The Board of Directors comprised 16 directors who were knowledgeable, competent and experienced in varied fields of business; whose names, as of December 31, 2019, were listed below:

No.	Name-Surname	Position	Category	Attendances/Number of Board of Directors' Meetings
1	Dr. Virabongsa Ramangkura	Chairman of the Board of Directors	Independent Director	7/7
2	Mr. Plew Trivisvavet	Deputy Chairman of the Board of Directors Chairman of the Executive Board Nomination and Remuneration Committee Member	Executive Director	7/7
3	Mr. Vitoon Tejatassanasoontorn	Chairman of the Audit Committee Nomination and Remuneration Committee Member	Independent Director	7/7
4	Gen. Chetta Thanajaro	Chairman of the Nomination and Remuneration Committee Audit Committee Member	Independent Director	7/7
5	Dr. Annop Tanlamai	Audit Committee Member	Independent Director	6/7
6	Mrs. Vallapa Assakul	Chairman of the Corporate Governance and Risk Management Committee	Independent Director	6/7
7	Mr. Supong Chayutsahakij	Executive Director Nomination and Remuneration Committee Member	Executive Director	7/7

No.	Name-Surname	Position	Category	Attendances/Number of Board of Directors' Meetings
8	M.L. Prasobchai Kasemsant	Director	Independent Director	6/7
9	Mr. Phongsarit Tantisuvanitchkul	Executive Director Corporate Governance and Risk Management Committee Member	Executive Director	7/7
10	Miss Arisara Dharamadhaj <sup>(1)</sup>	Director	Non-executive Director	4/4
11	Mr. Panit Dunnvatanachit	Director	Non-executive Director	7/7
12	MRTA's representative <sup>(2)</sup>	Director	Non-executive Director	N/A
13	Mrs. Natamon Bunnak	Director	Non-executive Director	7/7
14	Mr. Wichan Ekarintrakul	Director	Non-executive Director	5/7
15	Dr. Sombat Kitjalaksana	Executive Director Corporate Governance and Risk Management Committee Member	Executive Director	6/7
16	Mrs. Payao Marittanaporn	Executive Director Corporate Governance and Risk Management Committee Member	Executive Director	7/7

**Remarks:** Directors' profiles appear on pages 213 to 218.

- <sup>(1)</sup> Miss Arisara Dharamadhaj was appointed as a director on April 26, 2019 to replace Mr. Werapong Suppasedsak who retired by rotation in the 2019 Annual Ordinary General Meeting of Shareholders on April 26, 2019.
- <sup>(2)</sup> MRTA's representative was pending nomination for appointment to replace Mr. Yuttana Yimgarund who resigned his office as a director on October 25, 2019.

### Authorized Directors

The Company has determined five directors authorized to sign and bind the Company, comprising Mr. Plew Trivisvavet, Mr. Supong Chayutsahakij, Mr. Phongsarit Tantisuvanitchkul, Dr. Sombat Kitjalaksana, and Mrs. Payao Marittanaporn, whereby two of these five directors shall jointly sign and affix the Company's seal.

### Independent Directors

The Board of Directors of the Company comprises of six independent directors or representing more than one-third of the total number of directors of the Company. The Company specifies the qualifications of its independent directors in compliance with the notifications of the Office of the Securities and Exchange Commission and the Stock Exchange of Thailand, as follows:

### Qualifications of Independent Directors

1. Holding shares of not exceeding 0.5 percent of the total number of voting shares of the Company, its parent company, subsidiaries, associated companies, major shareholders or controllers of the Company, including shares held by any related persons of each independent director;
2. Not being or having been a director having involvement in the management, an employee, a staff member, an advisor receiving a regular salary or a controller of the Company, its parent company, subsidiaries, associated companies, subsidiaries of the same tier, major shareholders or controllers of the Company, unless such independent director has no longer been in such capacity for not less than two years prior to the appointment date, provided that such prohibited characteristics shall not apply to an independent director who was a public servant or an advisor to a government authority which is the Company's major shareholder or controller;
3. Not being a person having a relationship by blood or by legal registration in the capacity as parent, spouse, sibling, and offspring, including spouse of the offspring of other directors, executive, major shareholder, controller or person to be nominated as a director, an executive or a controller of the Company or its subsidiaries;

4. Not having or having had any business relationship with the Company, its parent company, subsidiaries, associated companies, major shareholder or controller of the Company in a manner which may prevent the exercise of his or her independent judgment; and not being or having been a substantial shareholder or controller of any person having a business relationship with the Company, its parent companies, subsidiaries, associated companies, major shareholder or controller of the Company, unless such independent director has no longer been in such capacity for not less than two years prior to the appointment date;

The aforesaid business relationship shall include any transaction in the ordinary course of business for lease of immovable property, any transaction relating to assets or services or grant or receipt of financial assistance through receiving or extending any loan, guarantee, providing assets as collateral, including any other similar action, which causes the Company or contractual party to be subject to indebtedness payable to the other party in the amount of three percent or more of the Company's net tangible assets or in the amount of Baht Twenty Million or more, whichever is lower. Such indebtedness shall be calculated according to the calculation method of connected transaction value under the Notification of the Capital Market Supervisory Board, Re: Rules on Connected Transactions, mutatis mutandis. However, the consideration of such indebtedness shall include the indebtedness incurred during the course of one year prior to the commencement of a business relationship with the same person;

5. Not being or having been an auditor of the Company, its parent company, subsidiaries, associated companies, major shareholder, or controller of the Company; and not being a substantial shareholder, controller, or partner of an audit firm which employs the auditor of the Company, its parent company, subsidiaries, associated companies, major shareholder, or controller of the Company, unless such independent director has no longer been in such capacity for not less than two years prior to the appointment date;
6. Not being or having been a professional service provider, including legal advisor or financial advisor which receives an annual service fee exceeding Baht Two Million from the Company, its parent company, subsidiaries, associated companies, major shareholder, or controller of the Company; and not being a substantial shareholder, controller, or partner of such professional service provider, unless such independent director has no longer been in such capacity for not less than two years prior to the appointment date;
7. Not being a director appointed as a representative of the Company's director, major shareholder or shareholder who is a related person of the major shareholder;
8. Not engaging in any business of the same nature as material competition with the business of the Company or its subsidiaries; or not being a substantial partner in a partnership or a director having involvement in the management, an employee, a staff member, an advisor receiving a regular salary or holding more than one percent of the total number of voting shares of another company engaging in any business of the same nature as material competition with the business of the Company or its subsidiaries;
9. Not having any other characteristics preventing the provision of independent opinions on the Company's operations.

## 8.2 Management Team

### 8.2.1 List of Names of Management Team

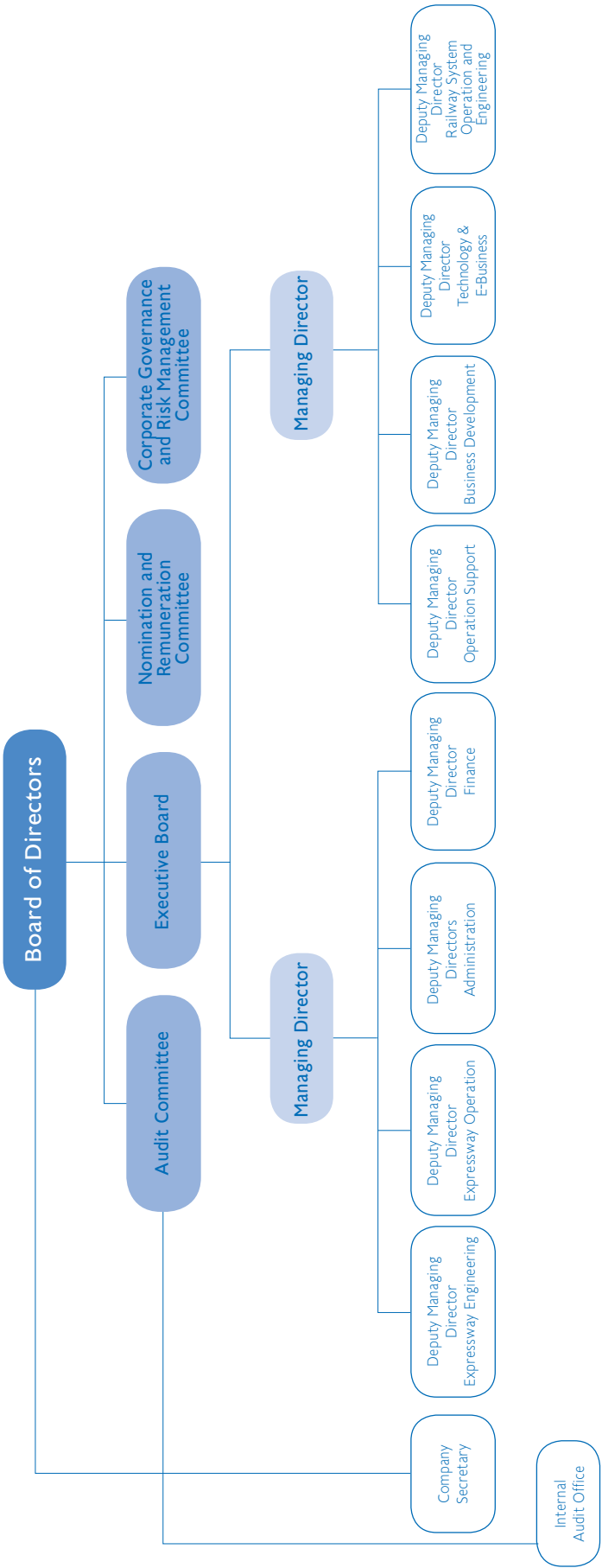
The Management Team under the structure as at December 31, 2019, comprised 10 persons as listed below: (information of executives appear on pages 218 to 220).

No.	Name	Position
1.	Dr. Sombat Kitjalaksana	Managing Director
2.	Mrs. Payao Marittanaporn	Managing Director
3.	Mr. Sanguan Kunatinun	Deputy Managing Director Expressway Engineering
4.	Mrs. Sudruthai Prommart	Deputy Managing Director Expressway Operation
5.	Mr. Phakpoom Thaweewittayarut	Deputy Managing Director Administration
6.	Miss Panan Tosuwanthaworn	Deputy Managing Director Finance
7.	Mr. Witoon Hatairatana	Deputy Managing Director Railway System Operation and Engineering
8.	Mr. Alvin Gee	Deputy Managing Director Operation Support
9.	Dr. Vites Techangam	Deputy Managing Director Technology and E-Business
10.	Mr. Anawash Suwanarit	Deputy Managing Director Business Development



8.2.2 Management Structure of the Company

Organizational Chart of Bangkok Expressway and Metro Public Company Limited



### 8.2.3 Structures of the Boards of Directors of Subsidiaries

#### 1) Northern Bangkok Expressway Company Limited

As of December 31, 2019, the Board of Directors of Northern Bangkok Expressway Company Limited comprised six directors as follows:

- |                                     |                                    |
|-------------------------------------|------------------------------------|
| 1. Mr. Plew Trivisvavet             | Chairman of the Board of Directors |
| 2. Mr. Supong Chayutsahakij         | Director                           |
| 3. Mr. Phongsarit Tantisuvanitchkul | Director                           |
| 4. Dr. Sombat Kitjalaksana          | Director                           |
| 5. Mrs. Tasanuch Thammachot *       | Director                           |
| 6. Mrs. Payao Marittanaporn         | Director                           |

Remark: \* She was appointed to hold the office on December 11, 2019 to replace Mr. Dumkerng Pankam who resigned his office on October 1, 2019 and Mrs. Tasanuch Thammachot resigned her office on January 10, 2020.

#### Authorized Directors

Northern Bangkok Expressway Company Limited has determined five directors authorized to sign and bind the subsidiary, comprising Mr. Plew Trivisvavet, Mr. Supong Chayutsahakij, Mr. Phongsarit Tantisuvanitchkul, Dr. Sombat Kitjalaksana, and Mrs. Payao Marittanaporn, whereby two of these five directors shall jointly sign and affix the subsidiary's seal.

#### 2) Bangkok Metro Networks Limited

As of December 31, 2019, the Board of Directors of Bangkok Metro Networks Limited comprised seven directors as follows:

- |                                     |                                    |
|-------------------------------------|------------------------------------|
| 1. Mr. Phongsarit Tantisuvanitchkul | Chairman of the Board of Directors |
| 2. Dr. Sombat Kitjalaksana          | Director                           |
| 3. Mr. Witoon Hatairatana           | Director                           |
| 4. Miss Panan Tosuwanthaworn        | Director                           |
| 5. Mrs. Thipsuda Yimwilai           | Director                           |
| 6. Mr. Anawash Suwanarit *          | Director                           |
| 7. Mr. Nattavut Trivisvavet         | Director                           |

Remark: \* He was appointed to hold the office on April 22, 2019.

#### Authorized Directors

Bangkok Metro Networks Limited has determined seven its authorized directors, namely:

- o Mr. Phongsarit Tantisuvanitchkul and Dr. Sombat Kitjalaksana shall jointly sign and affix the company's seal; or
- o Either Mr. Phongsarit Tantisuvanitchkul or Dr. Sombat Kitjalaksana shall jointly sign together with Mr. Witoon Hatairatana, Miss Panan Tosuwanthaworn, Mr. Anawash Suwanarit, Mr. Nattavut Trivisvavet, or Mrs. Thipsuda Yimwilai, totaling two persons, shall jointly sign and affix the company's seal.

## 8.3 Company Secretary, the Person Taking the Highest Responsibility in Finance and Accounting, and the Person Supervising Accounting

### 8.3.1 Company Secretary

The Board of Directors has considered appointing the qualified person as Company Secretary. On December 30, 2015, the Board of Directors appointed Mr. Phakpoom Thaweeewittayarut, who was knowledgeable and capable in the fields of accounting, law, and audit, as well as fully understanding rules, regulations and criteria applicable to listed companies, to serve as the Company Secretary (details of his profile appear on page 219, No. 18), with the duties and responsibilities as follows:

1. Providing suggestions to directors relating to provisions of laws, relevant rules and regulations.
2. Arranging for orientation and providing necessary information for the performance of duties to the current and new directors.
3. Monitoring the Company to ensure its compliance with laws, Articles of Association, relevant regulations and the good corporate governance principles.
4. Convening meetings as stipulated by laws and Articles of Association, preparing and keeping minutes of meetings, as well as coordinating to ensure efficient performance in compliance with resolutions passed by the Board of Directors or the shareholders' meetings.
5. Preparing and keeping the following documents:
  - a) Directors' register;
  - b) Notices, minutes of the Board of Directors' meetings and annual reports of the Company;
  - c) Notices and minutes of the shareholders' meetings.
6. Keeping reports on interest filed by directors or executives.
7. Monitoring to ensure disclosure of information and information memorandum to regulatory units in compliance with relevant laws, rules, and regulations.
8. Contacting and communicating with shareholders and relevant regulatory units, whereby shareholders may inquire or request any information as needed by contacting at Tel. 0 2641 4611 or sending questions via email to [companysecretary@bemplc.co.th](mailto:companysecretary@bemplc.co.th).
9. Promoting the provision of various training courses and providing useful information for the performance of duties of new directors.
10. Making other arrangements as announced by the Capital Market Supervisory Board.
11. Proceeding with other matters as assigned by the Board of Directors.

### 8.3.2 The Person Taking the Highest Responsibility in Finance and Accounting

The Board of Directors appointed Miss Panan Tosuwanthaworn, who had knowledge and abilities in the fields of accounting and finance, to serve as the Deputy Managing Director: Finance, holding the position of top management in accounting and finance (details of her profile appear on page 219, No. 19), with the duties and responsibilities as follows:

1. Planning financial strategies to encourage internal and external growth as well as financing to accommodate growth linking with the Company's growth strategies and business value.
2. Controlling and managing infrastructure in terms of financial information and financial management of the Company to ensure that the Company's work operations are driven to achieve tasks and goals as planned.
3. Developing and managing financial tools to contribute to the analysis of the efficiency of work operations and analysis of business value.
4. Communicating the organization's significant financial information to enhance the understanding and trust of investors relating to stability and opportunities of the Company.

In 2019, Miss Panan Tosuwanthaworn, the Deputy Managing Director Finance, received training in the course of temporary differences for deferred income tax (TAS12), including the update of the PAEs and NPAEs accounting standards, from MBA Chula Alumni, the Faculty of Commerce and Accountancy, Chulalongkorn University, for 8.30 hours.

### 8.3.3 The Person Supervising Accounting

Per the organizational chart of the Company, there was appointment of an officer in the management level in the position of General Manager of Accounting Division, i.e., Miss Saranya Lertjiraprasert, who had knowledge and understanding of the accounting system of the Company, to hold the position of General Manager of Accounting Division, as the person supervising accounting (details of her profile appear on page 220, No. 24), with duties and responsibilities as follows:

1. Drawing up policies and plans on accounting and finance as well as determining the accounting and financial systems in line with the guidelines for the Company's work operations.
2. Overseeing preparation of accounts and inspecting close of accounts of the Company in each period to ensure that they are made properly and in accordance with the specified practices.
3. Overseeing and inspecting preparation of financial statements, balance sheet, income statement, and accounting reports.
4. Overseeing and inspecting income-expenditure of the Company.
5. Overseeing the Company's budgeting and inspecting to ensure that the budget is utilized properly and in accordance with the budget plan as specified.
6. Overseeing the preparation of relevant tax reports for submission to relevant government authorities.

In 2019, Miss Saranya Lertjiraprasert, the General Manager of Accounting Division, received training in the course of keeping up with new financial reporting standards to be applied in 2019 and 2020, class 2/2019, from the Federation of Accounting Professions under the Royal Patronage of His Majesty the King, for six hours.

## 8.4 Remuneration of Directors and Executives

The Company has the policy to pay remuneration for directors and executives, by taking into account appropriate remuneration in accordance with criteria on remuneration determination as follows:

### 8.4.1 Remuneration for Directors and Managing Directors

1. The remuneration shall be appropriate for and in line with the scope of duties and responsibilities of each director, e.g., as Chairman of the Board of Directors, chairman of each subcommittee and the member of the Executive Board, the Audit Committee, the Nomination and Remuneration Committee and the Corporate Governance and Risk Management Committee, who shall receive additional remuneration for such position.
2. The remuneration for the directors and the Managing Directors is at the level which is appropriate and sufficient to attract as well as retaining knowledgeable and qualified directors to perform duties for the Company efficiently in order to lead the organization to accomplish the short-term and long-term goals.
3. The elements of remuneration are clear, transparent and easy to understand.
4. The remuneration shall be considered by the Nomination and Remuneration Committee to ensure that the remuneration is at the appropriate and competitive level and stays at the same level as that in the same sector which is adequate to retain the directors and the Managing Directors who possess the qualifications in line with the goals in the business operations of the Company.

### 8.4.2 Remuneration for Executives

Remuneration for executives, excluding the Managing Directors, shall be considered in accordance with the criteria and policy specified by the Executive Board, corresponding to the Company's operational results and each executive's performance evaluation results through the Performance Management System (PMS).

In 2019, the Company paid remuneration for directors and executives as follows:

#### (1) Monetary remuneration

- (1.1) Remuneration for directors of the Company comprised annual remuneration, meeting allowance, and bonus. In 2019, the total remuneration for directors of the Company amounted to Baht 38,073,948, in line with the resolution of its 2019 Annual Ordinary General Meeting of Shareholders which approved the remuneration for directors in the total amount not exceeding Baht 39,000,000, namely, bonus for directors for 2018 in an amount not exceeding Baht 21,000,000 and remuneration for directors for 2019 in an amount not exceeding Baht 18,000,000.



Unit: Baht

List of Directors	Remuneration for Directors 2019							Remuneration for Director in Holding Directorships in Subsidiaries (NECL/BMN)
	Board of Directors	Executive Board	Audit Committee	Nomination and Remuneration Committee	Corporate Governance and Risk Management Committee	Total	Bonus 2018	
1. Dr. Virabongsa Ramangkura Chairman of the Board of Director	2,300,000	-	-	-	-	2,300,000	2,500,000	-
2. Mr. Plew Trivisvavet Deputy Chairman of the Board of Directors Chairman of the Executive Board Nomination and Remuneration Committee Member	650,000	1,000,000	-	150,000	-	1,800,000	2,300,000	1,000,000
3. Mr. Vitoon Tejatassanasoontorn Director Chairman of the Audit Committee Nomination and Remuneration Committee Member	650,000	-	500,000	150,000	-	1,300,000	1,225,000	-
4. Gen. Chetta Thanajaro Director Chairman of Nomination and Remuneration Committee Audit Committee Member	650,000	-	300,000	250,000	-	1,200,000	1,225,000	-
5. Gen. Sampao Choosri <sup>(1)</sup> Director Chairman of the Corporate Governance and Risk Management Committee Audit Committee Member	288,587	-	192,391	-	192,391	673,369	1,225,000	-
6. Dr. Annop Tanlamai Director Audit Committee Member	600,000	-	300,000	-	-	900,000	1,025,000	-
7. Mrs. Vallapa Assakul <sup>(2)</sup> Director Corporate Governance and Risk Management Committee Member	600,000	-	-	-	200,000	800,000	1,025,000	-
8. Mr. Supong Chayutsahaj Director Executive Director Nomination and Remuneration Committee Member	650,000	500,000	-	150,000	-	1,300,000	1,275,000	650,000
9. M.L. Prasobchai Kasemsant Director	600,000	-	-	-	-	600,000	1,050,000	-
10. Mr. Phongsarit Tantisuvanitchkul Director Executive Director Corporate Governance and Risk Management Committee Member	650,000	500,000	-	-	200,000	1,350,000	1,275,000	794,000
11. Mr. Werapong Suppasedsak <sup>(3)</sup> Director	245,604	-	-	-	-	245,604	900,000	-
12. Miss Arisara Dharamadhaj <sup>(4)</sup> Director	404,396	-	-	-	-	404,396	-	-
13. Mr. Panit Dunnvatanachit Director	650,000	-	-	-	-	650,000	900,000	-
14. Mr. Yuttana Yimgarund <sup>(5)</sup> Director	544,565	-	-	-	-	544,565	900,000	-
15. Mrs. Natamon Bunnak <sup>(6)</sup> Director	650,000	-	-	-	-	650,000	631,233	-
16. Mr. Prasit Dachsi <sup>(7)</sup> Director	-	-	-	-	-	-	673,150	-
17. Mr. Wichan Ekarintrakul <sup>(8)</sup> Director	-	-	-	-	-	-	-	-
18. Dr. Sombat Kitjalaksana Director Executive Director Corporate Governance and Risk Management Committee Member Managing Director	600,000	500,000	-	-	200,000	1,300,000	1,275,000	746,000
19. Mrs. Payao Marittanaporn Director Executive Director Corporate Governance and Risk Management Committee Member Managing Director	650,000	500,000	-	-	200,000	1,350,000	1,275,000	650,000
<b>Total</b>	<b>11,383,152</b>	<b>3,000,000</b>	<b>1,292,391</b>	<b>700,000</b>	<b>992,391</b>	<b>17,367,934</b>	<b>20,679,383</b>	<b>3,840,000</b>
<b>Amount Approved by Shareholders</b>						<b>18,000,000</b>	<b>21,000,000</b>	

Remarks : <sup>(1)</sup> Gen. Sampao Choosri  
<sup>(2)</sup> Mrs. Vallapa Assakul  
<sup>(3)</sup> Mr. Werapong Suppasedsak  
<sup>(4)</sup> Miss Arisara Dharamadhaj  
<sup>(5)</sup> Mr. Yuttana Yimgarund  
<sup>(6)</sup> Mrs. Natamon Bunnak  
<sup>(7)</sup> Mr. Prasit Dachsi  
<sup>(8)</sup> Mr. Wichan Ekarintrakul

resigned his office as a director on December 18, 2019.  
 was appointed as Chairman of the Corporate Governance and Risk Management Committee on December 18, 2019.  
 retired by rotation in the 2019 Annual Ordinary General Meeting of Shareholders on April 26, 2019.  
 was appointed as a director on April 26, 2019.  
 resigned his office as a director on October 25, 2019.  
 was appointed as a director on April 20, 2018.  
 resigned his office as a director on October 1, 2018.  
 was appointed as a director on December 27, 2018 and notified his intention not to receive remuneration.

- (1.2) In 2019, the Company paid remuneration, comprising salary and bonus for its executives at the levels of Managing Director downwards to Deputy Managing Director, totaling 10 persons, in the total amount of Baht 120,223,847.
- (1.3) In 2019, NECL paid remuneration for its directors, comprising annual remuneration, meeting allowance, and bonus, in the total amount of Baht 3,952,772, in line with the resolution of its 2019 annual ordinary general meeting of shareholders which approved the remuneration for directors in an amount not exceeding Baht 4,250,000, namely, bonus for its directors in 2018 in an amount not exceeding Baht 1,400,000 and remuneration for its directors for 2019 in an amount not exceeding Baht 2,850,000.
- (1.4) In 2019, BMN paid remuneration for its directors, comprising annual remuneration and meeting allowance, in the total amount of Baht 774,000, in line with the resolution of its 2019 annual ordinary general meeting of shareholders which approved the remuneration for directors for 2019 in an amount not exceeding Baht 1,152,000.
- (2) Other remuneration
  - (2.1) Other remuneration for directors
    - None -
  - (2.2) Other remuneration for executives

The Company establishes a provident fund, which provides long-term benefits upon termination of employment or retirement, whereby executives pay savings at the rate of 5-10 percent of his/her salary according to his/her service years and the Company pays contributions at the same rate to the fund. In 2019, the Company paid contributions to the provident fund for 10 executives in the amount of Baht 5,019,064.

The contribution rate paid by the Company shall be in accordance with the resolution of the Board of Directors' Meeting, mainly taking into consideration the Company's profitability and the Company's operational results.

## 8.5 Personnel

### 8.5.1 Number of Staff as at December 31, 2019

- Expressway business: there were a total of 1,038 staff, comprising personnel in two main functions, namely, Operation and Engineering, representing 77.3 percent of all staff, and personnel in supporting functions, namely, Administration, Finance and Corporate Governance, representing 22.7 percent of all staff.
- Rail business: there were a total of 3,041 staff, comprising personnel in main functions, namely, Project Management and Development Group, Engineering & Maintenance Group, Train Operation Group, Strategy Group, representing 88 percent of all staff, and personnel in supporting functions, namely, Technology & E-Business, Business Development Group, Human Resources Group, General Affairs Group, Safety and Quality Group, Law and Compliance Division, representing 12 percent of all staff.
- As of December 31, 2019, the Company has staff in each function (excluding executives) as follows:

Functions	Staff (persons)
1. Main functions	2,668
2. Supporting functions	373
<b>Total</b>	<b>3,041</b>

- Subsidiaries
  - o NECL has no employment of executive and permanent staff but operates the Udon Ratthaya Expressway by means of a service agreement with BEM.
  - o BMN had a total of 192 staff in each work unit (excluding executives), comprising Sale and Marketing Department, Design and Production Department, Business Development Department, Finance Department, and Operation Department.
- In 2019, the Company paid remuneration to its staff in the total amount of Baht 2,232.45 Million, comprising salaries, overtime pays, bonus in the amount of Baht 2,135.55 Million, and contributions to the provident fund in the amount of Baht 96.9 Million. Moreover, the subsidiaries paid remuneration to their staff in the same manner as the Company did in the total amount of Baht 81.87 Million.
- Significant Change in Number of Staff over the Past Three Years
  - None -
- Relationship between Executives and Labor Union (if any)
  - None -

### 8.5.2 Personnel Development Policy

The Company is determined to be a leading, fully-integrated transportation service provider in Thailand and ASEAN, with its social mission to provide the transport service with convenience, rapidity, and safety by engaging in the business with its commitment to social and environmental responsibility, attainment of value added creation and optimum benefits for all stakeholders with fairness and sustainability.

Currently, the Company continues to undergo changes and business competition, and, to enable the Company to create the **“Route of Happiness for Better Travelling Mode”**, the Company then realizes the significance of personnel development to ensure that they have preparedness and capability to not only create value for the Company but also value for the society as a whole.

Personnel is regarded as a key feature in moving the business forward with sustainability, the Company has thus clearly incorporated the practices for staff’s compliance into the Company’s Codes of Conduct. In this regard, the Company is committed to development of efficiency of its staff to meet quality of work and quality of life of staff by fostering conceptions and values relating to quality policies, comprising personnel development, teamwork, creation of quality, working environment, and accountability of executives and staff, including formulation of clear policies on safety and hygiene along with ensuring environment and hygiene in the workplace with safety to life and property of personnel and the Company.

The Company firmly believes that qualified staff is a key factor in bringing the sustainable growth and success to the organization, it has thus clearly formulated the personnel development policy, as follows:

1. The Company establishes a policy on nomination, development, and retention of its personnel by means of provision of remuneration in the form of salary, welfare, and other remuneration which are competitive in the same industry.
2. The Company regards its staff as valuable resources, that is, human resources are one of the major factors to the Company’s development and competitiveness as well as the achievement of the Company’s objectives. The Company realizes the significance of internal personnel development and improvement by the way of regular training and performance review, including local and overseas study visits and training, particularly the awareness and training in respect of service safety. The Company’s staff must strictly comply with the Company’s safety rules and international standards.
3. The Company arranges for the efficient personnel management system based on fairness, equality, and opportunity for staff development and exercise of competency at full capacity.
4. The Company gives priority to morale and a sense of pride in work performance of staff by determining remuneration and career advancement based on knowledge, competency, and fairness, as well as arranging for the reasonable welfare system, together with the development of staff lifestyle in order to retain the Company’s valuable human resources.

5. Retention of the Company's competent personnel

The Company ensures that highly capable and competent staff advance in their career paths.

The Company is ready to create the path to happiness, by starting from the "Source of Happiness", which signifies the Company's personnel. To ensure that the Company's personnel can provide the quality service, particularly in respect of safety, the Company has encouraged the sphere of safety at work with a commitment to fostering and creating awareness of occupational safety and health to its personnel at all levels and then to its business alliances, customers, together with nearby communities. In addition, the Company has integrated the social and environmental responsibility activities in processes related to safety, for that reason, the Company not only gives priority to the safety of the service users, but also to all persons throughout the value chain of the Company.

**Personnel Development and Improvement Policies in 2019**

1) Creation of Organizational Culture

The Company has aimed to provide the expressway service and train operation service with efficiency and continuous development, it has therefore fostered the conceptions and practices in various aspects, whether it be awareness of safety or awareness of accountability and responsibility, which are communicated via the operating process and with support of supervisors until attaining the organizational culture. This is to rest assured of the staff's practices and behavioral expressions in accordance with the Company's goals.

2) Management of Work Competency

Personnel is regarded as an invaluable resource which will support the Company to endlessly evolve and have business competitiveness, and as the Company has planned to develop competency of staff at all levels by establishing core competency, performance competency and managerial competency of each work position, performance evaluation process and training provision as suitable for staff according to his/her work position, duties and responsibilities, to ensure staff's in-depth and extensive expertise, resulting in the Company's competency in moving its business forward to be the fully-integrated transportation service provider in Thailand and ASEAN.

**8.5.3 Benefits**

**1) Remuneration for Staff**

In order to determine the appropriate and competitive remuneration to maintain the good and competent staff to work with the organization, the Company then participates in the survey of wages and remuneration to compare with labor market and other companies in the same sector as well as reviewing the starting salary for new graduates and base salary based on the value of work via the institute conducting wage survey on a regular basis. Therefore, it can be assured that the Company determines the fair and appropriate remuneration to the staff.

The Executive Board considers adjusting wages on a yearly basis by taking into account the Company's operational results through the Competency KPIs and its payment coverage ratio.

Furthermore, the Company establishes a provident fund for long-term care of staff in order to motivate staff to work with the Company and to encourage staff's saving habits to secure adequate retirement savings for a quality retirement life. Staff may apply for provident fund membership, whereby staff pay savings at the rate of 5 to 15 percent of his/her salary according to his/her ability to save and the Company pays contributions at the rate of 5 to 10 percent according to such staff's service years and requirements of the fund. Staff who are fund members shall gain benefits arising from management in proportion to each staff's savings in the fund. The Company also provides group life insurance benefits for staff so as to secure staff and staff's family.



## 2) Staff Welfare

In addition to welfare required by law, the Company also provides staff with an additional and appropriate welfare and encourages the roles of the Staff Welfare Committee, beginning with the arrangement for the legitimate election as required by law in order to jointly provide advice and suggestions to the Company on welfare benefits for its staff as a whole and monitor to ensure that the Company's welfare benefits are properly provided to its staff, which lead to adjustment and improvement of the Company's welfare in various aspects as appropriate according to the changing economic and social circumstances.

## 3) Labor Relations

The Company sets out a policy to take care of its staff via the line management through the human resources unit with the duties to provide advice to, support supervisors and provide them with regular training on personnel management and understanding of the work rules and regulations of the Company. The Company also sets out the investigation procedures with clarity in case of any disciplinary misconduct by staff to ensure fairness and solutions to prevent repeated misconduct, including clear and rapid grievance procedures. Furthermore, the Company yearly organizes the activities to strengthen relationships with benefit its staff, comprising merit-making and food offering to monks activities on the occasion of New Year Day and merit-making to celebrate the Company's anniversary, New Year's Eve activity, Blood Donation to Thai Red Cross Society activity, Songkran Day activity, workout activity, mindfulness meditation activity, health and nutrition activity. In addition to the Company's internal activities as mentioned above, the Company also encourages and supports budget for off-work activities by allowing staff who are interested in useful activities to form activity group in the form of various clubs, such as, sports club, photo club, volunteer club, and music club. The sports club arranges for activities all year round, i.e., football match, walking-jogging for good health, as well as participation in walking-running for charity in association with the government sector on various occasions; internal sports activity so as to encourage staff to work out and then select the Company's athletes to participate in sports competition with external organizations to gain more experience and strengthen good intercompany relationships. The music club regularly arranges for recreational activities every year to promote staff to show their artistic and performance talents, to perform their shows in various events of the Company, and to spread happiness to the society, particularly to the underprivileged communities.

## 4) Occupational Safety and Health

The Company gives priority to the occupational safety and health by setting out a policy to require each work unit to set out measures and practices relating to proper use of safety equipment as appropriate for each task, as well as providing budget support in improvement of the efficiency of such equipment to be ready for effective and sufficient use, including review of use of such equipment on a regular basis throughout the year and emergency simulation drill. Moreover, the Company also provides training to its staff on the awareness of safety at work, life, and assets of its customers.

## 5) Quality of Staff's Life

The Company realizes the significance of life quality of staff, including staff of construction and management of the expressways and the metro projects, together with motorists and the society along the expressway routes, and then sets out a policy on hygienic workplaces and routes:

- By adopting the ISO 14001 Environmental Management System. The Company was certified by SGS (Thailand) Limited in accordance with UKAS Standard of England and NAC Standard of Thailand and through the commitments of the management and contribution of staff in realizing the significance and necessity as members of the world community with duty to preserve the environment, and the Company continues to undergo a recertification audit of ISO 14001 Environmental Management System.

- By adopting the international standard safety management system as a guideline for operations, namely, OHSAS/TIS 18001, as well as engaging Ricardo Rail as a safety consultant to provide suggestions on risk management and to devise new safety management techniques for improvement of the Company's work processes to ensure more safety.

#### 6) Anti-Drug in Office Campaign

The Company realizes the country's drug problems which give rise to major impact on the economic and social stability, public order and morality, and then, in association with the Occupational Health and Working Environment Subcommittee of the Company, participated in the White Factory project (Drug Free Workplace Project) of the Department of Labor Protection and Welfare, by participating in activities in collaboration with external agencies, and cooperation for drug test of all the Company's staff. In such arrangements, the Company sets out a policy to confirm its commitment and practice, namely:

1. Giving priority to drug prevention and solution by educating its staff on the damage of drugs and organizing staff health check-up every year or on a specific occasion.
2. Supporting and promoting all staff to take a role and participate in the campaign for drug prevention and solution, and jointly monitor both inside and outside the Company for drug prevention in the Company.
3. Providing cooperation with the government agencies in respect of various measures for drug prevention and solution campaign.
4. Appointing the Occupational Health and Working Environment Subcommittee of the Company to take responsibility for implementing the White Factory project (Drug Free Workplace Project) to meet the project's objectives in line with the drug prevention and solution policy in business premises.

In this regard, the Company authorized the Occupational Health and Working Environment Subcommittee of the Company to act as the ex officio "White Factory" Project (Drug Free Workplace Project) Committee to ensure the continued implementation, whereby the "White Factory" Project (Drug Free Workplace Project) Committee shall have duties and responsibilities as follows:

1. Providing suggestions and guidelines for drug prevention and solution;
2. Complying with policies and action plans for drug prevention and solution;
3. Promoting and supporting activities for raising the awareness and campaign on anti-drug in the Company;
4. Disseminating knowledge and understanding relating to drugs and drug prevention to its staff;
5. Following up and evaluating the implementation and report to the Company.

The Company as 1 of 150 business premises which were granted a Drug Free Workplace Certificate by the Department of Labor Protection and Welfare due to the Company's "Drug Management System in the Business Premises Ranking No. 1", from the total of 258 nominees, as a role model for other business premises in that the Company could encourage its staff to participate in anti-drug campaign in the business premises until they produced concrete results.

#### 7) Anti-Corruption in All Operating Procedures

The Company designs its operating procedures on the basis of independent check and balance and adopts the SAP system to inspect every step of the operating procedures, including prevention of any potential unusual practices in the procedures.

The SAP system comprises sourcing and procurement, maintenance, inventory, accounting and finance modules, all of which are integrated into one system, to inspect every step of the operating procedures and cross-platform processing, including financial data tracking, which helps prevent corruption efficiently.

## 9. Corporate Governance

### 9.1 Corporate Governance Policy

The Board of Directors and management put their trust in and realize the significance of the Corporate Governance Code, comprising establishing organizational leadership role and responsibilities of the Board for creating value for the business to attain the sustainable business operations, strengthening effective management and internal control, implementing mechanisms for control and checks and balances intended to ensure the transparent and auditable management, respect for rights and equality of shareholders by encouraging and supporting participation and communication with shareholders, ensuring disclosure and maintaining financial integrity; and ensuring all groups of stakeholders-oriented management, as crucial factors in adding value and bringing the highest returns to the Company's shareholders with the long-term sustainability.

To boost confidence of all shareholders, investors and stakeholders and development resulting in the good corporate governance of the Company and its subsidiaries on a continuous basis, including understanding of the Board of Directors in the Company's business operations, expectations of stakeholders, opportunities and risks affecting the business operations, the Board of Directors shall regularly review the corporate governance policy on a yearly basis at least once a year. In this connection, the Company has publicized the corporate governance policy on its website at <http://www.bemplc.co.th> to allow all shareholders, investors, and stakeholders to acknowledge the practical guidelines and business operations of the Company based on the Corporate Governance Code. Moreover, the Company has informed and communicated to the Company's staff to acknowledge and adhere to such policy.

- **Corporate Governance Policy**

1. **Rights of Shareholders**

Encouraging the shareholders to exercise their basic rights and taking care of the shareholders to the greater degree than their legal rights without taking any action which violates their rights or deprives them of their rights.

2. **Equitable Treatment towards Shareholders**

Ensuring that all shareholders are equally treated and protected in respect of their basic rights; implementing measures to prevent the inside information usage for personal gain or benefit others in an abusive manner, which would cause damage to the shareholders as a whole.

3. **Roles of Stakeholders**

Taking care of stakeholders of all groups based on their relevant legal rights without taking any action in violation of the stakeholders' rights, as well as establishing measures to redress the situation which the stakeholders have suffered damage arising from violation of their rights; providing a mechanism to promote cooperation between the Company and the stakeholders in the pursuit of the Company's prosperity, financial stability, and sustainability.

4. **Disclosure and Transparency**

Engaging in all activities transparently and auditably; disclosing sufficient information to all relevant parties, as well as ensuring disclosure of material information relating to the Company, both financial and non-financial information, to be made accurately, completely, timely, transparently through easy-to-access channels which are fair and reliable.

## 5. Responsibilities of the Board

Ensuring that the Board of Directors performs their duties in good faith, with diligence and due care, in the best interest of the Company and in fairness to all shareholders under the good internal control system and appropriate risk management, as well as complying with the Company's code of ethics.

As a result of the operational results from the adherence to and compliance with the aforesaid good corporate governance principles, the Company then received assessments and awards for the corporate governance in 2019, as follows:

- The Company received an "Excellent" rating in the assessment of the quality of the 2019 Annual Ordinary General Meeting of Shareholders (AGM Checklist 2019), from the Thai Investors Association.
- The Company received the Drive Award 2019 for Environment and Sustainability in Service Business, from MBA Chula Alumni, the Faculty of Commerce and Accountancy, Chulalongkorn University.
- The Company received a "Very Good" rating from the results of corporate governance survey of listed companies, from the Thai Institute of Directors Association (IOD).
- The Company was selected to enlist in the Thailand Sustainability Investment 2019 for the third consecutive year as a listed company engaging in business operations by taking into account environment, society and corporate governance.

In 2019, the Board of Directors supervised and monitored to ensure the development of the Company's corporate governance as well as summarizing the corporate governance activities held throughout the year 2019 covering and in compliance with the Corporate Governance Code for Listed Companies, as follows:

### 9.1.1 Shareholders' Rights and Encouragement of Participation by Shareholders

The Board of Directors acknowledges and realizes the significance of shareholders' fundamental rights as well as encouraging participation by shareholders and communication with shareholders, namely, share purchase, sale and transfer, entitlement to the Company's profit sharing, meeting attendance for exercising their rights to vote in the shareholders' meetings independently and equitably, participation in decision-making in the Company's important matters, appointment or removal of directors, determination of remuneration for directors, appointment of auditors, determination of remuneration for auditors, and rapid receipt of the Company's complete and sufficient information and news via easily accessible channels, whereby the Company encourages its shareholders to fully exercise their rights through the shareholders' meetings and refrains from taking any actions in violation of shareholders' rights or which deprive shareholders of their rights, as follows:

#### 1. Shareholders' Meetings

##### 1.1 Shareholders' participation in shareholders' meetings

The Company realizes and gives priority to shareholders' rights and encourages their participation, whereby the Board of Directors clearly sets out in the corporate governance policy that the Company must support all groups of shareholders, particularly minority shareholders, foreign shareholders, and institutional shareholders, to exercise their rights without limitation to only such rights provided by laws. In this regard, the Company must not take any actions in violation of shareholders' rights or which deprive shareholders of their rights and also promote shareholders' right to decide on significant changes, by ensuring that the shareholders have been provided with the Company's sufficient information. Furthermore, the Company prepares documents in both Thai and English versions for clear acknowledgment and understanding of all shareholders.



In case it is inconvenient for any shareholders to attend meetings in person, the Company prepares proxy forms for enabling the shareholders to decide among themselves how they wish their votes to be cast, and gives them an option of appointing the Company's independent director nominated by the Company as their proxy to exercise the right to attend meetings and vote on each agenda item on their behalf. Three available proxy forms under the law are prepared, as follows:

- Proxy Form A is a general simple proxy form (for shareholders in all cases);
- Proxy Form B is a proxy form with specific details;
- Proxy Form C is used only by foreign shareholders who appoint a custodian in Thailand.

The Company makes these three proxy forms available on its website for shareholders to choose and use them as appropriate. Furthermore, the Company prepares duty stamps available for free for shareholders who appoint their proxies to attend meetings.

## **1.2 Shareholders' access to the Company's information**

Notices of meetings which contain detailed explanations, facts and reasons in support of each agenda item, date, time, place, including details relating to the documents or evidence in support of participation in meetings, are prepared by the Company in both Thai and English versions to ensure all shareholders' acknowledgment and clear understanding. The Company posts notices of meetings on the Company's website 30 days in advance. In 2019, the Company convened two shareholders' meetings, namely, the Extraordinary General Meeting of Shareholders No. 1/2019 on March 18, 2019, the Company has disseminated the notice of the meeting on its website since February 18, 2019 and also sent the notice of the meeting to Thailand Securities Depository Company Limited, as the Company's share registrar, for delivery of the same to shareholders 16 days prior to the meeting, i.e., March 1, 2019.

As for the 2019 Annual Ordinary General Meeting of Shareholders on April 26, 2019, the Company has disseminated the notice of the meeting on its website since March 26, 2019 and also sent the notice of the meeting to Thailand Securities Depository Company Limited, as the Company's share registrar, for delivery of the same to shareholders 21 days prior to the meeting, i.e., April 4, 2019, so as to allow shareholders to have time to consider the details of each agenda item. Furthermore, the shareholders' meetings have been proceeded in accordance with the order of agenda as specified in the notices of the meetings without adding any agenda to the meetings without prior notice to shareholders in the meetings, so that shareholders have access to information in support of their consideration of each agenda item.

## **1.3 Facilitation to shareholders' exercise of their rights to attend meetings and vote**

The Company facilitates shareholders' exercise of their rights to attend meetings and vote without any special conditions which may restrict shareholders' opportunity to attend meetings. The Company sets shareholders' meeting dates which do not fall on any long holidays or public holidays; and an appropriate meeting time which is not too early in the morning or too late in the evening. Meetings are held at venues which are convenient for commuting, such as, close to a metro station or expressway on-off ramp, and with sufficient parking area, together with meeting venue and travelling map. In 2019, the Company convened two shareholders' meetings, namely, the Extraordinary General Meeting of Shareholders No. 1/2019 on March 18, 2019 at 14.00 hrs., and the 2019 Annual Ordinary General Meeting of Shareholders on April 26, 2019 at 14.00 hrs., whereby both shareholders' meetings were held at the Le Concorde Ballroom, 2<sup>nd</sup> Floor, Swissotel Bangkok Ratchada, No. 204 Ratchadaphisek Road, Huai Khwang, Bangkok, which shareholders could conveniently travel to venue by public transportation system such as buses, MRT, and by car, etc.

#### 1.4 Shareholders' opportunity to ask questions in advance

To ensure communication with shareholders and build participation with shareholders, the Company provides an opportunity for its shareholders to propose agenda items or send questions or comments in advance, under the criteria and process which are publicly disclosed on the Company's website at [www.bemplc.co.th](http://www.bemplc.co.th), or via E-mail address: [companysecretary@bemplc.co.th](mailto:companysecretary@bemplc.co.th), Tel.: 0 2641 4611, Fax: 0 2641 4610, or by post, to the Managing Director Office, Bangkok Expressway and Metro Public Company Limited (Branch Office 1) No. 238/7 Asoke-Dindaeng Road, Bangkokpi Subdistrict, Huai Khwang District, Bangkok 10310. In this regard, the Company will consider answering the questions via appropriate channels or further clarify in the ordinary general shareholders' meeting.

As for the 2020 Annual Ordinary General Meeting of Shareholders, the Company had provided an opportunity for shareholders to propose agenda items or send questions in advance via the website from October 1, 2019, to December 31, 2019, of which shareholders had been widely notified via the Stock Exchange's website.

### 2. Conduct of Shareholders' Meetings

The Company's reception staff facilitates shareholders' participation in meetings and provides information to shareholders both before and after meetings as well as serves refreshments to shareholders. In addition, the Company uses the following facilities and methods to conduct meetings:

#### 2.1 Use of technology in meetings

The Company uses barcodes and computer systems for meeting registration and voting to ensure accuracy, convenience, and rapidity, and as such, voting results can be displayed immediately in real time.

#### 2.2 Directors' participation in shareholders' meetings

The Board of Directors gives priority to their participation in shareholders' meetings to answer questions and take suggestions of shareholders into consideration. In 2019, the Company convened two shareholders' meetings, i.e., the Extraordinary General Meeting of Shareholders No. 1/2019 on March 18, 2019, with the number of 14 directors from a total of 17 directors attending the meeting (representing 82.35 percent of attending directors); and the 2019 Annual Ordinary General Meeting of Shareholders on April 26, 2019, with the number of 15 directors from a total of 17 directors attending the meeting (representing 88.24 percent of attending directors). The Chairman of the Board of Directors, the Audit Committee Chairman, the chairman of various subcommittees, the Managing Directors, and the Management Team of the Company attended such shareholders' meetings to answer shareholders' questions.

#### 2.3 Rules on voting

The Company specifies that shareholders have one vote for each share held by them. Normally, a majority of votes of shareholders who attend the meeting and cast votes is applicable. Agenda items on the determination of remuneration for directors must be passed by not less than two-thirds of all votes of the shareholders who attend the meeting. As for other issues, votes are in accordance with the Articles of Association, laws and relevant regulations. Agenda items for acknowledgement require no resolution.

## 2.4 Vote counting or examination in shareholders' meetings

To ensure transparency, compliance with the laws and the Articles of Association, the Company provides for a legal advisor and at least two independent persons as shareholders' representatives to count or inspect the counting of votes to ensure transparency and compliance with the laws and the Articles of Association. The Company would introduce the examiners of vote counting to the meetings and has them recorded in the minutes of the shareholders' meetings. In casting votes on each agenda item, the Company uses the barcode system to record such votes to ensure that the voting results are expeditiously displayed to the meetings. Voting results of the meetings, favorable, unfavorable, abstaining votes, and voided voting cards, would be also displayed. The Company discloses resolutions, together with voting results on each item to the meetings, and also disseminates such resolutions via the Stock Exchange's system as well as making such resolutions and minutes of meetings available on the Company's website for the shareholders' information and examination of voting results in a rapid manner.

## 2.5 Use of voting cards

1. Voting cards are provided for every agenda for those who attend the meetings in person or by proxy and have power to vote on each agenda item. The Company's officers facilitate the collection of voting cards in the meeting room. To ensure transparency, the Company has its legal advisor and the shareholders' representatives serve as examiners and witnesses in the counting of votes.
2. In case shareholders appointing their proxies have clearly voted for, against or abstained from voting on the respective agenda items, the Company collects and records such votes into the computer system for processing in advance. The legal advisor and the shareholders' representatives examine the counting of votes by proxy.
3. To ensure that the conduct of the meeting in each agenda item is efficient and beneficial to shareholders as a whole and that the Board of Directors has sufficient time to clarify or answer shareholders' questions, the Company collects only the voting cards of the shareholders attending the meeting in person and intending to vote against or abstain from voting.
4. For the agenda item on the appointment of directors in respect of which shareholders may vote on an individual basis, the Company collects the voting cards from all shareholders attending the meeting in person to ensure transparency in the counting of votes which can be requested for review at a later date. In case of by proxy, the Company will check votes cast in the provided proxy form.

## 2.6 Shareholders' opportunity to share opinions or ask questions in the meeting

The Chairman of the Board of Directors who presides over shareholders' meetings allows and encourages shareholders to share opinions and ask questions concerning related matters to the meetings, based on the following practices:

1. To further share opinions or ask questions relating to agenda items during the meetings, after the end of the report or presentation of each agenda item;
2. To further share opinions or ask questions relating to matters other than the agenda items after the meetings have proceeded in accordance with all agenda items.

In addition, the Company's staff facilitate shareholders' submission of questions to directors or posting of direct questions to directors during the meetings.

## 3. Preparation of Minutes of Shareholders' Meetings and Disclosure of Meetings' Resolutions

1. The Company discloses resolutions of shareholders' meetings in each item on its website in addition to the disclosure to the Stock Exchange via the SETLink system within the shareholders' meeting day for shareholders' information and review of voting results, together with cast votes in a rapid manner.

2. The Company prepares minutes of every shareholders' meeting with accuracy and completeness, comprising the following information:
  - The list of directors attending the meetings;
  - The number of shareholders/shares present at the meetings (in person/by proxy);
  - Brief explanation on material issues, such as voting procedures and display of voting results, to the meetings prior to conducting the meetings;
  - Names of persons who ask/answer questions or share opinions in brief;
  - Resolutions of the meetings, with details of votes for, against, abstentions, and voided cards.
3. After the end of the shareholders' meetings, minutes of the shareholders' meetings are required to be completed within 14 days, provided that such minutes shall contain sufficient details for the shareholders absent from the meetings to review on the Company's website. Moreover, video presentation of the atmosphere of the shareholders' meetings is made available on the website until the next shareholders' meeting, so that shareholders who are not attending the meeting or those who are interested in the Company's information can have access to the meetings' details other than that recorded in the minutes of the meetings.

#### 9.1.2 Equitable Treatment towards Shareholders

The Board of Directors realizes the significance of supervision and monitoring to ensure the Company's equal and fair treatment towards all shareholders, both major shareholders and minority shareholders, including foreign shareholders, and ensure the Company's prevention of usage or receipt of inside information which has not yet been disclosed to the public in a manner which such is done for personal interests or others' interests; which may take advantage of and cause damage to shareholders as a whole, all of which are considered unfair treatment in capital market. As a result, the Board of Directors formulates measures to prevent inside information usage and disclose information, as well as setting out fair criteria and methods for execution of transactions which may give rise to a conflict of interest, as follows:

##### 1) Provision of Information prior to Shareholders' Meetings

The Board of Directors ensures that the Company gives notices of the meetings, together with agenda items and opinions of the Board on each agenda item, to the Stock Exchange in accordance with the rules on disclosure, and such notices are posted on the Company's website on the following business day; ensures that the Company prepares the notices of the meetings, together with details of each agenda item, both in Thai and English, for the convenience of foreign shareholders; and disseminates such notices of the meetings, together with details of each agenda item, on its website 30 days prior to the meeting date. The Board of Directors also ensures that the Company gives prior notice to shareholders on rules and regulations in the conduct of the meeting, voting procedures, including their voting rights.

##### 2) Protection of Minority Shareholders' Rights

To enable shareholders to exercise their rights to propose any matters relating to the Company's significant changes, the Company, therefore, adopts a policy to fairly and equally allow all shareholders to exercise their rights to propose agenda items to the shareholders' meetings and to nominate qualified persons for appointment as directors via the channels announced on the Company's website. Shareholders may exercise such rights three months prior to the end of the accounting period. In this regard, the Board of Directors considers incorporating agenda items proposed by shareholders as appropriate. As for the persons nominated for appointment as directors, the management proposes such names to the Nomination and Remuneration Committee for further submission to the Board of Directors and the shareholders' meetings. In addition, shareholders are allowed to exercise their rights to appoint directors on an individual basis in the agenda item of appointment of directors, in respect of which shareholders may vote on an individual basis.



### 3) Prevention of Trading of Securities from Inside Information Usage

The Board of Directors has set out written guidelines for protection and prevention of inside information usage, and informed all directors, executives, and staff of such guidelines for compliance. In this regard, directors and executives are required to do as follows:

- submit the first report on their own securities holdings, their respective spouses and minor children's securities holdings in the Company; and report on every change in such securities holdings from purchase, sale, transfer or acceptance of transfer of securities, to the Office of the Securities and Exchange Commission in accordance with Section 59 of the Securities and Exchange Act B.E. 2535 (1992) within three business days from the date of purchase, sale, transfer or acceptance of transfer of securities, and the Company regularly reminds the Board of Directors thereof. Directors and executives are also required to report on their securities trading or holdings to the Board of Directors' Meeting on a quarterly basis.
- Report on each change in the securities holdings to the Office of the Securities and Exchange Commission and submit a copy of such report to the Company at the same date which the report on such change has been made to the Office of the Securities and Exchange Commission.
- No directors, executives, and staff who have known any material inside information with an effect on the securities prices shall disclose such material inside information to any third party before it has been disclosed to the public.
- Report to the Board of Directors' acknowledgment on the securities holdings in the Company by directors, executives, including their related persons, together with report on every change in the securities holdings to the Board of Directors' Meeting.

Moreover, directors and executives have also been informed of their duties and responsibilities as specified, including punishments under the laws. In addition, the Company prohibits its executives who have access to inside information from taking any actions contrary to the relevant laws, rules, and regulations.

In 2019, the Board of Directors and executives complied therewith strictly, no any violation or non-compliance with the criteria for securities trading by usage of the inside information and asset trading under the rules of the Stock Exchange of Thailand and the Office of the Securities and Exchange Commission was found.

### 4) Interests of Directors and Executives

#### 4.1 Report on interests of directors and executives

The Board of Directors imposes a duty on its directors and executives to report on their personal interests and disclose their holdings of directorships or executive positions in other legal entities, and their shareholdings in other legal entities in excess of 25 percent of total voting shares and this obligation applies to both reporters and their related persons. This is to ensure that the Board of Directors has information in support of its consideration and approval of execution of transactions of the Company and its subsidiaries with accuracy and transparency in compliance with the relevant rules and regulations.

The Company Secretary keeps such reports on interests of directors and executives, and provides copies of such reports to the Chairman of the Board of Directors and the Audit Committee Chairman within seven business days from the date of the Company's receipt thereof.

Report on securities holdings by directors and executives for 2019

Names of Directors/Executives	Amount of Ordinary Shares			
	As of December 31, 2018	Change in 2019	As of December 31, 2019	
			Amount	Percent (%)
<u>Directors</u>				
1. Dr. Virabongsa Ramangkura	-	-	-	-
2. Mr. Plew Trivisvavet	21,706,878	2,900,000	24,606,878	0.1610
The spouse	2,402,527	-	2,402,527	0.0157
3. Mr. Vitoon Tejatussanasoontorn	803,893	-	803,893	0.0053
4. Gen. Chetta Thanajaro	-	-	-	-
5. Dr. Annop Tanlamai	-	-	-	-
6. Mrs. Vallapa Assakul	-	-	-	-
7. Mr. Supong Chayutsahakij	-	-	-	-
8. M.L. Prasobchai Kasemsant	-	-	-	-
9. Mr. Phongsarit Tantisuvanitchkul	-	-	-	-
10. Miss Arisara Dharamadhaj <sup>(1)</sup>	-	-	-	-
11. Mr. Panit Dunnvatanachit	-	-	-	-
12. Mrs. Natamon Bunnak	-	-	-	-
13. Mr. Wichan Ekarintrakul	-	-	-	-
14. Dr. Sombat Kitjalaksana	1,599,141	1,400,000	2,999,141	0.0196
15. Mrs. Payao Marittanaporn	-	-	-	-
<u>Executives</u>				
16. Mr. Sanguan Kunatinun	-	-	-	-
17. Mrs. Sudruthai Prommart	-	-	-	-
18. Mr. Phakpoom Thaweewittayarut	-	-	-	-
19. Miss Panan Tosuwanthaworn	-	-	-	-
20. Mr. Witoon Hatairatana	-	-	-	-
21. Mr. Alvin Gee	-	-	-	-
The spouse	144,272	144,272	-	-
22. Dr. Vites Techangam	-	-	-	-
23. Mr. Anawash Suwanarit	-	-	-	-

Remark : <sup>(1)</sup> Miss Arisara Dharamadhaj was appointed as a director on April 26, 2019 to replace Mr. Werapong Suppasedsak who retired by rotation in the 2019 Annual Ordinary General Meeting of Shareholders on April 26, 2019.

#### 4.2 Interested directors' participation in shareholders' meetings

The Board of Directors sets out a policy to prohibit its directors and executives, who are connected persons or interested persons in relation to any agenda items to be considered, from participating in the meeting and voting on such items. The Company Secretary gives prior notice to such interested directors and executives to express their intention not to participate in the meeting nor vote on such item. In considering a connected person and interested person, the Board of Directors takes into account such reports on interests which all directors and executives have a duty to prepare and submit to the Chairman of the Board of Directors and the Audit Committee Chairman.

### 5) Related Party Transactions / Connected Transactions

#### 5.1 Policy on related party transactions / connected transactions

In case the Company executes a connected transaction under the definition of the Stock Exchange, the Company must comply with the rules and regulations of the Stock Exchange, as follows:

1. The Company shall comply with the rules and regulations of the Office of the Securities and Exchange Commission and the Stock Exchange, including the requirements on the disclosure of connected transactions as well as acquisition and disposition of significant assets of the Company or its subsidiaries and the accounting standards as prescribed by the Federation of the Accounting Professions. If there are transactions which may give rise to a conflict of interest in the future, such as, hiring a group of persons who may have a conflict of interest to carry out construction, project management, project maintenance, the Audit Committee shall jointly consider the necessity and justification of such transactions, including pricing and terms of the transactions, which must be based on the ordinary course of business. Pricing must also be compared with third party prices or market price. Interested persons will not be allowed to participate in the consideration and approval of the transactions.
2. The Company has no policy to extend or guarantee a loan for a person who may have a conflict of interest under the definition of the SEC Office.
3. Should the Board of Directors and/or the Audit Committee have no expertise in considering any particular related party transaction which may take place, the Company will arrange for an independent expert or the Company's auditor to give any opinion on such related party transaction to support the decision-making of the Board of Directors and/or the Audit Committee or the shareholders, as the case may be.
4. The Company will disclose the related party transactions in the notes to the financial statements that have been reviewed or audited by the Company's auditor.

#### 5.2 Criteria on execution of connected transactions on arm's length basis

The Board of Directors approves in principle the Company's execution of connected transactions on arm's length basis, namely, transactions which involve commercial terms in a manner persons of ordinary prudence may enter into with general parties under the same circumstances, through commercial negotiation without any influence in the capacity as director, executive or related person, as to execution of such transactions between the Company and its subsidiaries with directors, executives or their related persons, as follows:

1. Engagement of any company or legal entity which is the connected person for repair, improvement or additional construction of expressways and related equipment should such company or legal entity propose fair price and conditions to the utmost benefit of the Company.
2. Engagement of any company or legal entity which is a connected person for repair or purchase of materials or equipment, inclusive of labor, for maintenance of administration buildings and depots in the future, subject to the commercial conditions and other agreements which are not different from others.

3. Transactions between the Company and its subsidiaries with MRTA, as follows:
  - (1) Support of public relations and advertising activities to facilitate the metro service, in an amount not exceeding One Million Baht per year.
  - (2) Support of government policies to facilitate people's commute by the metro during the specified period from time to time by means of discounts or free rides, provided that MRTA will compensate for revenue during such period in accordance with appropriate and fair criteria.
4. Transactions in the manner of management or advisory service to any legal entity which is a connected person.
5. Leases of office building spaces for the Company and its subsidiaries from CH. Karnchang Public Company Limited.
6. Other transactions which are connected transactions on arm's length basis under the definition of the SEC Office or the Stock Exchange.

### 5.3 Prevention of a conflict of interest

1. Directors and executives must inform the Company of relationships or connected transactions in any business which may give rise to a conflict of interest;
2. Any connected transaction with directors which may give rise to a conflict of interest with the Company must be avoided. Any connected transaction which is necessary to be executed must be proposed to the Audit Committee to consider providing an opinion in relation to justifications and benefits for the Company prior to proposing the same to seek approval of the Board of Directors in accordance with the Corporate Governance Code, and ensure compliance with the rules of the Stock Exchange and the SEC Office;
3. Executives and staff must strictly comply with the Articles of Association and the code of business ethics of the Company, in order to ensure the Company's reliability and trust for all stakeholders, and ensure dissemination of the information for all staff's understanding and adherence to the same.

### 9.1.3 Role of Stakeholders and Responsible Business Operations

The Company has a clear policy which focuses on and realizes rights of every group of all stakeholders, whether inside, such as, staff and executives of the Company and its subsidiaries, or outside, such as, customers, business related persons, lenders, traders, society and communities where the Company is located, nearby schools, government sector, including competitors, and other relevant authorities. Any stakeholders wishing to contact or have any comments may directly contact directors or the Company Secretary. In addition, the Board of Directors has laid down the corporate governance policy that requires the Company to treat stakeholders based on their rights as specified by applicable laws without any actions in violation of stakeholders' right; and compensation measures in case any stakeholder sustains any damage arising from violation of the rights; as well as focuses on its operations with respect to human rights. The Company has continued to take care of stakeholders in accordance with the policies, as follows:

#### 1) Policy on Treatment towards Each Group of Stakeholders

- 1.1 **Customers:** The Company has a commitment to provision of quality, standard and reliable services as well as taking into account health, safety and fairness, keeping customers' information confidential, following up and evaluating customers' satisfaction for the purpose of development and improvement of services, together with advertisement, public relations and sales promotion, in response to customers' needs to have access to the mass transit system and routes which save their travelling time in Bangkok and its surrounding provinces. Work plans/programs are also continuously set out for improvement of the expressway and metro services for users to ensure a more rapid and convenient service with a standard safety. Rules and regulations of service provision to which the Company has adhered are as follows:



1. Providing quality, safe and standard services to satisfy service users' expectations.
2. Ensuring prompt responses to service users' needs, without discrimination, and allowing and facilitating submission of any comments or suggestions for service improvement.
3. Providing accurate and timely information on services.
4. Organizing special activities to allow the service users to visit the operation and management of the expressways and metro under the Company's concessions, including regular promotion of the service usage by and marketing activities with customers.

**1.2 Business counterparts:** The Company strictly discharges its obligations under the Agreements with EXAT and MRTA in its capacity as a contractual party, and fairly treats its business counterparts on the basis of equitable and impartial treatment, without discrimination. The Company also complies with conditions, rules, regulations, mutual practices, and promotes good relationships, which are clearly written in the Company's code of business ethics, along with the work procedures in accordance with ISO 9001 Quality Management System. This is to ensure its collaboration with EXAT and MRTA to provide efficient and regular services. In this regard, the Company arranges for monthly performance satisfaction assessment in order to develop and improve the efficiency of the operations. According to the assessment results, both EXAT and MRTA are completely satisfied with the Company's collaboration.

Moreover, the Company organizes quarterly meetings between its operating staff and EXAT's personnel and monthly meetings with MRTA, which not only enhance the efficiency and results in the service users' satisfaction but also minimizes conflicts or impacts which may give rise to disputes over joint operations between both parties.

**1.3 Traders / Contractors:** The Company has a commitment to the procurement of standard goods and service, for the purpose of development and maintenance of sustainable relationships with traders, with the clear objectives in terms of quality of goods and service worth its value, technical standard, and creditability. The Company, therefore, provides fair and equal procurement procedures for all traders and follows the procedures in a systematic way in compliance with the work procedures regarding procurement and conditions of contracts or agreements with fairness in accordance with the requirements of ISO 9001 Quality Management System, based on the practices, as follows:

1. Determining the criteria for selection of trade counterparts through a strict screening process to ensure fair business operations without violation of human rights.
2. Ensuring equal and fair competition on a database, without discrimination or preventing any trader from participating in business competition.
3. Preparing contracts or agreements in appropriate, fair and standard forms.
4. Arranging for management, monitoring, surveillance, including rechecking systems to ensure the full compliance with contracts or agreements and internal control system to prevent fraud and misconduct in all steps of the procurement procedures.
5. Paying consideration to traders on time in accordance with terms of payment as mutually agreed.
6. Not allowing directors and/or staff to accept any benefit from traders privately or by reason of personal relationship.
7. Evaluating traders on a yearly basis and informing them of the results of the evaluation with suggestions for traders to continuously improve the quality of goods and services, and also allowing traders to contact the management to make any complaints if they are unfairly treated.
8. Refraining from seeking any trader's confidential information dishonestly or improperly, such as bribing directors and staff of its competitors.
9. Refraining from making a serious accusation against traders without reasonable grounds.

**1.4 Lenders / Debenture holders:** The Company strictly complies with the conditions of credit facilities agreements, suretyship agreements, capital management to build up the confidence of the financial institution lenders who provide financial support to the Company's projects, and refrains from breaching any conditions thereof as mutually agreed. The Company complies with and adheres to the following practices:

1. Strictly complying with the conditions of the credit facilities agreements as mutually agreed. Failure to comply with any condition must be informed to the lenders in advance for jointly seeking a solution.
2. Ensuring equitable and fair treatment towards all lenders, based on fair returns for both parties.
3. Reporting correct and reliable financial information to the lenders accurately, completely, timely and regularly.
4. Refraining from giving, soliciting, receiving, agreeing to receive or accepting an engagement for any benefits fraudulently in commercial terms.
5. Disclosing information (if any) on giving, soliciting, receiving, agreeing to receive or accepting engagement fraudulently, to the lenders, and jointly resolving such problems with fairness and rapidity.

Debenture holders: The Company issues debentures in accordance with applicable requirements, laws and notifications of the SEC and strictly complies with policies, objectives and resolutions of the shareholders' meetings, and also realizes the significance of its responsibility to fulfill commitments in accordance with the requirements regarding the debenture issuer's rights and duties, including relevant contractual conditions.

**1.5 Staff:** The Company considers staff as a key resource behind its business movements and as a crucial factor to the Company's sustainable success and growth, and then clearly sets out the staff practices, as suitable for each work position, and has respect for human rights, for instance, determination of remuneration and other benefits with fairness, provision of welfare benefits not less than that provided by law or higher as appropriate, taking into account staff's hygiene and safety at work, provision of training, development of competency and support of career advancement, as well as providing staff opportunity to improve their important and essential skills in connection with working or in any other fields, etc. In this regard, the Board of Directors has authorized the management to follow up, evaluate and review work performance on a yearly basis.

1. Treatment of staff
  - 1) Establishing structures and providing fair and appropriate benefits to staff according to work competency, to which staff performance evaluation system (people assessment) has been applied, focusing on work competency assessment and capability measurement as principle for development of staff's skills and competency to suit work position and ensure the Company's growth, as well as clearly measuring their performance based on KPIs in all key activities for supporting consideration and assessment of staff's performance.
  - 2) Creating a participatory and teamwork environment by allowing staff to express their opinions on work performance.
  - 3) Ensuring that staff take pride in and engage with the organization by encouraging their career advancement.
  - 4) Ensuring equitable treatment, integrity, and fairness in punishment, appointment, and transfer, including rewards, on the basis of staff's knowledge, capacities, and qualifications.

- 5) Giving priority to and promoting the development of knowledge and capacities of staff at all levels, whereby the Company allows and encourages staff to attend training courses or further study in order to enhance their skills, knowledge, and expertise, as well as fostering positive attitudes toward them. Such training would emphasize the development of skills, knowledge, and competency of staff, whether it be functional skills, core skills or leadership skills. In 2019, the Company arranged for staff training, averaging 138.46 training hours/person.
- 6) Respecting human rights in respect of nondiscrimination, provision of equitable opportunity for employment of female labor, disabled persons, underprivileged persons, youths, and the elderly.
- 7) Supervising and monitoring to ensure that staff strictly comply with laws and regulations relating to staff, including provision of suggestions and close monitoring in order to prevent any illegal action, whereby the Company supervises and encourages staff to ensure that they use lawful products without infringement of copyrights or intellectual property, along with support of their compliance with the operational guidelines and performance of duties with integrity, without involvement with corruption in any form, for the benefits and success of the Company.

## 2. Policy on safety and hygiene

The Company realizes and gives priority to the safety and hygiene of the business premises to ensure staff's quality performance and quality of life with safety and hygiene at work, by setting out the policy on safety and hygiene, as follows:

- 1) The Company formulates measures to prevent any work-related accident, injury and illness through sincere cooperation among all staff as well as restrict and cope with safety risks arising from undertaking work under the normal operating process.
- 2) The Company formulates measures to design tools and equipment, set out practices, provide for training and supervise operations by taking into account safety for life, hygiene and property of staff and that of the Company as a whole.

The Company not only provides the hygienic work environment at the workplace for the sake of safety for life, hygiene together with property of staff and the Company, the Company also takes into account safety and hygiene of the service users, through provision of regular training to technical and engineering teams, including rescue and traffic management staff on the expressways, so as to ensure their efficient and safe performance; and in regard to the metro business, the Company also holds training to all staff on work safety and implements safety operations in accordance with the laws as well as local and international safety standards, i.e., TIS 18001 : 2001 and OHSAS 18001 : 2007, with the main aim of taking care of welfare in terms of safety, occupational health and work environment for staff related to the metro operations.

In 2019, the Company had seven work-related accidents on the expressways, and had three work-related accidents in metro operations, without any loss of staff.

Work-Related Accidents (times)		Injury Frequency Rate (I.F.R.)	
Expressway Business	Rail Business	Expressway Business	Rail Business
7	3	6.74	0.45

**Remark:** The injury frequency rates (I.F.R.) were calculated from the number of work-related injuries (N) per man-hours worked (MH) whereas  $I.F.R. = N \times 1,000,000 / MH$ .

**1.6 Supply chain:** The Company deals with the supply chain in strict compliance with international standards, ISO 9001 Quality Management System, and ISO 14001 Environment Management System, by way of providing education and close monitoring and audits to ensure that the supply chain of traders in business association with the Company takes account of environmental impact, in the interests of the sustainability of their mutual business alliance.

**1.7 Communities:** The social and environmental impacts of its business operations, particularly impacts on the communities adjacent to the expressways, metro routes, or near the office where the Company is located are of concern to the Company, and therefore, the Company continues to organize special activities for providing benefits and building a learning center for business and communities in the long run.

## 2) Anti-Corruption Policy

The Company realizes and gives priority to anti-corruption and fraud prevention and also adopts measures to prevent corruption, both inside and outside. The Company sets out guidelines and procedures for regular practices, monitoring, surveillance, review, risk assessment, and training as suitable and up-to-date, to ensure that all directors, executives, and staff of the Company have strictly adhered to and complied with such guidelines. In this regard, the Company formulates anti-corruption policy containing the key practical guidelines, as follows:

1. The Company's directors, executives, and staff at all levels should carry out activities with fairness, integrity, and transparency in business dealings with various agencies, provided that such activities must be proper in compliance with applicable laws, policies, Articles of Association, regulations, notifications or practical procedures.
2. The Company encourages and promotes fair treatment with integrity towards all its traders and compliance with any contractual commitments made with the Company's stakeholders.
3. The Company encourages and promotes directors', executives' and staff's awareness to ensure that they refrain from committing any fraud and realize the negative impacts of corruption.
4. The Company encourages and promotes directors, executives and staff to refrain from receiving, agreeing to receive or offering any hospitality, gifts, and any other payments which are extravagant and inappropriate to those in business dealings with the Company.
5. The Company arranges for staff training to educate them regarding the anti-corruption policy, practices, and guidelines.

In this regard, the Company has imposed the duty on the Internal Audit Unit to follow up, conduct surveillance, review, risk assessment and training for preventing / suppressing corruption.



### 3) Policy and Practices on Non-infringement of Intellectual Property

The Company respects and upholds the proprietary rights in others' intellectual property, whereby use of the intellectual property shall be subject to the prior consent of the intellectual property owner, and then, the Company formulates a policy to forbid any arrangements which infringe intellectual property of any kind, based on the following guidelines:

1. All staff have duty to protect and keep the Company's intellectual property confidential to ensure that such information must not be leaked out and exploited for personal gain or any other person's gain without permission.
2. All staff must respect and honor others' intellectual property and refrain from exploiting any work piece as others' intellectual property, whether in whole or in part, without the owner's permission.

### 4) Policy on Respect of Laws and Human Rights Principles

The Company makes it mandatory for directors, executives and staff to comply with the laws and human rights principles or human dignity, regardless of race, color, sex, language, religion, social origin, property, birth, political opinion, or other status, as well as realizing their own rights, duties, and responsibilities towards society and others, based on the guidelines, as follows:

1. The Company strictly complies with the laws and human rights principles and does not support any business which violates human rights.
2. The Company treats all staff equally, without discrimination in terms of employment, remuneration, training, promotion, termination or dismissal due to sex, race, color, religion, age, marital status, pregnancy, political opinion, or disability, etc.
3. The Company allows all staff to enjoy equal rights for work pursuant to rules, regulations, notifications, and orders of the Company.

### 5) Policy on Corporate Social Responsibility and Sustainable Development

The Company is committed to its business operations with social and environmental responsibility; as well as mainly focusing on coordination for mutual benefit with all groups of stakeholders in every dimension as appropriate in the pursuit of the Company's sustainable business growth, along with its determined efforts to benefit and grow all groups of stakeholders together, as follows:

1. To lead the organization with the concept of sustainable development, through communication and exchange of best practices with all of the Company's stakeholders;
2. To incorporate the sustainable development concept into every aspect of the work and decision processes of the Company;
3. To promote training, learning, and counseling, focusing on practices according to the sustainable development guidelines;
4. To support regional operation and cooperation to achieve sustainable development.

It is the responsibility of every employee to seriously implement this policy as part of his or her own work processes for the sustainable growth of the Company and all groups of stakeholders.

## 6) Environmental Policy

The Company is environmentally responsible for its service business. Therefore, the Company is committed to environmental management based on the following practices:

1. Giving priority to pollution prevention and control in compliance with international standards, taking into account the environmental impacts of all groups of stakeholders;
2. Raising staff awareness and promoting the efficient use of energy and natural resources as well as providing staff with environmental knowledge and training;
3. Performing duties in compliance with environment-related laws and other environmental regulations as applicable;
4. Reviewing objectives and goals for improvement of the environment management system on a continuous basis;
5. Communicating the environmental policy to the public and parties concerned, as well as adopting a policy to select and encourage use of eco-friendly products.

It is the responsibility of all the Company's staff and contractors to seriously and regularly implement this policy to ensure the environmental quality for the service users, staff, contractors, and communities nearby.

## 7) Information Security Policy

The information security plays an important part in contributing to the efficient and trustworthy business operations of the Company, the Company then is determined to develop the information security system and put it into practice, to rest assured that:

1. Access to the information system shall be strict to only authorized users;
2. The information system provides accuracy, reliability, and confidentiality;
3. The information system is always readily available to the users;
4. The information security is regularly reviewed;
5. Staff are encouraged to have information security knowledge, ability, and awareness.

In this regard, it is the responsibility of everyone for the information security. Thus, the staff and external parties authorized to have access to the Company's information system have the duty to make every effort to ensure the information security of the Company.

The Company becomes aware of and considers information technology security and threats caused by the use of information technology. Currently, technology has been not only progressing rapidly, but also posing a threat, which as days go by, continues to become significant and acute. On July 5, 2018, the Company completed ISO/IEC 27001 : 2013 certification from Bureau Veritas Certification (Thailand) Limited which shall be valid until July 4, 2021. The Company has then put the same into practice and set out regulations governing information system security, provided that such regulations shall be yearly reviewed as appropriate. The practices/prohibitions for staff's access to computers; the practices for computer system administrators; and the practices for external service providers are also set out.

Furthermore, the Company properly and sufficiently allocates and manages technology resources, and supports the state-of-the-art and efficient technology to be employed in work operations. There are the work system development department and the information technology department which shall be responsible for the computer system (software and hardware) and have access to the computer program to manage database of the Company's computer system. The Company has provided for job descriptions to clearly identify duties and responsibilities of each position. For the important work systems, the Company has prepared and transferred the body of knowledge to relevant personnel in the work fields to ensure that they can perform duties in place of others. On the other hand, the Company will choose to outsource the services for the work systems which need special skills or high operational safety.

## 8) Innovation Promotion Policy

The Company realizes and strives for promotion and development of creating of innovative culture in the organization to add value to the businesses according to the ongoing changing circumstances by paying regard to internal and external stakeholders under the policy, as follows:

1. To encourage staff to participate in improvement of the work process to ensure the highest efficiency in line with the corporate mission, by using innovations as suitable with current circumstances;
2. To promote use of equipment, tools, devices, and technology in work operations, as well as using financial tools as appropriate;
3. To support and promote innovative culture in the organization for taking care of the stakeholders in a continuous manner.

The Company has appointed a work group to formulate strategies and innovations to ensure the greater efficiency in management of various aspects, for instance, project analysis, engineering technique, finance, marketing, and in the context of contract, with the duty to brainstorm ideas and propose strategic and innovative guidelines for developing efficiency and generating more income for the Company, as well as conducting feasibility studies under the proposed guidelines, together with alternatives as it deems appropriate for the sake of economic benefits and improving a good image of the Company; to propose work plans to the Managing Directors for assigning agencies in charge to carry out such plans, follow up and conclude, assess, report the results to the Managing Directors.

In 2019, the Company developed innovations by using Digital Technology and LEAN process to support its business-related activities.

Moreover, the Company held the “Half Day Talk” program with an aim of ensuring that the Company’s personnel were provided an opportunity to learn skills useful for creative works from famous experts in different fields as such in information technology and new innovation, by focusing on learning subjects which could be transferred within precise timing, conveying content in line with the requirements of personnel as a whole, and could be applied helpfully. Such subjects included, for instance, government policy tendency and technology sector, innovative renovation, preparation for coping with digital volatility.

In respect of expressway engineering management, the Company developed the asset management system so that the expressways stay at the level of provision of suitable services in accordance with relevant requirements and laws, in order to provide convenient and comfortable with the highest safety to the expressway users. Furthermore, the Company itself would be able to efficiently use budgets for maintenance. Such asset management system was developed by the Company for a specific purpose by applying knowledge, expertise, and modern technology, e.g., Mobile Mapping System (MMS), Laser Point Cloud, International Roughness Index (IRI), and International Friction Index (IFI), etc. Each and every step of the process, the Company has taken in alliance with the consulting companies which successfully passed the requirements of at least 9001 quality assessment, in association with higher education institutions which have developed knowledge at all times by teachers and proficient researchers in the field of asset management to ensure that the acquired information is correct, reliable and conducive for decision making with efficiency.

## 9) Procedures and Channels of Complaints

### • Submission of complaints

The Company has arranged for channels for all groups of stakeholders to make complaints relating to matters which may cause damage to the Company or if they may find any behavior or event which may violate or be contrary to the code of ethics or policies, they may report or submit complaints directly to the Audit Committee Chairman or independent directors or contact the Company Secretary.

Audit Committee Chairman	: Bangkok Expressway and Metro Public Company Limited
Independent Directors	No. 238/7 Asoke-Dindaeng Road, Bangkoki Subdistrict,
Company Secretary	Huai Khwang District, Bangkok 10310
Telephone	: 0 2641 4611
E-mail	: companysecretary@bemplc.co.th

- **Procedures upon receipt of complaints**

1. Fact-finding

The independent directors will appoint and authorize a working group to make fact-finding and compile complaints.

2. Fact processing and screening

The authorized working group processes and screens such facts and then considers proposing appropriate steps and actions for handling such complaints.

3. Measures

The authorized working group proposes measures to deal with the violation or non-compliance with the code of ethics or policies to the Board of Directors' consideration so as to alleviate damage for those affected by such occurrence, taking the overall damage into account.

4. Report on results

The Audit Committee Chairman or independent directors or the Company Secretary reports to the Board of Directors for acknowledgment and reports on the results to the stakeholders who submitted such complaints, if the complainants can be identified.

- **Measures to protect the complainants or those who provide cooperation in the investigation**

The complainants or those who provide cooperation in the investigation are protected in accordance with the following criteria:

1. The complainants or those who provide cooperation in the investigation of facts may choose to keep their identities undisclosed, in case such disclosure may jeopardize their safety or cause any damage.
2. In case their identities are disclosed, the Company will report on developments of the fact finding.
3. The Company may not disclose name-surname, address, photograph, or any other information which may identify the complainants or those who provide cooperation in the investigation of facts.
4. The person who accepts complaints must keep related information confidential and may disclose the same only to the extent necessary by taking into account safety and damage in respect of the complainants or those who provide cooperation in the investigation of facts, sources of information or related persons. If it is likely to cause damage or jeopardize the security, appropriate protection measures must be implemented.
5. Those who sustain damage will be compensated by way of appropriate and fair procedures.

#### 9.1.4 Ensuring Disclosure and Maintaining Financial Integrity

- 1) The Board of Directors sets out a policy to disclose information and maintain financial integrity by formulating practical guidelines, including systems for financial reporting and disclosure of significant information to ensure correctness, adequacy, equality, punctuality via appropriate channels, protecting confidential information and information which may affect securities price, as well as having the company-wide communication to make all staff have a common understanding that compliance with such policy is required in accordance with applicable requirements, standards and practices, in a transparent and auditable manner. This is to ensure that disclosed information is a matter of importance and is able to reflect practices and operations of the Company contributing to the sustainable value creation to the business.



Moreover, personnel related to preparation of the report and information disclosure are promoted and managed to ensure they have knowledge, skills and experience as suitable for their duties, responsibilities, and in an adequate amount for the Company's needs. Such personnel shall include the highest level executive in accounting and finance, accountant, internal auditor, Company Secretary, and investor relations. The Managing Directors have the power to approve information disclosure and ensure the accurate, complete, timely and transparent disclosure of both financial and non-financial, material information relating to the Company as required by the SEC Office and the Stock Exchange, via the equitably accessible channels.

- 2) The Company has established the Investor Relations Unit to represent the Company, with the duty in appropriately, equitably and timely communicating information useful to shareholders and other stakeholders, such as debenture holders, investors, securities analysts, mass media, and relevant parties. The Company has also been a member of Thai IR Club, Thai Listed Companies Association. Interested investors may contact the Investor Relations Department at 0 2641 4611. Investors who find it inconvenient to visit the Company's Office No. 238/7 Asoke-Dindaeng Road, Bangkapi Subdistrict, Huai Khwang District, Bangkok 10310, may contact to make a conference call or sign up for the news mailing list via the website or submit questions or e-mail to [ir@bemplc.co.th](mailto:ir@bemplc.co.th).

Other than the mandatory disclosure pursuant to the practices and legal requirements, the Company also has a policy to rotate high level executives to participate in providing information and answers to investors' questions and to learn opinions and realize requirements of Thai and foreign investors in person, that is, the Managing Directors, the Deputy Managing Directors, the Assistant Managing Directors, and the Company Secretary, all of which regularly participate in the Company's Investor Relations activities.

- 3) The Company clearly sets out the authorization levels for information available to executives at each level, and their authorized access to such information for public disclosure, by means of communicating and ensuring proper understanding of information for investors, internal and external agencies of the Company, as well as contacting and coordinating with investors, collecting investors' opinions, and communicating with high level executives to staff at all levels, as follows:

### 3.1 Internal communications

Although the Board of Directors and high level executives may have full access to all information of the Company, the Managing Directors are appointed as the authorized persons to disclose such information to the Stock Exchange and to provide the information via the public media in accordance with the Company's disclosure policy.

The Board of Directors, executives, advisors, and staff of the Company, who perceive information, are obliged to keep any undisclosed information strictly confidential. The Company formulates work rules and regulations to prohibit staff from disclosing the Company's confidential information to any third party or abusing their positions for personal gains or for the gains of others. Any violation is deemed a disciplinary misconduct liable to termination of employment. In the past, there has never been any occurrence of misuse of inside information for personal interests or for the gains of others.

Moreover, the Company has also developed a control system on use of the Company's information by adopting such information security systems as the restriction of access to the Company's information by authorization level of staff's access to the Company's information based on their responsibilities. To prevent executives' misuse of the Company's inside information for securities trading, the Company has policies and procedures for controlling the use of inside information by directors, executives and staff to prevent any occurrence of the use of inside information for personal interests or for the interests of others.

The Company's disclosure of information to staff must be the same as the public disclosure in terms of accuracy, frequency, and timeframe. The Investor Relations Department prepares and submits to management monthly IR Reports, which collect and summarize investors' questions and opinions on the Company's business operations, in order to present useful suggestions or feedback of investors to management for further improvement of the Company's operations.

### 3.2 External communications

The Board of Directors adopts a policy that the Company's disclosure of material information follows the specified policy and requirements. The disclosure is prepared both Thai and in English and is made available via the Stock Exchange's channel and on the Company's website at [www.bemplc.co.th](http://www.bemplc.co.th). The Company regularly updates such information as annual report, annual registration statement (Form 56-1), practical guidelines for good corporate governance, the Company's profile and various policies, loan status, operational results, financial ratios, securities price, dividend history, together with other information, e.g., corporate social responsibility activities and public relations news. Such information and news are made available in support of investment decision-making by investors and relevant parties, together with monthly corporate presentations to investors, which are regularly updated, so as to be regularly and timely available to all investors and those who may interest in investment, on the website. Moreover, opinions and investment analysis of the Company by securities analysts from securities companies from [www.settrade.com](http://www.settrade.com), which are compiled in the form of Analyst Consensus, are shared on the Company's website in order to assist investors in making their decisions to invest.

In the disclosure of financial reports, the Board of Directors prepares the Report on Responsibilities of the Board of Directors towards the Financial Report to be presented along with the Report of the Auditor, as detailed on page 204.

The provision of the Company's related information to securities analysts is also another main duty of the Investor Relations Department since the Company's information is made available in the Analyst Consensus to assist investors in making their decisions to invest. The Investor Relations staff are then assigned to provide such information to ensure correct understanding and maintain good relationships with securities analysts. Staff may review and clarify for the purpose of accuracy of the Analyst Consensus, as opposed to guiding or distorting the Analyst Consensus by securities analysts, or may revise only such facts which have been outdated or disclosed to the public, in which case, such revision is not treated as guiding investment.

Other than public disclosure, the Company also participates in various activities to serve as a disclosure channel to directly meet with investors and hear their opinions as well as create good relationships with investors via activities, such as, Roadshow, Opportunity Day, Company Visit, Analyst meeting, exhibition booths, etc. The Company's management staff are rotated to accompany the Investor Relations staff to communicate and provide better explanations in support of their decisions to invest.

In 2019, the Company organized Company Visits and Conference Calls, and Press Interviews, as well as participated in local and international Roadshows organized by various institutions for provision of information to foreign investors, totaling 12 times.

The foregoing events were opportunities for the Company to provide appropriate clarification on the operational results and progress of the investment projects and for management to answer questions to investors and the press equally and fairly to provide material, necessary and accurate information for investment decisions to the general public, including investors and institutional analysts.

The Company organizes the Company Visit program to allow shareholders to visit and meet its management. The Company also publishes BEM Magazine for disseminating business information and other useful information, which has been regularly delivered to all shareholders and debenture holders of the Company. In addition, the Company surveyed opinions and requirements of analysts and investors in relation to quality of the communication and Investor Relations activities in 2019 (BEM IR SURVEY) for further improvement. The survey revealed that the percentage of satisfaction with the service provision in such Investor Relations activities was 96.22 percent.

#### 4) Rules on securities trading by inside information users

Other than the report on securities trading of directors and executives in accordance with the requirements of the SEC Office, other executives, along with staff, who are authorized to have access to or perceive the Company's undisclosed material information which may influence securities price movements, are also emphasized and prevented from using such information in securities trading for personal interests and interests of others, or taking advantage of general investors, such as, information on capital increase or decrease, dividend payment, the Company's operational results, joint investments, etc. In this respect, the Company requires its executives to report on their securities trading in accordance with the rules as required by the Stock Exchange, and all persons who perceive inside information should refrain from trading securities or should wait until the public has been informed of and have an adequate time to study such information.

### 9.1.5 The Board of Directors' Responsibilities and Strengthening Board Effectiveness

The Board of Directors realizes its roles and responsibilities in setting out policies and monitoring to ensure the Company's good management, covering its business objectives, goals, strategies, policies, important and adequate resource allocation to achieve the business objectives and goals, as well as monitoring, evaluating and ensuring the reporting on operational results in line with laws, the Articles of Association, together with resolutions of the shareholders' meetings, to ensure the operations which pursue the sustainable value creation for the business.

The Board of Directors complies with the practical principles of the Corporate Governance Code for Listed Companies in various aspects, as follows:

#### 1. The Board of Directors' Structure

- 1.1 The structure of the Board of Directors is considered by the Company in terms of size, composition, proportion of the independent directors, skill, experience, education, capability and expertise, together with gender and age as suitable and necessary for leading the organization to achieve the Company's specified objectives and goals, consisting of 16 qualified members, namely, five executive directors, six independent directors and five non-executive directors. This is to rest assured that the Board of Directors as a whole is qualified and is able to understand and respond to the stakeholders' needs, as well as enabling the Board of Directors to carry out operations conducive to exercising its discretion independently. In addition, three of six non-executive directors are directors as EXAT's and MRTA's representatives who have experiences in the Company's core businesses.
- 1.2 The Board of Directors includes six independent directors, in line with the number as required by the SEC Office, who are independently provide opinions on the Management Team's performance. The Company also determines qualifications of "independent directors" stricter than the minimum requirements of the SEC Office and the Stock Exchange.
- 1.3 Directors have a term of office of three years, and the retiring directors may be re-elected. At every annual ordinary general meeting of shareholders, one-third of the number of directors vacates their office and if the number of directors is not a multiple of three, then the number nearest to one-third must retire from office.
- 1.4 The Board of Directors has policy to limit the number of listed companies in which each director may hold directorship not exceeding five companies for the capability of discharging their duties efficiently.

## 2. Performance of Duty of the Chairman of the Board of Directors and Managing Directors

The Chairman of the Board of Directors and the Managing Directors may not be the same person so as to separate between the policy making and supervisory duty and the regular managerial duty. The Board of Directors clearly determines powers and duties of the Chairman of the Board of Directors and the Managing Directors. The Chairman of the Board of Directors is an independent director by the definition of the Stock Exchange and has no relationship with management.

## 3. Subcommittees

The Company has established four subcommittees to closely monitor and supervise operations and regularly report to the Board of Directors, namely, the Audit Committee, the Nomination and Remuneration Committee, the Corporate Governance and Risk Management Committee, and the Executive Board. The Board of Directors has determined duties and responsibilities of each subcommittee as detailed on pages 161 to 166.

## 4. Role, Duties, and Responsibilities of the Board of Directors

- 1) The Board of Directors has its role and duty in supervising to ensure the Company's good management, covering the vision, missions, strategies, targets, business plan, budget of the Company, important and adequate resource allocation, as well as supervising and monitoring to ensure the management's operations in compliance with the specified plans, for the sustainable value creation for the Company's business, conducive to the ethical business operations, with respect for rights and responsibility towards shareholders and stakeholders, provision of social benefits, environmental development or reduction of environmental impacts.
- 2) The Board of Directors has established the corporate governance policy, subject to review at least once a year, for directors, executives and staff of the Company to comply with, and also provides for mechanisms conducive to their real compliance therewith, as well as following up the results.
- 3) The Board of Directors approves preparation of the Company's code of ethics, subject to review at least once a year, prescribing the best practices of directors, executives, and staff for treatment towards the Company, colleagues, third parties and society, to allow the Company to create and push ahead the ethical organizational culture.
- 4) The Board of Directors has its duty to ensure that the Company has adequate systems and mechanisms so that the Company's operations comply with applicable laws, Articles of Association, resolutions of the shareholders' meetings, together with policies or guidelines as specified, and also has approval process for significant matters, such as, any investment, transactions which materially affect the Company or any transactions which may involve a conflict of interest, in which case, interested directors may not attend nor vote on such matter at the meeting, etc., as required by law.
- 5) In respect of risk management, the Board of Directors follows up and acknowledges risk management plan of the Company from management's report on operational results in each Board of Directors' Meeting and from the Report of the Corporate Governance and Risk Management Committee.
- 6) The Board of Directors shall supervise and monitor to ensure that the management conveys and transforms a strategic plan into operational plan, including performance assessment, and supervise and monitor the group companies. In this connection, the management is required to report on performance, together with any significant matters, to the Board of Directors for acknowledgment in the Board of Directors' Meeting.

In addition, the Company provides for the annual survey on compliance with the Company's code of ethics for directors, executives and staff, in which they must sign to signify their responsibility for compliance with the Company's code of ethics. Moreover, the Company not only arranges for the annual training and test on the code of ethics by means of e-learning for the Company's executives and staff, the Company also continues to encourage high and middle executives to undergo corporate governance training on a yearly basis.



## 5. The Board of Directors' Meetings

The Company's Board of Directors' Meetings

Names of Directors	Attendances / Total Number of Meetings for 2019				
	Board of Directors	Executive Board	Audit Committee	Nomination and Remuneration Committee	Corporate Governance and Risk Management Committee
1. Dr. Virabongsa Ramangkura	7/7				
2. Mr. Plew Trivisvavet	7/7	12/12		2/2	
3. Mr. Vitoon Tejatussanasoontorn	7/7		4/4	2/2	
4. Gen. Chetta Thanajaro	7/7		4/4	2/2	
5. Dr. Annop Tanlamai	6/7		4/4		
6. Mrs. Vallapa Assakul	6/7				4/4
7. Mr. Supong Chayutsahakij	7/7	12/12		2/2	
8. M.L. Prasobchai Kasemsant	6/7				
9. Mr. Phongsarit Tantisuvanitchkul	7/7	12/12			4/4
10. Miss Arisara Dharamadhaj <sup>(1)</sup>	4/4				
11. Mr. Panit Dunnvatanachit	7/7				
12. Mr. Yuttana Yimgarund <sup>(2)</sup>	6/6				
13. Mrs. Natamon Bunnak	7/7				
14. Mr. Wichan Ekarintrakul	5/7				
15. Dr. Sombat Kitjalaksana	6/7	12/12			3/4
16. Mrs. Payao Marittanaporn	7/7	12/12			4/4

**Remarks:** <sup>(1)</sup> Miss Arisara Dharamadhaj was appointed as a director on April 26, 2019 to replace Mr. Werapong Suppasedsak who retired by rotation in the 2019 Annual Ordinary General Meeting of Shareholders on April 26, 2019.

<sup>(2)</sup> Mr. Yuttana Yimgarund resigned his office as director on October 25, 2019.

### 1) The Board of Directors' Meetings

The Company gives prior notice of the annual schedule of the Board of Directors' meetings, together with the main agenda, to directors so as to allow directors to be able to manage their time to attend the meetings. Pursuant to the Articles of Association, the Board of Directors must meet at least every three months; and a quorum consists of not less than half of the total number of directors. In 2019, the Board of Directors held its seven meetings.

The Managing Director Office will deliver the notice of each meeting and agenda as clearly pre-determined 7 days prior to the meeting date and deliver the supporting documents at least five business days prior to the meeting date, so as to allow the Board to review the same prior to the meeting.

The agenda is determined by mutual discussion between the Chairman of the Board of Directors and the Managing Directors. In addition, one meeting among non-executive directors and without management will be held in order for the directors to independently discuss and exchange their opinions and to efficiently follow up the performance of management. At every meeting, the Chairman of the Board of Directors presides over the meeting to ensure that each item is carefully considered and all directors are allowed to express their opinions and take part in discussions. In addition, the high level executives will attend the meeting to clarify the information in the capacity as persons directly relevant to the problems to the satisfaction of the meeting prior to passing resolution on each item.

Moreover, the Board of Directors sets out a policy to prohibit directors and executives who are connected persons or interested persons in relation to any items to be considered from attending the meeting or voting on such item, and management gives prior notice to such directors and executives who are not allowed to attend the meeting or vote on such item. In considering who is a connected person and interested person, the Board of Directors takes into account the report on interests which all directors and executives have a duty to submit in accordance with the Board of Directors' policy requiring directors and executives to report their personal interests in order to disclose such information to the Chairman of the Board of Directors and the Audit Committee Chairman.

## 2) Subcommittee meetings

The Board of Directors will monitor the implementation of the Company's policies and strategies by convening subcommittee meetings to consider various significant matters and preparing reports on work performance of every subcommittee for submission to each Board of Directors' meeting, as follows:

### 2.1 Audit Committee

The Audit Committee regularly meets at least every quarter with the internal auditor and management and executives responsible for accounting and finance, for review of financial statements on a quarterly basis, and meets with the auditor for review of the annual financial statements, and makes a report to the Board of Directors, or in case management executes any connected transaction or transaction relating to asset acquisition or disposal which must take into account appropriateness, justification and the utmost benefit of the Company, the Audit Committee Chairman may convene additional meetings.

In 2019, the Audit Committee held its four meetings and one meeting with the auditor without management. The Audit Committee reports quarterly to the Board of Directors on its performance and will yearly summarize its performance during the previous year via the Audit Committee's report. Moreover, in 2019, the Audit Committee considered executing two connected transactions.

### 2.2 Nomination and Remuneration Committee

The Nomination and Remuneration Committee will meet to nominate qualified persons for appointment as directors of the Company to replace the directors who are due to retire by rotation and directors who resign prior to the end of term; review remuneration of directors and annual bonus for submission to the annual ordinary general meeting of shareholders for approval; and consider remuneration for the Managing Directors in accordance with the results of performance evaluation for submission to the Board of Directors for approval. In this regard, the Nomination and Remuneration Committee will review the criteria for nomination and consideration of remuneration for directors every year to keep it aligned with the Company's business strategies, and ensure that the criteria for consideration of remuneration stay at the same standard as those of other companies in the same industry so as to appreciate and retain the qualified directors.

The Company schedules the Nomination and Remuneration Committee's meetings to be held at least twice a year.

In 2019, the Nomination and Remuneration Committee held its two meetings to nominate qualified persons for appointment as the Company's directors to replace those directors who vacated office; and consider scrutinizing remuneration for directors for proposal to the 2019 Ordinary General Meeting of Shareholders for consideration and approval; and consider reviewing the criteria for nomination and consideration of remuneration for directors.

### 2.3 Corporate Governance and Risk Management Committee

The Corporate Governance and Risk Management Committee will meet to follow up and evaluate the results of performance in compliance with the Corporate Governance Code; improve the guiding practices in line with the corporate governance policy for listed companies under the guidelines of the Stock Exchange; consider risk management plan, risk management process; as well as monitor, inspect and review the Company's overall risks to stay at an appropriate level.

Furthermore, the Board of Directors has reviewed the Company's operations in compliance with the Corporate Governance Code for Listed Companies in 2017.

In 2019, the Corporate Governance and Risk Management Committee held its four meetings to monitor and review the good corporate governance practices in respect of shareholders' rights; treatment towards shareholders and stakeholders; information disclosure; and responsibilities in risk management. The Board of Directors has considered compliance with the annual risk management plan, reviewed and followed up the risk management plan on a regular basis. It was found that the Company was able to conduct risk management to meet the targeted plan, without any material impact on the Company's business operations. Furthermore, the 2020 annual risk management plan is sufficient and in line with the current business circumstances, together with proper action plan and risk management method.

### 2.4 Executive Board

The Executive Board of the Company meets to help provide suggestions and advice to the management, and review the operations in compliance with the Company's policies and work plans as well as to consider various matters within the scope of its authority and duties as assigned by the Board of Directors and to consider screening such matters to be proposed to the Board of Directors for consideration and approval.

In 2019, the Executive Board held its 12 meetings to consider scrutinizing the agenda items as proposed to the Board of Directors; consider approving transactions with a value not exceeding Baht 500 Million, and consider salaries and bonus for staff.

## 6. Board Self-Assessment

The Board of Directors has a policy to ensure the self-assessment of the Board of Directors and subcommittees at least once a year, including assessment of the performance in accordance with the Company's code of business ethics. In addition, the Managing Directors' performance must be assessed by the Board of Directors every year in accordance with the rules as specified by the Nomination and Remuneration Committee. Furthermore, the Board of Directors determines to review topics of assessment to ensure appropriateness and conformity to roles, duties, responsibilities, and its practices in accordance with the Corporate Governance Code.

### Results of Board / Subcommittee Self-Assessment

In 2019, the Company delivered board and subcommittee self-assessment forms to each group of directors/subcommittee members to evaluate the overall performance of the Board of Directors and subcommittees, the results of which were proposed to the Board of Directors for consideration and improvement of performance.

In this regard, most of the opinions provided by directors/subcommittee members can be summarized as follows:

- 1) Structure and Qualifications of the Board of Directors / Subcommittees: The structure and qualifications of the Board of Directors and subcommittees are proper and suitable to the nature of business operations of the Company. The Board of Directors comprises personnel with sufficient knowledge and experiences in a variety of fields and performed their overall duties efficiently.

Moreover, the Board of Directors appoints four subcommittees, namely, the Audit Committee, the Nomination and Remuneration Committee, the Corporate Governance and Risk Management Committee and the Executive Board to perform the duties to help supervise, monitor the businesses, nominate qualified personnel as director with transparency, fairness, independence from any person's influence, including determination of reasonable and competitive remuneration to retain quality and competent directors, draw up operational policies and direction in respect of good corporate governance of the Company, code of business ethics, together with risk management, as well as taking care of and providing suggestions to the management, for the benefit of the Company's business operations based on good corporate governance.

2) Role, Duties, and Responsibilities of the Board of Directors / Subcommittees:

- The Board of Directors gives priority and contributes sufficient time to consider significant matters relating to the direction of the Company's business operations, reviews the good corporate governance policy of the Company, as well as ensures compliance with various policies, reviews the code of business ethics, and monitors to ensure that no conflict of interest arises from any connected transactions and transactions. The Board of Directors also follows the procedures as specified by taking into account the optimum benefit of the Company. Furthermore, the Board of Directors regularly reviews the internal control system to ensure good and sufficient internal control system and appropriate risk management, as well as follow up and monitor to ensure the performance of duties of management in accordance with the policies as assigned by the Board of Directors.
- The Audit Committee has ensured that the financial statements have been prepared in accordance with the generally accepted accounting standards; the internal audit tasks have been supervised and monitored for ensuring the appropriate and effective internal audit system; the execution of transactions which may have a conflict of interest has been considered under the specified procedures and for the utmost benefit to the Company; the Company has complied with the securities and exchange law and other applicable laws; and nomination of persons for appointment, determination of remuneration, and assessment of the auditor's performance are appropriate.
- The Nomination and Remuneration Committee has ensured that the appropriate criteria for nomination of directors have been determined; the qualified persons have been considered and nominated for appointment as the Company's directors; the appropriate and transparent criteria for consideration of remuneration for directors have been determined; remuneration for directors has been considered under the specified criteria for submission to shareholders; the results of the Managing Directors' performance have been assessed under the specified criteria; and remuneration for the Managing Directors has been considered in line with the results of assessment.
- The Corporate Governance and Risk Management Committee has conducted studies and followed up movement, tendency, and practice in respect of the good corporate governance; has improved and made suggestions on the good corporate governance policy of the Company, including the code of business ethics; has followed up and evaluated the results under the good corporate governance principles of the Company; has considered policies and work plans relating to risk management; has monitored and reviewed overall risk management of the Company, strategies for risk management and risk prevention system of all kinds; has reported on risks and actions taken to minimize risks to the Board of Directors.
- The Executive Board has provided guiding policies, supervised, made suggestions and advice for the Managing Directors and management; has set up business plan, budget and managerial power of the Company as assigned by the Board of Directors; has inspected and followed up the compliance with the Company's policies and plans with efficiency; has conducted feasibility studies on new projects; has approved justifiable juristic acts; has approved the appropriate appointment, and determination of remuneration for executives.



- 3) The Board of Directors' / Subcommittees' Meetings: The results of assessment are satisfactory, namely that directors/subcommittee members are given prior notice of the annual schedule' meetings so as to enable them to manage time to attend every meeting; the number of the meetings and agenda are suitable to support the performance of its duties efficiently and to supervise and monitor the Company's business operations successfully; directors/subcommittee members are also given supporting documents prior to each meeting and sufficient time to read such information in preparation for each meeting; the supporting documents contain sufficient information for their decision making; the Board of Directors/subcommittees can request any other necessary information in support of their decisions for the benefit to the Company; the atmosphere at each meeting allows all directors/subcommittee members to express constructive opinions without undue influence of any person; and directors/subcommittee members can fully discuss significant issues at each meeting.
- 4) Directors' / Subcommittee Members' Performance of Duties: The results of assessment are satisfactory, namely that directors/subcommittee members are well prepared and sufficiently study information prior to each meeting; have regularly attended the meetings; independently provide their opinions and impartially consider various matters and are independent in making decisions and passing resolutions; provide useful suggestions for the Company's operations, and understand the significance of each matter and properly contribute their time to consider such matters without wasting time on minor issues; and accept different opinions among them without conflict.
- 5) Relationship with Management: The results of assessment are satisfactory, namely that directors/subcommittee members may straightforwardly discuss with the Managing Directors; maintain a good relationship with management; the Managing Directors can request directors'/subcommittee members' advice as necessary; the Board/subcommittees do not intervene with management's performance of duties; and the Board/subcommittees participate in solving problems as appropriate in case management's performance does not meet the specified plans and budget.
- 6) Self-Development of Directors/Subcommittee Members and Executives: The results of assessment are satisfactory, namely that directors/subcommittee members understand their roles, duties, and responsibilities; directors/subcommittee members have sufficient knowledge and understanding relating to the Company's businesses; have paid attention to significant information or news relating to economic and industrial conditions, changes in rules and regulations and the status of competition, which allows them to efficiently perform their duties; all directors/subcommittee members undergo training to ensure their understanding of the performance of duties in their capacity as directors/subcommittee members; and in case of newly-appointed directors/subcommittee members, the Board monitors to ensure management provides documents or briefings for the new directors/ subcommittee members to understand the businesses and ensure performance of duties as directors/subcommittee members; and a succession plan has been set out to ensure continued performance of duties as high level management of the Company.

## 7. Assessment of Performance in Compliance with the Company's Code of Business Ethics

The Board of Directors sets out the Company's code of business ethics as principles and goals of the Company's business operations, and guidelines for performance of all directors, executives, and staff. Directors, executives, and staff will assess their performance in compliance with the Company's code of business ethics every year. In this regard, the results of the assessment can be summarized as a whole that directors and executives have complied with the Company's code of business ethics, as follows:

1. Compliance with the code of business ethics: Understanding and adhering to the guidelines as specified in the Company's code of business ethics.
2. Guidelines for business operations: Strictly complying with the laws applicable to the Company and the trading business under the desirable morality, including the Company's policies.

3. Conflict of interests: Not disclosing any confidential information of the Company to any third party; refraining from any act which will give rise to a conflict of interest between their own interest and the Company's interest; not involving in nor holding any share in any business which may have a conflict of interest with the Company.
4. Insider trading: Not disclosing any insider information which has not yet been disclosed to the public, which may affect the prices or trading of securities of the Company and its related companies.
5. Commitments to shareholders: Making an effort in best to create value added to the organization to ensure its capability to accommodate the business growth and expand its businesses with continuity and create value added to the shareholders in the long run.
6. Treatment towards counterparts and business contractual parties: Keeping counterparty's and contractual parties' information confidential for the purpose of fair and independent business operation; refraining from wrongful business operation between counterparts and contractual parties; refraining from offering any bribe to others or supplying them items in exchange for business benefits.
7. Responsibilities for executives and staff: Setting out guidelines and practices for taking care of the working environment to ensure safety for their life and properties at all times.
8. Treatment towards business competitors: Complying with the business policies in a fair manner by the rules and laws relating to trading competition.
9. Commitments to communities, society, environment, and government sector: Providing cooperation in making benefits for the communities, society, environment and government sector on an occasional and ready basis.
10. Gambling, drinking alcohol and drugs: Not possessing, purchasing-selling or drinking alcoholic beverages, drugs while being in the workplace or during doing businesses of the Company, except parties or other social gatherings held by the Company; and not playing or supporting all kinds of gambling activities during working times or in the area of the Company.
11. Disclosure of information and confidentiality: Complying with the policy to efficiently manage the Company's information; and disseminating necessary, correct and proper information to the public on an occasional basis; and not disclosing the Company's information which has not yet been disclosed to the public, including any personal information, nor using any information as known from performance of duties for their own interest.
12. The Company's assets: Setting out practices in taking care of the Company's assets to prevent them from loss, damage or misuse.
13. Gifts and parties: Setting out practices regarding giving of gifts and holding of parties by refraining from receiving any item or benefit from counterparts, contractual parties or persons who have connection with the Company's businesses, except during festival or according to custom, in which case, at the reasonable value as shall be considered by recipient;
14. Safety and hygiene: Strictly complying with the laws and regulations relating to safety and hygiene; and earnestly providing cooperation in preventing any accident, injury, and illness.
15. Non-compliance with the code of ethics: Realizing and complying with the code of ethics of the Company by not committing any violence which may cause the violator to be held liable for punishments under applicable laws and disciplinary actions.

## 8. Assessment of Performance of the Managing Directors

All directors of the Company, except the Managing Directors, will constantly assess the performance of the Managing Directors on a yearly basis in accordance with the criteria specified by the Nomination and Remuneration Committee. The Nomination and Remuneration Committee is assigned by the Board of Directors to propose remuneration and other benefits as appropriate for the Managing Directors, taking into consideration the Corporate KPIs used in the annual assessment of performance in order to obtain the Board of Directors' approval.

## 9. Remuneration of Directors and Executives

Remuneration for directors	: The Company establishes a clear and transparent policy on remuneration for directors and the Managing Directors in line with the scope of duties and responsibilities of each director serving as chairman or subcommittee member, subject to review by the Nomination and Remuneration Committee. The remuneration is at the same level as that in the same industry and sufficiently high to retain the qualified directors.
Remuneration for Managing Directors	: The Nomination and Remuneration Committee considers remuneration for the Managing Directors in accordance with the Company's operational results under the Corporate KPIs and the Managing Directors' performance and propose the same to the Board of Directors for consideration each year.
Remuneration for executives	: Remuneration for executives, excluding the Managing Directors, is in accordance with the principles and policies determined by the Executive Board corresponding to the Company's operational results and performance of each executive.

Remuneration in 2019 is shown in the caption of Remuneration of Directors and Executives on pages 125 to 127.

## 10. Development of Directors and Executives

### 1) Directors and Executives Training

The Board of Directors has a policy to support and facilitate training and learning for its directors and executives to ensure their continued improvement and performance, involving both internal and external training courses. All directors must attend training for an understanding of the performance of their duties in their capacity as directors.

The Company's Board of Directors and high level executives realize the significance of their participation in training or seminars in various courses or development of their knowledge and skills. The Board of Directors attends training courses organized by the Thai Institute of Directors Association (IOD), namely, Director Certification Program (DCP), Director Accreditation Program (DAP), Board Performance Evaluation, The Role of Chairman (RCP), Audit Committee Program, Role of Compensation Committee (RCC).

In 2019, one of the Company's directors, namely, Mr. Wichan Ekarintrakul, a representative from the Expressway Authority of Thailand, received training on Director Accreditation Program (DAP 161/2019).

### 2) Orientation for New Directors

The Board of Directors determines the operational practices for the Company to arrange for orientation for newly-appointed directors and to provide documents or briefings for the new directors to understand the business and performance of duties as directors. The Board of Directors assigns the Managing Directors, the Company Secretary, and the Managing Director Office to arrange for orientation for newly-appointed directors by convening a meeting with the relevant directors and/or executives and/or officers for clarification and answering questions. In 2019, there was one new director, whereby the Company has complied with such operational practices, by briefing the new director about the Company's information as well as preparing documents and summary information for the new director, such as, information relating to the Company, listed company director's handbook, the Corporate Governance Code, the Company's code of ethics, power and duties of the Board of Directors, and the annual schedule of the Board of Directors' meetings. Furthermore, the Company also has its directors attend training courses, as suggested by the SEC Office, conducted by the Thai Institute of Directors Association (IOD).

## 11. Succession Plan

The Board of Directors prepares and reports on a succession plan for the positions of Managing Directors and the high level executives and in the primary line, taking into account the performance, potentials, and readiness of each person. In this regard, the Company makes preparations for those potential successors in the development of their knowledge, competency, and skills as required for their work positions for succession in the event that the Managing Directors or executives in the key positions are not able to perform duties.

The Company sets out a succession plan for the high level executives of the Company, particularly executives and work positions in the primary line, by emphasizing nomination from internal personnel, and the Company requires promotion to be considered every year under the specified criteria for development of personnel who have good performance and competency for their advancement to a higher position in accordance with the staff's line of command, both the middle level executives and staff. The consideration committee, comprising the Managing Directors and executives at the General Manager level or higher or the middle level executives, shall consider this matter in accordance with the clearly specified criteria. With regard to the implementation of strategy and succession plan of the high level executives, who may be changed or vacate office by rotation or retirement, the Nomination and Remuneration Committee's meeting shall review the criteria and select knowledgeable, competent and qualified persons, whereby the Board of Directors shall consider appointing candidates to hold the office of Managing Director, and the Executive Board shall consider appointing executives at the General Manager level or higher.

An executive who has been assigned to succeed to an office must not only be suitably qualified and experienced in such field, but must also have accepted transfer of knowledge and experience by rotation to other related work units, and have attended additional necessary training courses to be well prepared for performance of duties in a higher position in the future, and to ensure smooth succession and continued management. The Company sets up the human resource management system through adequate allocation, controlling, following up, performance assessment, that is, nomination process for qualified and knowledgeable persons as required, appropriate and fair remuneration, determination of duties and responsibilities, performance of personnel, performance standard, personnel development, and efficient communication, to ensure that staff have knowledge and skills; and the Company's human resource management is efficient and suitable, emphasizing development of staff competency and ensuring clarity of the performance assessment in support of consideration of remuneration appropriate for their capabilities and performance.

## 9.2 Board Structure

The Board structure comprises the Board of Directors and four subcommittees, namely, the Audit Committee, the Corporate Governance and Risk Management Committee, the Nomination and Remuneration Committee, and the Executive Board.

Details of such four subcommittees, their powers, and duties as well as the nomination procedures in accordance with their respective charters, are as follows:

### 9.2.1 Board of Directors as of December 31, 2019, comprising

1. Dr. Virabongsa Ramangkura	Chairman of the Board of Directors	(Independent Director)
2. Mr. Plew Trivisvavet	Vice Chairman of the Board of Directors	
3. Mr. Vitoon Tejatussanasoontorn	Director	(Independent Director)
4. Gen. Chetta Thanajaro	Director	(Independent Director)
5. Dr. Annop Tanlamai	Director	(Independent Director)
6. Mrs. Vallapa Assakul	Director	(Independent Director)
7. Mr. Supong Chayutsahakij	Director	



8. M.L. Prasobchai Kasemsant	Director	(Independent Director)
9. Mr. Phongsarit Tantisuvanitchkul	Director	
10. Miss Arisara Dharamadhaj	Director	
11. Mr. Panit Dunnvatanachit	Director	
12. MRTA's representative *	Director	
13. Mrs. Natamon Bunnak	Director	
14. Mr. Wichan Ekarintrakul	Director	
15. Dr. Sombat Kitjalaksana	Director	
16. Mrs. Payao Marittanaporn	Director	

Remark: \* Pending appointment to replace Mr. Yuttana Yimgarund.

### The Board of Directors' Authority and Duties

- Monitoring and supervising the Company's operations to ensure compliance with laws, objectives and the Articles of Association, as well as resolutions of shareholders' meetings, and protecting the Company's interests based on the Corporate Governance Code, as well as complying with the rules and requirements stipulated by the Stock Exchange of Thailand and the Office of the Securities and Exchange Commission.
- Establishing operational policies and directions of the Company, as well as supervising to ensure that management takes actions in compliance with the established policies with efficiency and effectiveness to contribute to economic value maximization for the business and the wealth maximization for shareholders.
- Convening the annual ordinary general meeting of shareholders by no later than four months from the Company's year-end account closing date and convening extraordinary general meetings of shareholders as required.
- Convening the Board of Directors' meetings on a quarterly basis; each meeting requires at least 50 percent of all directors. Decisions of each meeting are made by a majority of votes. In the case of an equality of votes, the chairman of the meeting has an additional casting vote.
- Considering approval for the budget for investment and the Company's annual business operations, including monitoring use of the Company's resources.
- Providing complete, correct and sufficient reports on financial information, the Company's information and general information which are important for shareholders, and verifying information in the reports.
- Introducing to the Company an internal control system, internal audit and risk management measures with effectiveness, as well as following up on such matters on a regular basis.
- Establishing subcommittees to ensure the good corporate governance.
- Considering clearly determining and separating roles, duties, and responsibilities among the Board of Directors, subcommittees and management, with regular communication regarding such roles, duties and responsibilities to the Board of Directors, subcommittees, management and staff of the Company.
- Supervising the Executive Board to comply with the specified policies, whereby the Executive Board is authorized to approve any transaction binding upon the Company in an amount not exceeding Baht 500 Million per transaction, excluding those transactions giving rise to a conflict or interest, including such transactions requiring approval from shareholders as per the regulations of the SEC Office and the Stock Exchange.
- Appointing any persons to engage in the Company's business under the supervision of the Board of Directors, or, if applicable, authorizing such persons to have power for a period of time as the Board of Directors deems appropriate, provided that the Board of Directors may revoke, repeal, amend or change such authorization as appropriate.
- Appointing the Company's authorized signatory directors.

### The Chairman of the Board of Directors' Authority and Duties

1. Considering and setting out the business goals in conjunction with management.
2. Monitoring the administration by management.
3. Providing suggestions for the business operations through the Executive Board and the Managing Directors on a regular basis without interfering in the routine works under the responsibility of management. The Chairman of the Board of Directors also plays an important role in making decisions on the Company's policies.
4. Having a duty to preside over both the Board of Directors' meetings and the shareholders' meetings to ensure the efficiency and effectiveness in such meetings, by encouraging all directors to participate in each meeting and independently provide opinions.
5. Ensuring their strict compliance with the Corporate Governance Code and taking into account the shareholders' rights.

### 9.2.2 Audit Committee

The Board of Directors appoints the Audit Committee to assist in supervising the Company's businesses. Mr. Vitoon Tejatussanasoontorn, an independent director who has knowledge in the field of accounting and finance, was appointed to hold office as Audit Committee Chairman, and the General Manager of the Internal Audit Office serves as secretary to the Audit Committee. As of December 31, 2019, the Audit Committee comprises three independent directors as listed below:

- |                                     |                          |                        |
|-------------------------------------|--------------------------|------------------------|
| 1. Mr. Vitoon Tejatussanasoontorn * | Audit Committee Chairman | (Independent Director) |
| 2. Gen. Chetta Thanajaro            | Audit Committee Member   | (Independent Director) |
| 3. Dr. Annop Tanlamai *             | Audit Committee Member   | (Independent Director) |

Remark: \* Served as audit committee members with knowledge in the field of accounting and finance.

### The Audit Committee's Authority and Duties

1. Reviewing to ensure that the Company's financial reports are accurate and adequate.
2. Reviewing to ensure that the Company's internal control system and internal audit system are suitable and effective, considering the independence of the internal audit unit as well as granting approval on consideration for appointment, transfer, termination of employment of head of the internal audit unit or any other unit responsible for the internal audit.
3. Reviewing to ensure the Company's performance in compliance with the securities and exchange law, requirements of the Stock Exchange and the laws relating to the Company's business.
4. Considering, selecting, submitting for appointment of a person who is independent to serve as the Company's auditor, and proposing remuneration and termination of employment of such person as well as meeting with the auditor without management at least once a year.
5. Considering connected transactions or transactions which may involve a conflict of interest in compliance with the laws and requirements of the Stock Exchange in order to ensure that such transactions are justified and of the utmost benefit to the Company.
6. Preparing a report of the Audit Committee to be disclosed in the Company's Annual Report. Such report must be signed by the Audit Committee Chairman and comprise at least the following information:
  - (a) Opinions on correctness, completeness, and reliability of the Company's financial reports;
  - (b) Opinions on the adequacy of the Company's internal control system;
  - (c) Opinions on compliance with the securities and exchange law, requirements of the Stock Exchange or laws relating to the Company's business;
  - (d) Opinions on the appropriateness of the auditor;
  - (e) Opinions on transactions which may involve a conflict of interest;
  - (f) Number of meetings of the Audit Committee and attendance of each Audit Committee member;
  - (g) Overall opinions or observations by the Audit Committee from the performance of duties in accordance with the Charter;
  - (h) Other matters that should be informed to shareholders and general investors within the scope of the duties and responsibilities assigned by the Board of Directors.

7. Supervising and monitoring the internal audit tasks by reviewing missions, scope of works, independence and development plan and providing internal audit personnel training to catch up with the business changes and develop themselves on a continual basis, in order to accommodate the direction of the Company's operations and international standards, including consideration and approval of annual internal audit plans.
8. Performing any other activities as assigned by the Board of Directors to independently provide opinions and suggestions in line with the requirements and the best practice guidelines for the audit committee of the Stock Exchange.
9. In performing its duties, should the Audit Committee find or should there be any doubt as to whether or not the following transactions or actions may have a material impact on the Company's financial position and operational results, the Audit Committee will report on its findings to the Board of Directors in order to improve and rectify the same within the time as the Audit Committee deems appropriate:
  - (a) Any transactions giving rise to a conflict of interest;
  - (b) Corruption or unusual occurrence or material fault in the internal audit system;
  - (c) Violation of the securities and exchange law, requirements of the Stock Exchange or laws related to the Company's business.

### 9.2.3 Nomination and Remuneration Committee

The Board of Directors appoints the Nomination and Remuneration Committee to perform the duty to nominate and consider remuneration for directors and the Managing Directors to ensure transparency and fairness, and General Chetta Thanajaro, an independent director, was appointed as Chairman of the Nomination and Remuneration Committee in accordance with the Corporate Governance Code which states that the chairman of each subcommittee should be an independent director. As of December 31, 2019, the Nomination and Remuneration Committee comprises four members as follows:

- |                                   |  |
|-----------------------------------|--|
| 1. General Chetta Thanajaro       | Nomination and Remuneration Committee Chairman<br>(Independent Director) |
| 2. Mr. Vitoon Tejatussanasoontorn | Nomination and Remuneration Committee Member<br>(Independent Director)   |
| 3. Mr. Plew Trivisvavet           | Nomination and Remuneration Committee Member                             |
| 4. Mr. Supong Chayutsahakij       | Nomination and Remuneration Committee Member                             |

#### The Nomination and Remuneration Committee's Authority and Duties

1. Considering criteria and procedures of nomination as well as selecting and proposing qualified persons to hold the position of the Company's directors to the Board of Directors so as to nominate them to the shareholders' meeting, or proposing the nomination to the Board of Directors for consideration and appointment.
2. Considering selecting and proposing qualified persons to hold the positions of the Managing Directors to the Board of Directors for consideration and appointment.
3. Considering and determining criteria for consideration of remuneration of directors and the Managing Directors.
4. Considering and determining remuneration of directors and proposing the same to the shareholders' meeting for consideration and approval.
5. Considering and reviewing salary rates and other remuneration for the Managing Directors and proposing the same to the Board of Directors for consideration and approval.
6. Proceeding with other matters as assigned by the Board of Directors.

#### 9.2.4 Corporate Governance and Risk Management Committee

The Board of Directors appoints the Corporate Governance and Risk Management Committee to perform the duty to formulate policies and directions of operations in respect of the good corporate governance of the Company, including business ethics, and to ensure performance of duties with transparency and independence in compliance with the guidelines of the good corporate governance, consider risk management plan, risk management process, as well as monitor, inspect and review the Company's overall risks to stay at an appropriate level. To this effect, Mrs. Vallapa Assakul, as an independent director, was appointed as the Corporate Governance and Risk Management Committee Chairman. As of December 31, 2019, the Corporate Governance and Risk Management Committee comprises four members as follows:

- |                                     |   |
|-------------------------------------|---|
| 1. Mrs. Vallapa Assakul *           | Corporate Governance and Risk Management Committee Chairman<br>(Independent Director) |
| 2. Mr. Phongsarit Tantisuvanitchkul | Corporate Governance and Risk Management Committee Member                             |
| 3. Dr. Sombat Kitjalaksana          | Corporate Governance and Risk Management Committee Member                             |
| 4. Mrs. Payao Marittanaporn         | Corporate Governance and Risk Management Committee Member                             |

Remark: \* The Board of Directors' Meeting No. 7/2019 on December 18, 2019 resolved to appoint Mr. Vallapa Assakul, an independent director, to hold the position of the Corporate Governance and Risk Management Committee Chairman to replace Gen. Sampao Choosri who resigned his office on December 18, 2019.

#### The Corporate Governance and Risk Management Committee's Authority and Duties

1. Studying and following up movement, tendency and performance in respect of the good corporate governance for submission to the Board of Directors for consideration as to appropriateness for adoption as guidelines for the Company's operations.
2. Improving and proposing the good corporate governance policy of the Company, including business ethics, to the Board of Directors.
3. Following up and evaluating the results under the good corporate governance principles of the Company as well as reporting the same to the Board of Directors.
4. Considering policies and work plans relating to risk management for submission to the Board of Directors for consideration.
5. Monitoring and reviewing overall risk management of the Company, strategies for risk management and alert system of all kinds of risks in order to deal with risks to stay at an acceptable level to ensure compliance with the risk management policy of the Company.
6. Reporting on risks and operations for minimizing risks to the Board of Directors.
7. Proceeding with other matters as assigned by the Board of Directors.

#### 9.2.5 Executive Board

The Board of Directors appoints the Executive Board to assist in providing advice and suggestions to management and make other arrangements as assigned by the Board of Directors. As of December 31, 2019, the Executive Board comprises five directors as listed below:

- |                                     |                                 |
|-------------------------------------|---------------------------------|
| 1. Mr. Plew Trivisvavet             | Chairman of the Executive Board |
| 2. Mr. Spong Chayutsahakij          | Executive Director              |
| 3. Mr. Phongsarit Tantisuvanitchkul | Executive Director              |
| 4. Dr. Sombat Kitjalaksana          | Executive Director              |
| 5. Mrs. Payao Marittanaporn         | Executive Director              |



### The Executive Board's Authority and Duties

1. Delivering guidelines for policy, supervising, providing suggestions and advice for the Managing Directors and management.
2. Setting up a business plan, budget and managerial authority of the Company as assigned by the Board of Directors.
3. Inspecting, following up to ensure compliance with the Company's policies and plans with efficiency.
4. Conducting feasibility studies on investment in new projects for business expansion and prospects.
5. Having power to approve any juristic act binding upon the Company in an amount not exceeding Baht 500 Million per transaction, excluding those transactions giving rise to a conflict or interest with the Company or its subsidiaries under the notifications of the Securities and Exchange Commission, including such transactions requiring approval from shareholders under the regulations of the Securities and Exchange Commission and the Stock Exchange of Thailand.
6. Having power to approve, appoint, remove, and determine salary and other remunerations, including expenses and facilities of the Company's officers or staff in the position of General Manager or higher, but not including the Managing Directors.
7. The Executive Board or the Chairman of the Executive Board has the power to convene the Executive Board's meetings and/or determine rules and regulations of the meetings as it deems appropriate.
8. Reporting on the Company's operational results to the Board of Directors.
9. Proceeding with other matters as assigned by the Board of Directors.

### The Managing Directors' Authority and Duties

The Board of Directors determines the Managing Directors' authority and duties as follows:

1. Controlling and managing main business of the Company.
2. Monitoring all activities of the Company to ensure compliance with resolutions and policies as assigned and suggested by the Board of Directors.
3. Conducting feasibility studies on new projects and having power to consider approving various projects as authorized by the Executive Board.
4. Having power to approve, appoint, remove, and determine salary and other remunerations, including expenses and facilities of the Company's officers or staff in the position of General Manager or lower (but not including Deputy Managing Director, Assistant Managing Director, and General Manager).
5. Having power to approve any juristic act binding upon the Company in an amount not exceeding Baht 5,000,000 (Five Million Baht Only) per transaction.
6. Having power to sign cheques without affixing the Company's seal, and having power to sign and affix the Company's seal for withdrawal of money from all accounts of the Company and utilize credit facilities available to the Company by all banks or financial institutions in the amount not exceeding Baht 5,000,000 (Five Million Baht Only) per transaction.
7. Having power to make a payment order by various electronic methods in the amount not exceeding Baht 5,000,000 (Five Million Baht Only) per transaction, and having power to appoint the sub-attorney acting on their behalf.
8. Authorizing the Company's staff in the executive positions, namely, Deputy Managing Director, Assistant Managing Director, General Manager or equivalent to perform duties on behalf of the Managing Directors in certain matters (such as purchase order, procurement, payment order) as appropriate.
9. Appointing any Deputy Managing Directors or any other persons acting in place of the Managing Directors from time to time in the event that the Managing Directors are unable to perform their duties, whereby such acting persons shall have the same authority as the Managing Directors.
10. Having power to appoint any persons or groups of persons to engage in the Company's business under the supervision of the Managing Directors, or, if applicable, authorizing such persons to make arrangements as the Managing Directors deem appropriate and having power to change, amend, revoke and repeal such authorization.
11. Proceeding with other matters as assigned by the Board of Directors or the Executive Board from time to time.

In this regard, the Board of Directors regularly evaluates performance of duties of the Managing Directors for comparison with the target as determined on a yearly basis, and the Nomination and Remuneration Committee considers remuneration of the Managing Directors by assessing their performance in the previous year and proposing the same to the Board of Directors for approval under the criteria.

## 9.3 Nomination of Directors and Top Executives

### (1) Nomination of Independent Directors

The Company establishes the structure of the Board of Directors which shall be composed of independent directors of at least one-third of all directors, but no fewer than three persons, whereby such independent directors can provide their opinions independently and perform the duty to safeguard benefits of the Company and shareholders at their best.

The Nomination and Remuneration Committee nominates directors who are qualified in terms of useful skills and experience for the Company and meet the qualifications of independent directors by the definition of the Company's independent directors, as follows:

1. Holding shares of not exceeding 0.5 percent of the total number of voting shares of the Company, its parent company, subsidiaries, associated companies, major shareholder or controller of the Company, including shares held by any related persons of each independent director;
2. Not being or having been a director having involvement in the management, an employee, a staff member, an advisor receiving a regular salary or a controller of the Company, its parent company, subsidiaries, associated companies, subsidiaries of the same tier, major shareholder or controller of the Company, unless such independent director has no longer been in such capacity for not less than two years prior to the appointment date, provided that such prohibited characteristics shall not apply to an independent director who was a public servant or an advisor to a government authority which is the Company's major shareholder or controller;
3. Not being a person having a relationship by blood or by legal registration in the capacity as parent, spouse, sibling and offspring, including spouse of the offspring of other director, executive, major shareholder, controller or person to be nominated as director, executive or controller of the Company or its subsidiaries;
4. Not having or having had any business relationship with the Company, its parent company, subsidiaries, associated companies, major shareholder or controller of the Company in a manner which may prevent the exercise of his/her independent judgment; and not being or having been a substantial shareholder or controller of any person having a business relationship with the Company, its parent company, subsidiaries, associated companies, major shareholder or controller of the Company, unless such independent director has no longer been in such capacity for not less than two years prior to the appointment date;

The aforesaid business relationship shall include any transaction in the ordinary course of business for lease of immovable property, any transaction relating to assets or services or grant or receipt of financial assistance through receiving or extending any loan, guarantee, providing assets as collateral, including any other similar action, which causes the Company or contractual party to be subject to indebtedness payable to the other party in the amount of three percent or more of the Company's net tangible assets or in the amount of Baht Twenty Million or more, whichever is lower. Such indebtedness shall be calculated according to the calculation method of connected transaction value under the Notification of the Capital Market Supervisory Board, Re: Rules on Connected Transactions, mutatis mutandis. However, the consideration of such indebtedness shall include the indebtedness incurred during the course of one year prior to the commencement of a business relationship with the same person;

5. Not being or having been an auditor of the Company, its parent company, subsidiaries, associated companies, major shareholder, or controller of the Company; and not being a substantial shareholder, controller, or partner of an audit firm which employs the auditor of the Company, its parent company, subsidiaries, associated companies, major shareholder, or controller of the Company, unless such independent director has no longer been in such capacity for not less than two years prior to the appointment date;
6. Not being or having been a professional service provider, including legal advisor or financial advisor which receives an annual service fee exceeding Two Million Baht from the Company, its parent company, subsidiaries, associated companies, major shareholder, or controller of the Company; and not being a substantial shareholder, controller, or partner of such professional service provider, unless such independent director has no longer been in such capacity for not less than two years prior to the appointment date;
7. Not being a director appointed as a representative of the Company's director, major shareholder or shareholder who is a related person of the major shareholder;

8. Not engaging in any business of the same nature as and in material competition with the business of the Company or its subsidiaries; or not being a substantial partner in a partnership or a director having involvement in the management, an employee, a staff member, an advisor receiving a regular salary or holding more than one percent of the total number of voting shares of another company engaging in any business of the same nature as and in material competition with the business of the Company or its subsidiaries;
9. Not having any other characteristics preventing the provision of independent opinions on the Company's operations.

## **(2) Nomination of Directors and Top Executives**

### **(2.1) Nomination of Directors**

#### **(2.1.1) Criteria**

The Nomination and Remuneration Committee considers nominating persons to be appointed as directors to replace those directors who vacate office, both resignations prior to the end of term and retirement by rotation, in accordance with the following criteria:

1. Having qualifications in compliance with the Public Limited Companies Act, the Securities and Exchange Act, rules of the SEC Office and rules of the Stock Exchange.
2. Having knowledge, ability, and experience in a variety of fields which will be beneficial and add value to the Company.
3. Having characteristics supporting and promoting the corporate governance to create value to the Company, such as independence, willingness to share opinions, initiative, and performance of duties with responsibility, due care, integrity, and full-time contribution, etc.
4. In case of a director who retires by rotation, the Nomination and Remuneration Committee considers from his past records whether he performed duties as a director with due care, integrity, and full-time contribution.
5. In the nomination of directors, there should be consideration of the required qualifications taking into account the necessary skills for the Board and qualifications in line with the Company's business strategies.
6. In case such vacancy is a director representing the Expressway Authority of Thailand or the Mass Rapid Transit Authority of Thailand under the conditions of the relevant Concession Agreements, the replacement director must be nominated by the said authority to fill the vacancy.

The Nomination and Remuneration Committee shall nominate such qualified persons to the Board of Directors for consideration for submission to the shareholders' meeting for appointment as directors.

#### **(2.1.2) Nomination Procedures**

The Board of Directors sets out the procedures for nomination of directors, and the Nomination and Remuneration Committee proceeds in accordance with the following procedures:

1. Nominating qualified persons to fill the vacancy.
2. Considering the qualifications of the directors who represent EXAT and MRTA in accordance with the conditions as specified in the Concession Agreements.
3. Considering the qualifications of persons nominated by minor shareholders according to the Company's policy to allow shareholders to propose their nominations in advance (if any).
4. Proposing the nominations to the Board of Directors for consideration and appointment (in case of interim vacancy).
5. Considering proposing the nominations to the Board of Directors for consideration and approval for submission to the annual ordinary general meeting of shareholders for an appointment.

Pursuant to the Articles of Association, at every annual general meeting, one-third of the number of directors must vacate their offices. If the number of directors is not a multiple of three, then the number nearest to one-third must retire from office. Therefore, the directors have a term of three years, and a retiring director may be re-elected. In this regard, the Company does not fix the number of terms of holding office as a director or the number of other listed companies in which the directors will hold office as directors but considers the suitability of appointment of directors who are due to retire by rotation to resume office.

Pursuant to the Articles of Association, the criteria and procedures for appointment of directors by shareholders are as follows:

1. One shareholder has one vote for every one share held by that shareholder;
2. When electing directors, each shareholder shall exercise all of his or her votes to elect all directors to be elected on such occasion, or in case the shareholders' meeting deems it appropriate, the casting of votes is made to elect directors on an individual basis. In this regard, in casting votes, whether in the election of directors on an individual basis or the election of all directors, each such person elected by the shareholders must receive votes from shareholders according to the total number of shares held by each shareholder under clause 1., and no shareholder can allot his or her votes to any person in any number.
3. In case of the election of directors on an individual basis, persons receiving the most votes are those who are elected to be directors, in descending order, for the number of directors who are to be elected. If there is a tie for the last to be elected and this exceeds the said number of directors, the election shall be drawn by lots.

#### **(2.2) Nomination of Managing Directors and Executives**

1. The executives in the position of Managing Directors must be nominated by the Nomination and Remuneration Committee, which considers nominating qualified persons, namely, those who have knowledge and capacities and experience which are useful for management and operations to achieve objectives or targets as determined by the Board of Directors and have a good understanding of the Company's business, whereby the Nomination and Remuneration Committee shall propose the nominations to the Board of Directors for consideration and appointment.
2. For any executives at the level of General Manager or higher, the Managing Directors proposes the nominations to the Executive Board for consideration and appointment.

#### **(2.3) Consideration on determination of holding a directorship in other listed companies**

To ensure that each of the directors, Managing Directors and high level executives can dedicate their adequate time to performance of their duties with efficiency, the Board of Directors then considers determining the number of listed companies in which each of the directors, Managing Directors and high level executives is allowed to hold a directorship, as follows:

1. Holding a directorship in other listed companies by directors  
Each director is allowed to hold a directorship in other listed companies not exceeding five companies to achieve efficiency in management.
2. Holding a directorship in other listed companies by the Managing Directors and the high level executives  
Each of the Managing Directors and high level executives is allowed to hold a directorship or management position in other listed companies not exceeding five companies, provided that such Managing Director and high level executive must seek approval of the Board of Directors prior to assumption of such position.

## 9.4 Supervision of Operations of Subsidiaries

To ensure that supervision of operations of the Company's subsidiaries is conducted in compliance with the business policy specified by the Board of Directors of the Company and in line with the Corporate Governance Code, and to safeguard investment benefits of the Company and its shareholders, the Board of Directors of the Company thus sets out criteria and guidelines for supervision and control of management of the subsidiaries, as follows:

- 1) The subsidiaries are encouraged to put the Corporate Governance Code into practice.
- 2) The selection of any persons as representatives of the subsidiaries is subject to the approval of the Board of Directors of the Company, according to their respective shareholding percentage.
- 3) The subsidiaries shall be supervised through representative directors and executives and in compliance with the policies specified by the parent company.
- 4) Any significant matters, such as strategies, action plan, capital increase or reduction, company dissolution, including various important policies shall be considered. The guidelines for exercising the right to cast votes in the shareholders' meetings are also formulated.
- 5) The operational results shall be followed up through the management, executive board, for reporting to the Board of Directors of the Company.
- 6) The subsidiaries shall be monitored to ensure their compliance with laws, relevant regulations stipulated by the supervisory units, including generally acceptable accounting standards.

The Company requires its subsidiaries to yearly review the respective internal control systems to ensure adequacy and appropriateness, whereby the Internal Audit Office of the Company shall regularly review, follow up and evaluate compliance with the good internal control principles, which is specified in the annual audit plan.

In this regard, the Company has assigned the Managing Directors or his/her delegate(s) to monitor each of such subsidiaries, as a shareholder. Currently, the Company appoints directors who are its representatives to supervise and monitor operations of the subsidiaries, as follows:

### **Northern Bangkok Expressway Company Limited (NECL), comprising seven directors:**

- Five directors who are members of the Executive Board of the Company;
- One director who is a representative from EXAT;
- One managing director of NECL.

### **Bangkok Metro Networks Limited (BMN), comprising seven directors:**

- Five directors who are representatives from the Company;
- One director who is a representative from other shareholder;
- One managing director of BMN.

## 9.5 Control of Inside Information Usage

The Company determines its written control of inside information usage in accordance with the Corporate Governance Code, as follows:

### **Inside Information Usage Policy**

- (1) Due to the fact that the Company is listed on the Stock Exchange of Thailand, any sale or purchase of the Company's securities by any of its directors, executives or staff in a manner which may take advantage of a third party by using information material to changes in the prices of the securities which have not yet been disclosed to the public and to which he/she has access in the exercise of his/her duty or position in the Company, is then considered as unfair securities trading practices, subject to a criminal penalty under the law.

Therefore, the Company has set guidelines to prevent the use of insider information. Such guidelines will be revised from time to time as appropriate, and all directors, management, and staff of the Company will strictly adhere to these guidelines with accountability as well as causes and effects on a case by case basis. These guidelines or policies will be stricter than the provisions of applicable laws and will apply to directors, management and staff, including related persons.



(2) Securities Sale and Purchase Using Insider Information

Persons who should not sell or purchase securities pursuant to the guidelines to prevent the use of insider information are as follows:

1. Directors and management of the Company;
2. Directors and management of the subsidiaries, including its affiliates;
3. All staff of the Company and of the Company's subsidiaries, who have perceived insider information of the Company;
4. Spouses and minor children of the directors, executives and staff, who have perceived insider information of the Company; and
5. Relatives who live with the directors, executives, and staff who have perceived insider information of the Company.

Securities refer to shares, share warrants, convertible debentures and transferable subscription rights issued by the Company.

General Practice

1. Any person who has perceived insider information of the Company should not sell or purchase the securities under any circumstances if such person knows or should have known the publicly undisclosed material information that may affect change in the market price of the Company's securities.
2. Any person who has perceived material insider information of the Company from their duties and positions as the Company's staff shall not disclose such information to any other person while such information has not yet been disclosed to the public unless it is done in the performance of their duties to the Company.

Specific Guidelines

In addition to the general guidelines to prevent the use of insider information, persons who have perceived insider information of the Company shall also comply with the following guidelines:

1. Any person who has perceived insider information of the Company and is directly involved in the preparation of the Company's financial statements and the balance sheet is prohibited from any purchase or sale from the commencement of such preparation until the end of the day immediately following the disclosure date of such financial statements.
2. Any director, management or staff who has received the draft financial statements as referred to above, is prohibited from selling or purchasing the Company's securities from the day that he or she receives the draft financial statements until the end of the dissemination date of the financial statements.
3. Any person who has perceived insider information of the Company and knows or should have known that the Company will disclose material information that may affect change in the market price of the Company's securities, is prohibited from selling or purchasing the Company's securities from the day that he/she knows or should have known such information until the end of the day immediately following the disclosure and dissemination date of such information.

(3) Report of Persons who have Perceived Insider Information of the Company

A. Duty to Prepare Reports

Directors, Managing Directors or persons who hold management positions as specified in the Securities and Exchange Act shall be required to prepare disclosure reports of their initial securities holdings, and changes in such holdings, pursuant to the relevant laws and regulations, together with such reports to the Company.

B. Reporting Procedures

Directors, Managing Directors or persons as specified in paragraph A. above who have the duty under law to disclose their securities holdings, their spouses' securities holdings, and their minor children's securities holdings to government agencies or regulators shall submit copies of such reports to the Company on the same day.

**Protection and prevention of inside information usage**

- (1) The Company has policies and procedures for controlling the use of inside information by directors, executives and staff to prevent any occurrence of the use of inside information for personal interests or the interests of others. The work rules and regulations of the Company prohibit staff from disclosing the Company's confidential information to any third parties or abusing their positions for personal gains or others. Any violation is deemed a disciplinary misconduct. In addition, this obligation has been specified as an important condition in new employment agreements, whereby staff must keep confidential information relating to the Company's business to which they have access, whether directly or indirectly, and must refrain from disclosing it to any third parties or other unauthorized persons. In this regard, the confidential information relating to the Company's business refers to financial information, marketing plan or business plan, wages, etc.
- (2) The Company has a control system for use of the Company's information by adopting such information security systems as the restriction of access to the Company's information by setting authorization level of staff's access to the Company's information to correspond to their responsibilities and setting user password for common use of data files with other persons via the computer system, provided that the password must be changed every three months.  
The Company has obtained the certification of the ISO/IEC 27001:2013 international standard which describes the best practices relating to information security system which is applicable to improvement of the toll collection system at the control center to ensure compliance with the standard, and the Company also lays down standard for management of significant information to ensure continued operations of the business, with an aim of enhancing the organization's worldwide reputation for reliability.
- (3) The Company prohibits executives who know insider information from taking any actions contrary to Section 242, which does not allow securities trading by using insider information for his own or another person's benefit, under the Securities and Exchange Act, including relevant rules and regulations.

**9.6 Remuneration for Auditor**

The Audit Committee and management jointly consider the qualifications of the auditor in respect of the reliability, independence, knowledge and experience in audit services, advice on accounting standards, certification of the financial statements in a timely manner, and appropriate remuneration, and then propose this matter to the Board of Directors for submission to the annual ordinary general meeting of shareholders to consider approving the appointment of the auditor.

The proposed auditor shall have neither relationship with nor interest in the Company or its subsidiaries, executives, major shareholders or their related persons.

**Remuneration for auditor is divided into two categories, namely:****(1) Audit fee**

The Company paid the audit fees for 2019 in the amount of Baht 4,020,000 to EY Office Limited. When compared to the average audit fees of other listed companies in the same sector, the Company's audit fee was reasonable.

The Company's subsidiaries, namely, Northern Bangkok Expressway Company Limited and Bangkok Metro Networks Limited, paid the audit fees for 2019 amounting to Baht 960,000 and Baht 1,250,000, respectively.

**(2) Non-audit fee**

In 2019, the Company used any other services from EY Office Limited in the amount of Baht 450,000.

## 9.7 Compliance with the Corporate Governance Code for Listed Companies 2017

The Board of Directors has understood the roles, duties, benefits, and principles of the Corporate Governance Code for Listed Companies 2017, whereby the Board of Directors has suitably applied the Corporate Governance Code to the contexts of the Company. The Corporate Governance and Risk Management Committee, which is deemed a subcommittee with the duty to supervise and monitor to ensure the Company's compliance with the Corporate Governance Code to promote and support the Company's business operations conducive to the sustainable value creation, requires that the appropriateness of compliance with the Corporate Governance Code shall be reviewed at least once a year. The Board of Directors has then authorized the Corporate Governance and Risk Management Committee to consider and evaluate the application of the same for proposal to the Board of Directors for further consideration.

The Board of Directors shall have the duty to establish the Company's visions and missions so that its executives and staff are intended to perform their works in the same direction. In 2019, the Board of Directors considered reviewing and approving the visions, missions, strategies, goals and directions of business operations of the Company, including review of significant policies to ensure that they shall be appropriate and consistent with the business operations in accordance with the Corporate Governance Code.

The Board of Directors has monitored and supervised to ensure the Company's strategies shall be practically implemented. In the Board of Directors' Meeting on a quarterly basis, the Board of Directors has followed up the management team's performance, which is required that there shall be report on performance and operational results of the Company, particular in respect of the financial goals and action plans, in order to achieve the formulated strategies.

## 9.8 Compliance with the Corporate Governance Code in other Matters

The Company has complied with the Corporate Governance Code for Listed Companies in order to achieve assessment in various aspects. The Company received the "Very Good" rating as a whole from corporate governance assessment in the Corporate Governance Report of Thai Listed Companies 2019 from the Thai Institute of Directors Association (IOD). The Company has conformed to all principles of the Corporate Governance Code for Listed Companies 2017, except for the following:

1. Determination of the number of terms of holding of office as director and independent director: The Board of Directors does not clearly determine any number of terms of holding of office as director. In regard to determination of a term of consecutive holding of office as independent director of not exceeding nine years, the Board of Directors considers and deems that the appointment of independent directors to resume office as directors will be useful for the Company and shareholders since the directors consecutively holding such office will have better knowledge and experience in the Company's business operations and create more value for shareholders. In this regard, no director serves on the Board of Directors for more than nine years.
2. The composition of the Nomination and Remuneration Committee: It should be consisted mainly of independent directors (more than 50 percent): The Board of Directors establishes the composition of the Nomination and Remuneration Committee of the Company that it shall be comprised of four members, out of which not less than half shall be independent directors which have leadership, vision, independence in making decisions, skills and experience which are useful for the Company, prudence, honesty and dedication of their time to performance of their duties in an adequate manner.
3. The Board of Directors consisting of 5-12 directors: the Company gives priority to the good corporate governance together with the nomination of personnel who have knowledge and capability to conduct management. At this point, the Company realizes necessities and potential benefits from the nomination of personnel who have appropriate qualifications, knowledge, and capability to be appointed as additional directors. Currently, some directors serving on the Board of Directors are from the amalgamation between Bangkok Expressway Public Company Limited and Bangkok Metro Public Company Limited and from directors who are representatives from the Expressway Authority of Thailand and the Mass Rapid Transit Authority of Thailand in accordance with the conditions of the Concession Agreement, and as such, the Company has 16 directors.
4. The composition of the Board of Directors required that more than 50 percent of the Board shall be independent directors: The structure of the Board of Directors shall consist of persons engaging in the business and in various other fields, which have qualifications, skills, experience in administration and operating works which are useful for the Company, have knowledge in terms of concession agreement, out of which at least one director shall be experienced in the core businesses or industry currently operated by the Company, and shall include independent directors which have at least qualifications under the requirements stipulated by the SEC Office and the Stock Exchange, namely, there must be at least one-third of the total number of directors as independent directors but not less than three persons. The Chairman of the Board of Directors shall be an independent director and shall not the same person as Managing Directors.

## 10. Corporate Social Responsibility

The transportation systems with convenience and efficiency are essential for an urban lifestyle, whether it be road or rail systems, all of which play a key role in integrating livelihoods of the people in the society from one side of the city to the other side. Bangkok Expressway and Metro Public Company Limited (the “Company”), as the expressway and metro service provider, has its commitment to development of the transportation system network to facilitate the people’s travelling and help mitigate traffic problems in Bangkok and its surrounding provinces to upgrade the quality of life of the service users. The Company has continued to improve and develop provision of the services to achieve efficiency, by giving priority to safe, convenient and rapid travelling to ensure delivery of services with modern transportation network and improved life quality to the people through the business operations always based on the social and environmental responsibility, the guidelines to which the Company has adhered for the sustainable business operations.

### 10.1 Policy Overview

The Company is committed to operating its businesses with particular emphasis on the society and environment in pursuit of the Company’s sustainable business growth. As such, the Company focuses on transparency and fairness in its operations with the aim of coordinating benefits and growing together with all groups of stakeholders. Therefore, the Company adopts and communicates its operating policy for sustainable development to all staff to ensure that they seriously implement and harmoniously incorporate it into their own work processes for sustainable growth of the Company and all its groups of stakeholders, as follows:

1. To be a leading organization for sustainable development through communication and exchange of best practices with all groups of the Company’s stakeholders;
2. To build up the culture and concept of the sustainable development for incorporation into every work process and decision-making process of the Company;
3. To promote training, learning, and counseling, focusing on practices according to sustainable development guidelines;
4. To support the operations, disseminate the guidelines, and to ensure collaboration at the regional level as well as transferring the body of knowledge to achieve sustainable development on a continuous basis.

### 10.2 Corporate Social Responsibility and Sustainable Development

The Company, as **the expressway operator**, is committed to fulfilling the people’s requirements for their travelling via the expressway network which has been connected and stretched to the central business districts of Bangkok. The expressway service is considered the transportation service provided to the expressway users who need convenience, rapidity, and safety in their travelling. For that reason, the Company has continued to conduct the study and improvement of the expressways to ensure engineering safety in accordance with international standards; enhance efficiency in the service provision to the expressway users by the way of an addition of Easy Pass lanes, including relocation of the positions of the lane entrance gates to minimize traffic conflict points with the cash lanes, which will mitigate the traffic congestions in front of the toll plazas. Furthermore, the Company has conducted a study on new routes in response to the urbanization in the future.

With regard to the **metro system**, the Company has emphasized creativity and development of the modes of services to facilitate the passengers' travelling both peak and off-peak hours based on the Company's professional operations on the motto "Service above all else". The Company then sets out the aims for quality services, namely, convenience, fast, reliability, punctuality, and above all, safety which are the first priority of which all staff have to be aware. Moreover, to create an atmosphere of safety throughout the service users' travelling, staff shall strictly comply with the safety requirements of the Company, including public relations regarding safety via media and activities to ensure knowledge and understanding of the general people.

As for the commercial development business, it is considered as the Company's non-core business which the Company also gives importance other than its core businesses, thereby diversifying the Company's services which can fully satisfy the needs of the service users and those who live along the stations. The Company has developed spaces for retail shops and sale promotions to suit the convenience of the MRT service users.

With the Company's competency of and commitment to provision of the expressway and metro services, the Company always gives priority to provision of convenient, rapid and safe services which meet standards to the service users, in which the Company believe that it will be able to play a part in completing daily life for all persons for good.

## Summary of Social Performance

### Human Capital Development

The Company is determined to be a leading, fully-integrated transportation service provider in Thailand and ASEAN, with its social mission to provide the transport service with convenience, rapidity, and safety by engaging in the business with its commitment to social and environmental responsibility, attainment of value added creation and optimum benefits for all stakeholders with fairness and sustainability. Therefore, it is a clear policy of the Company to be responsible for the rights of all groups of stakeholders, as follows:

1. Internal stakeholders, i.e., staff, executives of the Company and its subsidiaries, including their shareholders;
2. External stakeholders, i.e., customers, business partners, lenders, counterparts, competitors, society, communities, schools located near the rights of way and the electric train routes, including government sector and relevant authorities.

### BEM's Human Resource Development

At present, the Company has to continue facing the ongoing changes and business competitions. To enable the Company to create the **"Route of Happiness for Better Travelling Mode"**, the Company emphasizes the development of its personnel to ensure their readiness and capabilities which will not only create value for the Company, but also for the society as a whole.

#### 1. The Source of Happiness

The Company appreciates the value and importance of its staff, rest assured that the qualified staff is an essential factor in contributing to the organization's sustainable growth and success, as well as being competitiveness indicating factor. Therefore, the Company is determined to look for talent and good persons and regularly and continuously support the development and training of staff at all levels. The Company is also committed to fair treatment towards its staff under the nondiscrimination policy and provision of equitable opportunity for employment pursuant to the work rules and regulations and laws. The Company treats all staff equally regardless of gender, age, race, religion, work position or physical abilities.

The Company has always treated and cared for its staff at all levels in all respects, for example, job description, safety, occupational health and work environment, including training and development of skills in various aspects, together with career opportunity and advancement, fair consideration and welfare through the clearly specified criteria for career path, and fair and appropriate remuneration based on benchmarking with the same industry. Furthermore, the Company has promoted a participatory work environment and teamwork as well as organizing the workplace on the occupational safety and health basis, not to mention the fact that staff are also allowed to show off their abilities.



Realizing the significance and development of personnel as mentioned above satisfy staff to work for the Company to achieve the Company's goals, and with the Company's notion that staff are regarded as valuable resources and its strong belief in their inner potential in order to make staff proud and determined to perform works as well as improving their own performance on a continual basis.

"Source of Happiness", the Company has regularly arranged for development of personnel in both main and supporting lines of work on a systematic basis. Regarding "Career Opportunity and Advancement", the Company is determined to restructure its organization and the work positions, and career paths, and salary of staff to be more appropriate and fair to ensure staff career paths.

Therefore, the human resources management has become absolutely essential and necessary, and the Company must establish more clear and concrete, appropriate and fair direction for the retention of existing personnel, and recruitment of new staff for business expansion, as well as development of knowledge and skills for both existing and new staff, and update of job descriptions, including transfer of staff according to their knowledge and abilities, and promotion for career advancement.

Particularly staff in main line of work directly related to services on the expressway and rail systems, where quality and safety are compulsory, in order to achieve its goal of providing excellent service to the utmost satisfaction and impression of the expressway and MRT service users. The Company formulates training courses so that staff will have skills and ability to use equipment and devices for specific tasks, i.e., rescue operation, traffic management, toll collection and maintenance of the system and carriage way, including training courses relating to the metro system, various relevant rules and regulations, especially knowledge regarding work safety.

Moreover, the Company has nurtured innovative development by allowing staff to provide suggestions and opinions which are useful for the development of competency in work process as well as supporting varied studies and researches which are striving for benefits and value creation for the business, on a community, social and eco-friendly basis.

"Staff Capacity Building", the Company focused on personnel training and development, both inside and outside the organization, to maintain core knowledge within the organization, and to prepare our personnel to become the international standard service operator, as well as conveying important knowledge in other aspects to enable them to further knowledge in the future. Training courses provided for staff are described below.

#### 1) Knowledge Management: KM

The Company implemented the knowledge management project as intermediate KM Roadmap, with the objectives to identify the body of core knowledge which was necessary and important for the organization, to ensure a systematic collection of knowledge for all staff to have wide access to the source of such knowledge, knowledge sharing for ensuring the optimum benefits, and furthering the Company's corporate transition into a learning organization. Other than the management of core knowledge for the Company's businesses, the Company also promoted a community of practices (CoPs) to ensure learning and sharing of work experiences, problem-solving, including solutions and improvement to work processes, in order to come up with the best practices.

#### 2) Codes of Conduct and Business Ethics Training

This training course was intended to serve as guidance for all staff regarding their work responsibilities and duties and to ensure that they understand and also follow the preliminary guidance described in the Company's Codes of Conduct and Business Ethics handbook, which is in line with the Company's vision, mission, and corporate culture, in order to achieve goals for improved quality of work and life for staff. The Company also provides for refresher training to update staff's knowledge by the way of E-Learning & E-Exam, which all new staff are required to attend, including regular exams for the existing staff on a yearly basis.

### 3) Annual Training & Development

The Company put into practice the idea of developing staff competency by improving the Training Roadmap for all levels of staff, namely, executives, supervisors, and operating staff. The roadmap is intended to make sure that staff gain basic knowledge and skills required for their work performance, both technical and soft skills. These two types of skills are fostered in mandatory programs for new staff, e.g., an orientation program for new staff about the Company and about the **“Route of Happiness for Better Travelling Mode”** including rules, regulations, and requirements; a work safety program; and a quality management system program.

The existing permanent staff are given refresher training on knowledge every year. All of these training programs should enable staff to apply such knowledge to their work performance and adapt themselves to the corporate culture, so as to have a sense of pride and to conduct themselves properly and in line with the goals. In such training programs, staff are also encouraged to employ their own expertise.

#### Rescue Operation and Traffic Management

The Company, in association with the Expressway Authority of Thailand (EXAT), has conducted rescue operation and assistance drills in case of serious accidents on the expressways, with safety training every year, including training on use of the rescue operation vehicles on the expressways, safe driving training, traffic volunteer training and on the job training; and the Company has arranged for three-month new staff orientation prior to actual operation on the expressways, as well as service mind training.

#### Toll Collection Operation

The Company’s personnel in charge of this field comprises of personnel with the duty to collect tolls of the Si Rat - Outer Ring Road Expressway, whereby the Company provides the personnel training in toll collection to ensure that tolls are correctly and completely collected to facilitate the expressway users’ toll payment with convenience and rapidity. The Company’s personnel in charge of toll revenue operation are responsible for ensuring that tolls are correctly, transparently and precisely collected, in collaboration with the government sector, namely, EXAT. The Company provides the internal on the job training regarding the role and responsibilities of toll collection controllers, emphasizing that tolls must be collected punctually, and verification of data on vehicle counting and collection records must be made correctly and accurately.

In addition, the condition of toll collection equipment must be checked to get it ready for full-time service and to ensure the accuracy of toll collection, which will help assure the Company’s complete revenue streams and equally protect the interests of shareholders and stakeholders. The Company also arranges for overseas study visits on toll collection systems.

#### Structure Maintenance Operation

This is to ensure that the expressways will be ready and safe for service. The Company is internationally recognized as a company specializing in the inspection and maintenance of the Segmental Box Girder structures, with regular inspection, monitoring, and surveillance all year round.

MRT Control Officer and MRT Operation Control Officer Training

The MRT control officer training takes at least 600 hours of training and the MRT operation control officer training takes at least 1,100 hours of training, which are provided in theory and in practice by the way of actual train driving and train-driving simulator, training to use equipment in train operation control room, emergency response drills and exercises, including on the job training, where safety is given the top priority, whereby professional trainers are provided to closely monitor staff's training. Moreover, the Company's staff are given refresher training on a yearly basis to ensure that all trained staff will be able to discharge their duties in the metro service provision with safety, convenience, rapidity, reliability, punctuality, and efficiency in order to improve the quality of life of residents.

## Enhancement of Quality of Life

### 2. On the Route of Happiness

The expressway users and MRT users are the heart of the Company. The Company is then ready to deliver and improve the expressway services to ensure the most efficiency as the **"Route of Happiness for Better Travelling Mode"** of rapid and safe transportation, uplift the quality of life, and play a role in developing Thai society. The Company appreciates innovations which will help minimize the impact of the operations on society, environment and stakeholders from construction to repair and maintenance of the expressways to stand ready for service to users to ensure their convenience and safety both under normal and emergency situations.

To maintain the Route of Happiness, the Company emphasizes taking care of the delivery process and improvement of services in detail on a regular basis, as follows:

#### The delivery process and improvement of services in detail of the expressway service

- 2.1 Expressway Construction: The Company adopted the internationally recognized Segmental Box Girder technology, which meets the AASHTO (American Association of State Highway Transportation Officials) standards, and which was considered a sophisticated technology at the time it was adopted. As a result, the Company was able to minimize the impact on at-grade traffic and dust and noise pollution during the construction. The construction was then completed according to plan without any protests from society and nearby communities. The expressways are safe, meet standards and effectively respond to users' transportation needs.
- 2.2 Expressway Maintenance: The Company carries out regular inspection and maintenance of the main structures of the expressways, under the independent consulting engineer's supervision and quality assessment of the expressways. The expressways are in a stable condition, meet standards and safety requirements, and the expressway users are able to enjoy convenient, rapid and safe transportation to their destinations.
- 2.3 Expressway Services: The expressways, by physical characteristics, mostly are elevated and linked as a network with a total length of approximately 268 kilometers. The expressways have become effective strategic routes for sending aid to disaster victims, transporting equipment and supplies, and travelling by both public and private sectors, during the occurrence of any event or disaster which may impede the at-grade roads. Those events in the past have perfectly confirmed the strategic route status. Therefore, the Company, in its capacity as the operator of the Si Rat Expressway, the Si Rat - Outer Ring Road Expressway and the Udon Rattaya Expressway, sets out practical guidelines for dealing with unusual occurrences, so as to make the expressways available for service under emergency situations and return to normal as soon as possible. In this regard, the Company is ready to take various actions as follows:

- (1) **Expressway Control Center:** The Company's communications staff in the Control Center monitor traffic condition on the expressways and provide travelling information to the expressway users. CCTV surveillance systems are installed on the expressways, along with radio-communications systems through the Control Center working 24 hours in close collaboration with other relevant authorities. The Company's rescue operation teams are patrolling the expressways at all times, therefore, they are ready to instantly assist service users in any incident on the expressways. In addition, the teams also coordinate with police officers on duty on the expressways and at-grade roads in order to facilitate traffic management 24 hours a day. The traffic condition on the expressways is viewable by at-grade police officers from the video signals connected with the Company's CCTVs.
- (2) **The automatic toll collection system or Easy Pass** was implemented by the Company's collaboration with the government sector beyond the terms and conditions of the relevant Concession Agreements, with the intention to improve services and minimize environmental impact from traffic congestion. This system has helped save travelling time and fuel for the expressway users, protect the environment, minimize pollution at the toll plazas, reduce fuel consumption, and improve the quality of life.
- (3) **With respect to safety innovations,** the Company sets up a dedicated unit responsible for research and development (R&D) to regularly improve the safety of the expressways by means of road safety audits. The audit results are used for the expressway improvements for greater safety.

#### The delivery process and improvement of services in detail of the MRT service

- 2.4 Value added to safety: The Company's business operations give priority to the safety of passengers, staff, contractors, including everyone in the MRT system, as evidenced by the adoption of the international standard safety management system as a guideline for operations, namely, OHSAS/TIS 18001. Moreover, Ricardo (Thailand) Company Limited is engaged as a safety consultant to evaluate the Company's operations in accordance with the safety management system standard after opening the MRT Purple Line for service, and provide suggestions on improvement of the risk management process, system assurance, and review of the train operation service process to achieve greater efficiency and to accommodate the growth in the future.
- 2.5 Value added to convenience: As the metro is a mass rapid transit system with rapidity and definite service schedule for the service users' commute convenience as they can somewhat precisely anticipate the service schedules and sets out their commute plans, the Company thus gives priority to value added in convenience in its services from making an entrance to the stations, utilization of services until leaving the stations. This effect, the Company has made various preparations to suit the convenience of the passengers and the service users in all respects such as information services, common ticketing system, and facilities within the stations.
- 2.6 Value added to rapidity: As the metro is a mass rapid transit system which offers the rapid services, a main reason that people select to commute by the metro, therefore, the Company supports other services from the passengers' entering into the stations until leaving the services with rapidity by means of development of the efficiency in service provision from where the passengers make an entrance to the stations and during the services, deletion of certain repeated steps which cause any unnecessary delay or increase in certain steps which more impress the passengers such as the passenger volume management system during rush hours on platforms, rapid services in the time when the passengers are so crowded or during the exhibitions, ticket issue or stored value card services are provided by staff who are active in providing clear suggestions, etc.

- 1) Value added to reliability: The Company is committed to the regular services of the required standard to build the reliability in the metro system in respect of safety, convenience, and rapidity, whereby the Company continues to improve the quality of the services, for instance, maintenance and test of equipment are planned in a preventive and corrective manner, annual rehearsals for handling various emergency stimulations together with internal and external rescue agencies, improvement of safety system, ethical and equitable treatment towards passengers. Moreover, the Company accepts any comments or complaints from customers for further taking remedial actions to ensure improved services. The M.R.T. Chaloom Ratchamongkhon Line (MRT Blue Line) service capability has been assessed by Train Service Delivery, which the Company's M.R.T. Chaloom Ratchamongkhon Line (MRT Blue Line) service capability has always been more than 99 percent. In 2019, the Company's Train Service Delivery in respect of the M.R.T. Chaloom Ratchamongkhon Line (MRT Blue Line) represented 99.82 percent from the target of 99.70 percent.
- 2) Value added to punctuality: The clear and punctual schedule of the MRT service enables passengers to manage their travelling time and do various activities more easily, not to mention that it results in their quality of life and mind health. The punctuality of the MRT service can be assessed by examining train punctuality with delays of not more than 5 minutes (Train Punctuality (Delay within 5 Min.)) in all MRT stations, which in 2019, the Company's Train Punctuality (Delay within 5 Min.) in respect of the M.R.T. Chaloom Ratchamongkhon Line (MRT Blue Line) represented 99.86 percent from the target of 99.75 percent.

As for the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line), its train service availability with a delay of not more than 3 minutes during peak hours and not more than 6 minutes during off-peak hours, which in 2019, represented 99.97 percent from the target of 99.25 percent; and its train service punctuality with a delay of not more than 3 minutes, which in 2019, represented 99.99 percent from the target of 99.25 percent.

Moreover, the Company's membership in NOVA Group of Metros, a consortium of international metro service operators in a program of railway benchmarking, has inspired the development and improvement of service operations to achieve a higher level of success. Other than the standard set out service performance indicators, the Company has set out benchmarking indicators that are comparable to those of other members of the NOVA Group of Metros in various aspects in order to share knowledge and experience which will result in improvement and development of the services. Furthermore, in comparison with information in the NOVA Group, the Company's operational results are excellent in various respects, such as train punctuality as compared with the train schedule, repair and maintenance to ensure the availability of trains for service, and work safety of staff, etc.

Other than the safety, efficiency in the services and new technology as employed to satisfy the service users' needs, the Company has also realized the significance of its traders which are considered as a business supply chain as comparable to the service users.

The Company formulates a policy to fairly treat its business partners and promotes the knowledge, understanding, practice, development in accordance with the framework for sustainable development in the Company's business sector, building reliability through the fair business operations with its traders and financial supporters, regarded as key success factor which enables the Company to deliver the quality services to the expressway and MRT service users even during a crisis. The Company then set out the practices towards traders in a way of the business operations with fairness to ensure that acquisition of goods and services meet standards, together with the commitment to developing and maintaining sustainable relationships with traders, and having the clear objective regarding quality of goods and services as suitable for monetary value, technical quality and trust in each other.



The Company has arranged for the procurement process with equality and fairness for its traders in all systems, which is in accordance with the operating process governing procurement under the requirements of the ISO 9001 quality management system, by methods and measures adopted in against unfair competitions, determined the guidelines to promote respect for intellectual property rights of traders and safeguard the rights in assets, as well as the business operations with the supply chain in strict compliance with the international standards of the ISO 9001 quality management system and the ISO 14001 environmental management system through provision of knowledge, understanding and close monitoring system, to rest assured that the Company's supply chain transacting a business with the Company has carried out its operations with environmental care to ensure sustainability in mutual business operations. As for the group of financial supporters, it included lenders, debenture holders, creditors, the Company is determined to comply with agreements and commitments and maintain the financial discipline on a strict basis.

Regarding safety for staff and contractors, the Company has conducted its work safety in accordance with Thai laws and local and international safety standards, i.e., TIS 18001 and OHSAS 18001, as assessed by TUV NORD (Thailand) Limited. The main objective is to supervise welfare for work performance in respect of occupational safety, health, and environment of staff and persons in connection with operations in the metro system. The Company also prepared Plod Online E-magazine for communication with its staff to ensure their awareness of safety, quality, and environment.

### 3. Happy Society

Throughout the period of the business operations, the Company is committed to being the **"Route of Happiness for Better Travelling Mode"** and the pursuit of happiness of travelers, the following matters are given priority:

- **Family:** Spending quality family time can be made in various manners, one of which is travelling together as a family on expressway route or metro route, to see and experience new stories of community lifestyles and to ensure income distribution to their destinations;
- **Education** of children and youth: The Company aims to promote children's outdoor learning experience by organizing outdoor learning activities to allow children to gain important first-hand experience and apply such gained experience to their lives in the future, and meanwhile, the Company has provided educational opportunities for underprivileged children and youth with good academic records, by distribution of scholarships to them as a cost for their sustainable careers.
- **Public interest assistance** and alleviation of hardships from various disasters: The Company has always provided assistance in this matter to play a part in healing of the suffered society from such disasters.

### 4. Summary of Environmental Performance

Environmental Quality Promotion and Environmental Impact Reduction (More Quality and Less Impact)

The Company, in its capacity as the expressway and metro service provider, has realized the business operations based on sustainable development in three aspects, namely, economy, continuously developing quality of services; society, taking care of the Source of Happiness to ensure that they have the improved quality of life, with the readiness to transfer value to society nearby and as a whole; and environment, emphasizing prevention and control of pollution and impacts which may occur.

The Company is determined to develop the quality of the services, with the commitment to environmental responsibility; therefore, the environmental management policy has been formulated, with the guidelines as follows:

#### Environmental Policy

1. Giving the priority to prevention and control of pollution to ensure compliance with the international standards and taking into account the environmental impacts of the service users, staff and communities;
2. Instilling the awareness on the utilization of natural resource energy in an efficient manner in our staff and promoting them to do so;
3. Performing duties in compliance with laws and other requirements in relation to the environment;
4. Reviewing the objectives and goals for improving the environmental management system on a regular basis;
5. Disseminating the environmental policy to the public and other concerned parties.

It is deemed to be all staff's and traders' responsibility to strictly and regularly adhere to this policy for ensuring a good environment for the service users, staff, traders, and nearby communities.

The Company has a policy and is determined to continuously take care of every sector of society in respect of the management of improved operational results, and creation of value added to shareholders, and giving priority to nearby communities as well as taking care of both nearby and remote communities. In 2019, the Company organized the corporate social and environmental contribution activities as follows:

#### 1) Activities for Development of Quality of Life on Safe Travelling

Driving cars by traffic rules and taking care of cars to ensure that they are in ready condition for travelling lie at the heart of helping prevent and reduce potential accidents on roads, including expressways, as well as ensuring the greater safety to motorists and their companions. The Company has therefore organized traveling safety promotion activities, as follows:

##### **"Smart Drive"**

The Company provided the Smart Drive training to the general public on two occasions in order to promote safe driving, acquaint them with knowledge and techniques about methodical and accurate driving under traffic rules, solving immediate problems in case of emergency to help reduce potential accidents, including first aids for road accident victims by the emergency rescue unit, and provision of basic car care advice, together with taking them to make a site visit to the Si Rat - Outer Ring Road Expressway Control Center.

##### **"Provision of Facilities and Safety for People's Travelling during New Year and Songkran Festivals"**

The Company, in association with EXAT, conducted a campaign for safe driving during the Songkran festivals under Road Safety Measure 777 "Driving Slowly, Daytime Headlight Switching on, Seat Belt Fastening", and also provided for the public service points on the expressways in order to facilitate the people's travelling during the New Year and Songkran festivals.

#### 2) Good Family Relationships

##### **"Moms & Kids Strengthen Relationships with BEM by Taking Mom on Trip, Enjoy Tea and Visit the Garden"**

The family institution is regarded as the first basic unit which is of vital importance to the society, the Company is committed to playing a part in strengthening family relationships, and on the occasion of the National Mother's Day, the Company then held the good family relationship activity by taking the expressway service users' families to pay homage to Phra Buddha Devaraj Patimakorn at Wat Devaraj Kunchon Worawihan, and learn about floral culture at the Museum of Floral Culture, as well as doing activities to strengthen family relationships by making flower garlands for moms to allow kids to express the gratitude towards their moms in the midst of a heartwarming atmosphere.

##### **"Dads & Kids Strengthen Relationships with BEM by Taking Dads on Trip at Natural Classroom for Thai Herbal Learning"**

To strengthen the family relationships, on the occasion of the National Father's Day, the Company then held the activity titled Dads & Kids Strengthen Relationships with BEM by Taking Dads on Trip at Natural Classroom for Thai Herbal Learning, at Sireeruckhachati Nature Learning Park in Nakhon Pathom Province, by taking the expressway service users' families to go on a trip by using the Si Rat - Outer Ring Road Expressway to jointly promote Thai wisdom and health care by learning about healthful herbs of different types, as well as doing activities to strengthen family relationships by jointly decorating small herbarium cards for dads to allow kids to express the gratitude towards their dads in the midst of a heartwarming atmosphere.

##### **"BEM Let Lovers Save Phakhai Community"**

The Company organized the activity titled "BEM Let Lovers Save Phakhai Community", by inviting couples to go on a trip on the Si Rat - Outer Ring Road Expressway connected to the Si Rat Expressway heading to Chaeng Watthana along the Udon Rathaya Expressway to visit Ruean Manila at the Traditional Thai House Conservation Place in Amphoe Bangsai, Ayutthaya Province, to appreciate the unique exquisiteness of the traditional Thai houses and listened to a lecture about the interesting history, as well as jointly making the hand-made original Thai dessert, e.g., Kanom Khrok (Mortar-Toasted Pastry), Khow Griep Pag Mo (Steamed Rice Dumplings), at Baan Thanakan Rimnam, and took a boat trip to admire the spectacular natural scenery on both sides of Phakhai Community canal, in the midst of a cheerful and happy atmosphere.

### 3) Awareness of Environmental Preservation

#### **“Let’s Love Environment with BEM”**

The sustainable maintenance of the balance of nature and the environmental preservation must be given priority by everyone and required their concerted efforts to raise awareness of environmental preservation, the Company then organized the program titled Let’s Love Environment with BEM, by taking a group of executives and staff to jointly restore the mangrove ecosystem by helping repair the wooden bridges and disposing of garbage in the area of the mangrove forest at the Laem Phak Bia Environmental Study and Development Project under the Royal Initiatives, in Amphoe Ban Laem, Phetchaburi Province.

#### **“Mangrove Plantation to Build Relationships with MRT Lovers”**

The Company, in association with the Mass Rapid Transit Authority of Thailand (MRTA), held the activity titled “Mangrove Plantation to Build Relationships with MRT Lovers”, by taking executives and staff to jointly plant 450 mangrove trees at Ban Khlong Khon Mangrove in Samut Songkhram Province to play a part in the environmental preservation together with restoration of Ban Khlong Khon Mangrove to ensure the habitat for aquatic species and shoreline protection to enable the local villages to make a living sustainably. This activity also encouraged staff to have the volunteering efforts in social and environmental responsibility.

### 4) Moral and Ethical Awareness for Corporate Social Responsibility

#### **“Blood Donating”**

It is to give blood to give life as the greatest giving. The Company, in association with The Thai Red Cross Society and Faculty of Medicine Vajira Hospital, then organized the blood donation activity three times a year at the Si Rat - Outer Ring Road Expressway Control Center, together with active participation of a lot of executives, staff and residents living nearby.

### 5) Good Relationships with Related Authorities

The cooperation for the provision of good services to meet the utmost satisfaction of the expressway users is regarded as a key goal of the three collaborating authorities, namely, staff of the Company, staff of EXAT, and police officers of the Expressway Police Station 2. To strengthen relationships among them in order to ensure unity and maximum efficiency of the services, the Company organized activities, as follows:

#### **“Let’s Watch Movie with Expressway”**

The Company invited families of staff of EXAT and police officers of the Expressway Police Station 2 as well as families of the Company’s staff to meet, enjoy games, and watch a 3D movie titled “Captain Marvel”, the sci-fi action, at Esplanade Cineplex.

#### **“Let’s Admire Artworks Reflecting the National Heritage with BEM”**

The Company brought the management and staff of toll collection division of EXAT and toll collection division of the Company, to jointly pay homage to Phra Buddha Naruemon Dhanmopas and visit the Buddha image hall, the royal temple in the magnificent and remarkable architectural styles combined both Thai and Western arts at Wat Niwet Thamma Prawat, as well as visiting the Arts of the Kingdom Museum and enjoying the Khon Exhibition, as a marvelous cultural heritage of Thailand, at Kao Koet Royal Folk Arts and Crafts Center in Ayutthaya Province, in order to strengthen relationships among agencies.

**6) Promotion of Youth Learning**

The youth are the vital force of the nation. An education represents a key foundation for the youth's sustainable development of knowledge, abilities, thoughts, and values in order to become decent and quality citizens of society, the Company then continues to encourage and support youth education every year through various activities as follows:

**“Scholarships to Adjacent Schools”**

The Company organized the activity titled “BEM Grants Scholarships to Underprivileged Students with Good Academic Records and Funds for Development of 14 Schools adjacent to the Si Rat Expressway, the Udon Rattaya Expressway and the Si Rat - Outer Ring Road Expressway”, to raise morale of the youth in studying hard and growing up as a quality adult for the country's development in the future.

**“Scholarships to Children of EXAT's Staff”**

The Company, in association with EXAT and the EXAT Club, granted scholarships to children of EXAT's staff working on the Si Rat Expressway and the Udon Rattaya Expressway. The executives from both authorities jointly granted such scholarships.

**“Scholarships for Children of the Expressway Police Station 2's Police Officers”**

The Company granted scholarships to children of the Expressway Police Station 2's police officers, who collaborated with the Company to ensuring convenience and safety of the expressway users.

**7) Support for Outdoor Learning Experience**

Outdoor experience is an opportunity for children to fully gain experiences, which will help them to understand various things clearly and comprehensively, and be able to apply the gained knowledge to their life in the future. The Company thus organized outdoor learning experience activities as follows:

**National Children's Day 2019 Activities****“Join Kids' Forces to Save the World”**

The Company organized the National Children's Day activity titled “Join Kids' Forces to Save the World” to allow children to jointly accomplish the mission to save the world by showing their imagination through the invention of miracle cloth bags to reduce the use of plastic bags, and learning about correct waste separation for the environmental preservation, as well as enjoying a close-up experience with the expressway-sweeping trucks, with active participation of staff's children, students from schools adjacent to the expressways and nearby neighbors.

**“MRT Happy Children's Day 2019”**

The Company, in collaboration with the Princess Mother Memorial Park, held an activity titled “MRT Happy Children's Day 2019” to deliver the happiness to children on the occasion of the National Children's Day 2019 at the Princess Mother Memorial Park in Khlong San District, Bangkok, adjacent to the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line), Itsaraphap Station, in order to enhance learning experience and skills of children through various games, such as, Safe Zone game, allowing children to practice the use of the MRT system in a correct and safe way, Let's Love Environment with MRT game, allowing children to practice the learning skills to raise their social responsibility awareness and participation by learning about categories of garbage, basic garbage separation, and Let's Grow Home-Grown Vegetable with MRT game, allowing children to practice the environmental preservation by learning how to plant trees and home-grown vegetables by themselves.

**“Let's Learn about the Earth's Animals Dating Back Million Years at the Geological Museum”**

The Company brought a group of teachers and students, totaling 60 persons, from Wat Choeng Krabue School adjacent to the Si Rat - Outer Ring Road Expressway to visit the National Geological Museum Pathum Thani to learn about geology via modern technologies, allowing children to take a close-up look at the lost world dinosaurs as if they were alive, in order to promote children's outdoor learning, which made children gain knowledge and enjoyable.

### **“Let’s Admire Artworks Reflecting the National Heritage”**

The Company brought a group of teachers and students, totaling 60 persons, from Wat Matchantikaram School adjacent to the Si Rat - Outer Ring Road Expressway to visit the Arts of Kingdom Museum and enjoy the Khon Exhibition, as a marvelous cultural heritage, learning about production process of scenes and characteristics of the Khon performing in the Thai literature, allowing students to gain knowledge and become aware of preservation of the Thai cultures and arts via outdoor experience at Kao Koet Royal Folk Arts and Crafts Center in Ayutthaya Province.

### **“MRT Happy Blue Line”**

The Company held the activity to ensure recognition and public relations about the service opening of the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line), Hua Lamphong - Bang Khae Section, with a commitment of developing a group of youth, people and communities nearby the MRT route to ensure that they have learned about the correct and safe use of the MRT system, as well as learning about travelling on the MRT system; visiting four of the most exquisite underground stations, namely, Wat Mangkon Station, Sam Yot Station, Sanam Chai Station, and Itsaraphap Station, which are elaborately designed and decorated with the Thai style architectures in the Rattanakosin era perfectly reflecting the arts, cultures, and livelihoods of communities nearby. The activity was divided into two phases, namely:

1. Activity for enhancement of learning skill about the MRT system, targeting at a group of students in the nearby schools to ensure the recognition and public relations among them about the service opening of the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line), Hua Lamphong - Bang Khae Section, included learning about the use of the MRT system via the “MRT Safety Share” activity, and acquainting them with the MRT routes via “Bangkok MRT Application”, as well as ending with the enjoyable games for winning many rewards.
2. Activity for public demonstration run on the MRT system, targeting at a group of students, and people in the nearby communities to visit four exquisite underground stations, namely, Wat Mangkon Station, Sam Yot Station, Sanam Chai Station and Itsaraphap Station, throughout July and September, from a total of 17 schools and 3 communities, with a total of 2,885 participants.

### **“Making Dream Come True with Learning Center for Kids by BEM”**

The Company organized the activity titled “Making Dream Come True with Learning Center for Kids by BEM” under the policy to promote and develop the quality of life in terms of education to children and youth in educational institutions/communities adjacent to the MRT system to make it a ready place to serve as modern learning center to encourage Thai children to love reading and enhance physical development to ensure that they grow up to become a key force of the nation, by granting the learning and teaching equipment as suitable for their ages, scholarships, outdoor playground equipment for early childhood’s development. As well as organizing recreational activities and sponsoring luncheon to children, as welcomed by the representatives from both public and private sectors, including the Thonburi District Office, representatives from the Masjid Ban Somdej Community who participated in such activity at the Early Childhood Development Center, the Masjid Ban Somdej Community, Bangkok.

## **8) Activities for Development of Quality of Life on Public Health**

### **“M Care Activity”**

The Company, in association with more than 10 hospitals and business alliances, organized the activities for health and public health promotion of communities through holding exhibition booths to provide free health checkup services by conventional medicine and alternative medicine, and to provide knowledge relating to health and safety of correct use of the MRT system to MRT passengers, residents surrounding the MRT routes, including nearby communities, comprising health checkup service by conventional medicine, namely, monitoring blood pressure, blood glucose test, pulmonary function test, screening for hepatitis B/C, exercise stress test, oral and dental checkup, initial visual test, demonstrating the Cardiopulmonary Resuscitation and choking first aid (CKP and Choking), demonstrating the use of AED, first aid as well as providing knowledge and suggestions by health specialists about breast cancer, health checkup service by alternative medicine, integrative medicine, and traditional Chinese medicine, namely, providing initial health checkup together with health care suggestion as well as providing service of body massage therapy on the physiological basis. Such activities were held at MRT Chatuchak Park Station and Bang Wa Station, with active participation witnessed by more than 1,500 participants.



## 9) Support for Other Social Activities

### **“Happy Smile Happy the Elderly”**

The Company, in collaboration with Chaturamit Samphan Community, Thonburi District, Bangkok, a community adjacent to the MRT route, organized the activity titled “Happy Smile Happy the Elderly” to uphold the family institution and foster the good culture on the occasion of the Songkran Festivals and the National Elderly Day for 2019, by holding activities bathing rite for Buddha images and pouring water on the hands of the revered elderly and asking for blessing, as well as delivering a lecture on safety of use the MRT system for the elderly, sponsoring the luncheon, and ending with the recreational activities to bring the great happy smiles to the elderly in the community.

### **“Thot Kathin Ceremony 2019”**

The Company jointly upheld the good culture and maintained the Buddhism by organizing the Thot Kathin Ceremony 2019 at Wat Kamphaeng Bang Chak, Phasi Charoen District, Bangkok, adjacent to MRT Bang Phai Station, with the raised donations from executives, staff of the Company, MRT service users of both the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line) and the M.R.T. Chalong Ratchadham Line Project (MRT Purple Line), affiliates in CK Group, and business alliances. For the purpose of renovation of the arched gateways and boundary wall, as well as maintaining the Buddhism, together with contribution of scholarships to Wat Thong Sala Ngam School, located in the nearby communities of MRT Bang Phai Station, in the amount of Baht 5,000 as scholarships for the underprivileged students.

### **“Monetary and In-Kind Donations to Assist Disaster Victims”**

- **Monetary donation to storm victims under the project titled “Ruam Namjai Thai Chuai Watapai Tai (Thai Hearts Together to Help the Storm Victims)”**

Bangkok Expressway and Metro Public Company Limited and CH. Karnchang Public Company Limited jointly made the monetary donation through the OPM Disaster Relief Fund under the project titled “Thai Hearts Together to Help the Storm Victims”, to assist the victims suffered from Tropical Storm Pabuk in the southern part of Thailand.

- **Monetary donation to flood victims under the project titled “Ruamjai Pi Nong Thai Chuai Phai Nam Tuam (Thai Hearts Together to Help the Flood Victims)”**

Bangkok Expressway and Metro Public Company and CH. Karnchang Public Company Limited jointly made the monetary donation under the project titled “Ruamjai Pi Nong Thai Chuai Phai Nam Tuam” on 9 MCOT HD Channel which conducted fundraising for relief of the flood victims in Ubon Ratchathani Province.

- **In-kind donation to flood victims under the project titled “Song Nam Jai Chuai Luea Phu Pra Sob Utokkaphai (Donations for Flood Victims)”**

The Company, by executives and staff, jointly made the in-kind donation such as consumer goods and necessities to assist the flood victims in the north and northeast parts of Thailand, which would be collected and delivered to the Flood Victim Relief Center at Chaloem Prakiat Almshouse, Wat Phraram 9 Kanchanaphisek, with the Royal Thai Army representing to deliver such relief to help those who affected by flood.

- **Monetary donation to the project titled “Virtual Run”**

Bangkok Expressway and Metro Public Company and CH. Karnchang Public Company Limited jointly made the donation to the “Virtual Run” project organized by the Thai Red Cross Society to purchase AEDs to help save patients with acute heart failure, for contribution to communities and agencies all over the country.

### **“Activities on the Auspicious Occasion of the Royal Coronation Ceremony”**

The Company organized the activities to celebrate the auspicious royal coronation ceremony of His Majesty the King Rama X, as follows:

- **Honorary exhibitions**

During April 22 and July 31, 2019, which were held in commemoration of the royal grace of His Majesty the King Rama X towards the metro business of Thailand once he proceeded to graciously lay the foundation stone for the M.R.T. Chaloem Ratchamongkhon Line Project on November 19, 1996; together with exhibitions featuring his royal history, remarkable talents, and royal duties in various aspects, at Hua Lamphong Station of the M.R.T. Chaloem Ratchamongkhon Line. Moreover, BEM in alliance with Pid Thong Lang Phra Foundation under Royal Initiative held the exhibition titled “132 Royal Initiatives for Mitigating Sufferings of the People”.

- **Celebrative arches**

At which well-wishing books were prepared to allow people to sign for extending their best wishes to His Majesty the King Rama X on the auspicious occasion of the royal coronation ceremony, held at Bangkok Expressway and Metro Public Company Limited and within the M.R.T. Chaloem Ratchamongkhon Line (MRT Blue Line) and the M.R.T. Chalong Ratchadham Line (MRT Purple Line) so that executives and staff, MRT passengers, including general public, jointly gave their blessings to the monarch during April and July 2019.

- **Volunteer activity**

A group of executives and staff of the Company, along with CH. Karnchang Public Company Limited and the Mass Rapid Transit Authority of Thailand participated in the royal volunteer activity under the initiative “We Do Good By Heart”, by arranging for free food and beverage, which were jointly distributed by the executives and staff, together with first aids unit services at MRT Hua Lamphong Station, Lat Phrao Station, as well as providing the shuttle services to and from the waiting stops to facilitate the people’s travelling during such auspicious ceremony on May 4-6, 2019.

## 10.3 Anti-Corruption Policy

### 10.3.1 The Company’s Anti-Corruption Policy

The Company realizes and gives priority to anti-corruption and fraud prevention, both inside and outside its organization. The Company thus formulates guidelines for the proper conduct of directors, management and staff via the code of business ethics of the Company. Furthermore, with the potential damages from corruption in mind, the Company then formulates anti-corruption policy containing the key practical guidelines as follows:

1. The Company’s staff at all levels should carry out activities with fairness, integrity, and transparency in business dealings with various agencies, provided that such activities must be lawful, and they have the duty to comply with the anti-corruption policy in the code of business ethics of the Company.
2. The Company promotes fair treatment with integrity towards its traders and compliance with any contractual commitments made with the Company’s stakeholders.
3. Executives’ and staff’s awareness must be promoted to ensure that they refrain from committing any fraud and realize the consequences of corruption.
4. Directors, executives, and staff must refrain from accepting or offering any reception, gifts, and any other payments which are extravagant and unusual to those in business dealings with the Company.
5. The Company arranges for staff training to educate them regarding the anti-corruption policy, practices, and guidelines.

The Company which operates the expressway business and the metro business did formulate and implement their respective anti-corruption policies, which can be summarized as follows:

### 10.3.2 Anti - Corruption Guidelines

The Company sets out measures, based on both disciplinary and legal actions, against corruption. The fact-finding must be conducted by a committee comprising representatives from the human resources department, from the department of the offender and from other units. The Managing Director is authorized to consider imposing disciplinary actions in case of written warning and termination of employment. Should the misconduct constitute embezzlement, legal action will be undertaken to protect the Company’s interests. Guidelines under this policy are as follows:

1. No business dealings may be entered into with any organization or unit which is involved in corruption.
2. Disciplinary and legal actions will be imposed and instituted against such staff who are involved in corruption.

### Additional Anti-Corruption Practices

The Company intends to operate its business with transparency without involvement with any corruption, in accordance with the corporate governance policy. All directors, executives and staff must perform their duties with integrity, due care, prudence and in the best interests of the Company and fairness to stakeholders, as well as free from corruption, both internal and external.

1. The Company and its subsidiaries set out policy and measures for anti-corruption and prevention of payments or acceptance of bribery, including any actions contrary to morality and customary practices, which are written in the corporate governance policy, the Company's code of business ethics, and the work rules and regulations, for compliance by all directors, executives and staff.
2. The Company is aware of business risks from both internal and external factors which may affect its operations. The Company therefore sets out a systematic risk management, monitoring and measures to continuously minimize risks. The Corporate Governance and Risk Management Committee was thus appointed to consider the policy level while the Management has the duty to supervise the overall risk management process and perform the day-to-day operation on behalf of the Corporate Governance and Risk Management Committee. Such duties include monitoring, evaluation and preparation of a risk management report at the department level for submission to the Board of Directors for information. Moreover, the risk management manual and plan are prepared as operational guidelines, including risk monitoring, evaluation and review in line with the internal and external circumstances. All work units must also prepare emergency plans for any emergency situation so as to be ready to resolve problems forthwith.
3. In order to comply with the written anti-corruption policy, the Company also builds up recognition of anti-corruption practices in the organization through physical and mental development training to have a positive attitude because the Company believes that decency emanates from inside out. In preparation for the application for certification of membership in Thailand's Private Sector Collective Action Coalition Against Corruption, the Company also had various departments conduct a self-assessment to identify potential improvements in compliance with the anti-corruption measures in Thailand's Private Sector Collective Action Coalition Against Corruption. Moreover, the Company assigned two representatives, who are responsible for the corporate governance and the internal audit, to attend the Anti-Corruption: The Practical Guide (ACPG 15) course, organized by the Institute of Directors Association (IOD).
4. The Company surveys the compliance with the code of business ethics yearly for the management to review their conduct in accordance with the code of business ethics.
5. The Company treats misconduct relating to fraud and corruption as serious disciplinary misconduct, and any violation is subject to severe disciplinary action up to termination of employment without prior warning. The details of such misconduct are described as follows:
  - (1) Disclosure of the Company's confidential information to any third parties;
  - (2) Breach of duty and/or fraudulent acts towards the Company, including a conspiracy with others to do so;
  - (3) Abuse of position for personal interest or for the interest of others;
  - (4) Acceptance of undue consideration in relation to assigned tasks;
  - (5) Showing impolite manners or use of aggressive, threatening, insulting words or causing bodily injury to supervisors, including visitors.

## II. Internal Control and Risk Management

### 11.1 Internal Control

The Board of Directors continues to realize the significance of its good and effective internal control system, including its good corporate governance guidelines. It believes that a good internal control system is founded on a good performance process, organization chart and work system, which could help the Company achieve goal or mission with efficiency and effectiveness, as well as minimize risks and prevent possible risks and damage in the Company's business operations. The Board of Directors has thus authorized the Audit Committee comprising independent directors to audit the evaluation of the effectiveness of the internal control system. The Internal Audit Office, which independently performs its duty and directly reports to the Audit Committee, audits the work operation system in various departments of the Company as per the annual audit plan approved by the Audit Committee, with an aim of ensuring each department's efficient and effective performance of work and optimized use of its resources, as well as ensuring corruption control and prevention. This also includes the control of the work performance, and the accurate, reliable and timely financial reporting, as well as the compliance with the policies as well as laws and regulations of the government agencies and relevant authorities. Furthermore, the effectiveness of the internal control system is regularly reviewed to ensure the optimum benefit to the shareholders from the business operation based on fairness in terms of benefits to all stakeholders. In addition, the Audit Committee shall have the duties to consider, select and submit for the appointment of the auditor, including remuneration of the auditor, consider accurate and complete disclosure of the Company's connected transactions or any transactions which may give rise to any conflicts of interest.

### 11.2 Risk Management

The Board of Directors has realized the significance of using the risk management system in the administration by assigning the Corporate Governance and Risk Management Committee to supervise and review the Company's overall risks, risk management strategy, and risk alert system. This is to ensure proper and timely response to various challenges, as well as to provide training for executives and staff about the risk management guidelines for their understanding and engagement in the firmwide risk management, covering both corporate level and operational level. The Company's management takes into account various risk factors currently sustained or threatened to be sustained in the future by the Company to analyze impact and possibility of such risks and to determine measures to prevent and deal with such risks to stay at an acceptable level in line with the Company's policy, and to report to the Corporate Governance and Risk Management Committee to consider the adequacy and appropriateness. The risk management plan shall be reviewed every year, and the effectiveness of the risk management system shall be monitored and evaluated every quarter, and at any time when the risk level has changed, whereby the results are regularly monitored on a quarterly basis by the secretary to the Corporate Governance and Risk Management Committee and reported to the management and the Corporate Governance and Risk Management Committee for acknowledgment and further report to the Board of Directors. The Company's significant risk factors and management are described in Risk Factors on pages 88 to 94.

**11.3** The Board of Directors has evaluated the adequacy of the internal control system based on the Internal Control Adequacy Evaluation Form, taking into consideration five components, i.e., corporate internal control, risk assessment, control measures, information and communication system, and follow-up system. It was concluded that the Company's internal control system was considered adequate and appropriate to the business operation; no material defect in the internal control system was found; and it could control and prevent corruption and improper or unauthorized use by executives or employees of the property of the Company and the subsidiaries. The financial reports of the Company were accurate and reliable in accordance with the generally accepted accounting standards and the financial reporting standards. The Company's business operation was in accordance with the law on securities and exchange and other applicable laws.

The Board of Directors, the Audit Committee and the auditor were of the same opinion that the Company's business operation was transparent and in accordance with the good corporate governance principles, its internal control system was suitable, effective and capable of preventing improper or unauthorized use by executives or employees of the property of the Company.

The Head of the Internal Audit Unit is Miss Vasana Wattananukulchai, General Manager of the Internal Audit Office. The Audit Committee is of the view that she has knowledge, abilities and work experience and is qualified to efficiently and adequately perform duties as the Head of the Internal Audit Unit. The appointment, removal, and transfer of a person holding an office as Head of the Internal Audit Unit shall be subject to the Audit Committee's approval. (The details are described on page 223.)

The Head of the Compliance Unit is Mr. Phakpoom Thaweewittayarut, Deputy Managing Director - Administration and Company Secretary, having knowledge on laws and accounting, abilities and work experience in the position of Company Secretary for a long time, who shall be responsible for compliance matters. (The details are described on page 224.)



## 12. Connected Transactions

### 12.1 Criteria and Procedures for Approval of Execution of Connected Transactions

Transactions with persons who may have a conflict of interest are subject to the conditions and criteria in the ordinary course of business. The execution of connected transactions and transactions with a conflict of interest are in accordance with the regulations of the Stock Exchange of Thailand and the Office of the Securities and Exchange Commission.

In the consideration and approval of any connected transaction, the Company shall propose such matter to the Board of Directors' Meeting, in which the directors having any involvement which may give rise to a conflict of interest shall not be entitled to attend and vote on such matter. Furthermore, the Audit Committee, as assigned by the Board of Directors, shall consider the disclosure of the Company's information in respect of the connected transaction or the transaction which may have a conflict of interest, to ensure accuracy and completeness.

In respect of connected transactions with general commercial terms which the Company and its subsidiaries have or may have in the future, the Company already requested approval in principle from the Board of Directors' Meeting.

### 12.2 Policy or Trend of Future Connected Transactions

The Company shall comply with the requirements and regulations of the Office of the Securities and Exchange Commission and the Stock Exchange of Thailand, as well as the rules on disclosure of information on connected transactions and acquisition and disposition of material assets of the Company and its subsidiaries, including the accounting standards as prescribed by the Federation of Accounting Professions. Should there be any transaction which may have a conflict of interest in the future, for example, engagement of a group of persons who may have a conflict of interest for construction, project management, maintenance, the Board of Directors, together with the Audit Committee, will consider the necessity and justification for execution of such transaction, as well as pricing and conditions on the execution of such transaction whether they are in the ordinary course of business, and in comparison with third party prices or market price, provided that the interested parties shall not take part in the consideration and approval for execution of the transaction. The Company has no policy for lending loans or providing guarantee to any person who may have a conflict of interest in accordance with the definition of the SEC Office.

In case that the Audit Committee has no expertise to consider any potential connected transaction, the Company will arrange for an independent expert or the Company's auditor to provide an opinion on such connected transaction in support of the decision-making by the Board of Directors and/or the Audit Committee or shareholders, as the case may be. In this regard, the Company discloses its connected transactions in the Company's notes to the financial statements as audited or reviewed by the Company's auditor.

### 12.3 Connected Transactions of the Company and the Subsidiaries with Persons who May Have a Conflict of Interest for 2019 and 2018

#### 1. Transactions of the Company and its Subsidiary with CH. Karnchang Public Company Limited ("CK")

CK engages in the construction business and a full range of development, investment and management of large-scale infrastructure concession projects within the country and the region. CK is also the Company's related company since CK is the Company's major shareholder, holding shares in the Company representing 31.32<sup>1</sup> percent of the Company's registered and paid-up capital. CK and the Company also have common directors and executives, namely, (1) Mr. Plew Trivisvavet, (2) Mr. Phongsarit Tantisuvanitchkul, and (3) Mrs. Payao Marittanaporn, the spouse of Mr. Prasert Marittanaporn.

<sup>1</sup> Information as at the latest closing date of the share register for suspension of the share transfer of the Company on August 23, 2019

Transaction	Transaction Volume (Million Baht)		Transaction Nature/Necessity and Justification
	Accounting Period Ended December 31, 2019	Accounting Period Ended December 31, 2018	
Design and Construction of the Connection between the Si Rat - Outer Ring Road Expressway and the northern part of the Si Rat Expressway (Heading to Chaeng Watthana)			
- Construction cost	-	217.25	The Company engaged CK for design and construction of the connection between the Si Rat - Outer Ring Road Expressway and the northern part of the Si Rat Expressway (heading to Chaeng Watthana), with the total value of Baht 275 Million, for a construction period not exceeding 18 months. The work price was already considered by the independent certification engineer and deemed reasonable.
- Trade payable	-	2.71	
Inspection and Repair of the Structures of the Si Rat Expressway and Improvement of the Structures of the Si Rat Expressway and the Si Rat - Outer Ring Road Expressway			
- Construction cost	742.88	-	The Company engaged CK for inspection and repair of the structures of the Si Rat Expressway and improvement of the structures of the Si Rat Expressway and the Si Rat - Outer Ring Road Expressway, as follows:  1) No. 4, Phase 1: The contract was executed on September 1, 2017 in the value of Baht 24,884,140, with a contract term of 12 months from the date of the contract signing. The Company also executed the Variation Order for additional works in the amount of Baht 985,706.  2) No. 4, Phase 2: The contract was executed on August 17, 2018 in the value of Baht 31,920,642, with a contract term of 12 months from the date of the contract signing.  3) Construction and Improvement of the Structures: The contract was executed on January 23, 2019 in the value of Baht 779,684,481, with a contract term of 12 months from the date of receipt of the Notice to Proceed.  4) No. 4, Phase 3 and Improvement of the Structures: The contractor was executed on August 16, 2019 in the value of Baht 233,255,144, with the contract term of 12 months from the date of the contract signing.  The work prices were reasonable and lower than the prices as assessed by the Company and the independent certification engineer.
- Costs of inspection and repair of the structure of the Si Rat Expressway	209.55	28.91	
- Trade payable	92.01	1.83	

Transaction	Transaction Volume (Million Baht)		Transaction Nature/Necessity and Justification
	Accounting Period Ended December 31, 2019	Accounting Period Ended December 31, 2018	
<p>Civil Infrastructure and Electrical and Mechanical Systems Maintenance for the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line)</p> <ul style="list-style-type: none"> <li>- Cost of maintenance of civil infrastructure and electrical and mechanical systems</li> <li>- Replacement of M&amp;E Systems</li> <li>- Trade payable</li> </ul>	<p>165.85</p> <p>4.50</p> <p>82.93</p>	<p>144.45</p> <p>70.47</p> <p>118.62</p>	<p>On November 17, 2015, the Company executed the Project Management Agreement engaging CK for Civil Infrastructure and Electrical and Mechanical Systems Maintenance for the M.R.T. Chaloem Ratchamongkhon Line Project (MRT Blue Line) for a period of 8 years, with the total contract value of Baht 1,270 Million.</p> <p>Subsequently, on August 29, 2018, the Company executed the Amendment Agreement with CK for Civil Infrastructure and Electrical and Mechanical Systems Maintenance for the MRT Blue Line Extension Project, for a period of 8 years and 6 months, together with the extension of the contract term of the M.R.T. Chaloem Ratchamongkhon Line Project for another 3 years and 5 months to end at the same time as the Agreement for the MRT Blue Line Extension Project, as well as adjustment and replacement of the expired M&amp;E Systems of the M.R.T. Chaloem Ratchamongkhon Line Project, with the total contract value of Baht 2,778 Million, which was considered an integral part of the aforesaid Project Management Agreement. Such work value was reasonable and lower than that as appraised by the independent certification engineer.</p>
<p>Civil Infrastructure and Electrical and Mechanical Systems Maintenance, including Maintenance of Elevators and Escalators inside the Metro Stations, Elevated Structures and Depot, as well as Supply of Equipment, Tools, Spare Parts and Personnel for Maintenance Services for the MRT Purple Line Project</p> <ul style="list-style-type: none"> <li>- Cost of maintenance of civil infrastructure and electrical and mechanical systems</li> <li>- Trade payable</li> </ul>	<p>220.00</p> <p>121.57</p>	<p>209.97</p> <p>80.60</p>	<p>On November 17, 2015, the Company executed the Project Management Agreement with CK for Civil Infrastructure and Electrical and Mechanical Systems Maintenance, including maintenance of elevators and escalators inside the metro stations, elevated structures and depot, as well as supply of equipment, tools, spare parts and personnel for maintenance services for the MRT Purple Line Project, for a period of 8 years from November 17, 2015 to November 16, 2023, with the contract value of Baht 1,520 Million.</p> <p>Subsequently, on December 14, 2016, the Company additionally executed the Project Management Agreement with CK for Civil Infrastructure and Electrical and Mechanical Systems Maintenance for the MRT Purple Line Project, with the contract value of Baht 155 Million, for a period of 7 years from January 1, 2017 to December 31, 2023. Such work value was reasonable and lower than that as appraised by the independent certification engineering.</p>

Transaction	Transaction Volume (Million Baht)		Transaction Nature/Necessity and Justification
	Accounting Period Ended December 31, 2019	Accounting Period Ended December 31, 2018	
Project Management, as well as Supply, Installation, and Test Run and Commissioning of M&E Equipment for the MRT Blue Line Project			
- Project management cost	5,560.61	8,116.55	On June 20, 2017, the Company executed Project Management Agreement with CK for Project Management, as well as Supply, Installation, and Test Run and Commissioning of M&E Equipment for the MRT Blue Line Project, in the total amount of Baht 19,643 Million. Subsequently, on February 9, 2018, the Company executed the Variation Order engaging CK for management of construction and improvement of the administrative building in the area of Huai Khwang Depot, as well as supply and installation of the (additional) M&E Equipment for the MRT Blue Line Project, for a total value of Baht 558 Million, whereby it shall be deemed as an integral part of the aforesaid Project Management Agreement. Later, on July 12, 2018, the Company executed the Variation Order for expediting the opening of the train operation ahead of schedule and installation of the telecommunication network system inside 4 metro stations of the MRT Blue Line Extension Project, in the total amount of Baht 898 Million, and the scope of works under the existing Agreement remained unchanged. On January 7, 2020, the Company executed the Variation Order for the M&E Equipment and the Civil Work as assigned by MRTA which are beyond the scope of works under the existing Agreement in the total amount of Baht 293 Million. The work value was reasonable and lower than that as appraised by the independent certification engineer.
- Trade payable	455.40	521.21	
Office Space Lease in Viriyathavorn 2 Building			
- Office space rental and service charge	8.44	7.88	The subsidiary: Bangkok Metro Networks Limited (“BMN”) entered into the office space lease agreement in Viriyathavorn 2 Building with CK, for the term of 3 years, ending on July 9, 2022. The office rental rate was comparable to the rental rates charged by the lessor to third party lessees.
- Trade payable	0.09	0.08	

## 2. Transactions of the Company and its Subsidiary with Mass Rapid Transit Authority of Thailand (“MRTA”)

MRTA engages in mass rapid transit business and other business for the benefit of Mass Rapid Transit Authority of Thailand and the people in using the mass rapid transit service. MRTA is connected with the Company since MRTA holds shares in the Company representing 8.22<sup>2</sup> percent of the Company’s registered and paid-up capital. In this regard, MRTA’s executive, namely, Mrs. Natamon Bunnak, is a director of the Company.

<sup>2</sup> Information as at the latest closing date of the share register for suspension of the share transfer of the Company on August 23, 2019

Transaction	Transaction Volume (Million Baht)		Transaction Nature/Necessity and Justification
	Accounting Period Ended December 31, 2019	Accounting Period Ended December 31, 2018	
Remuneration from Farebox Revenue and Commercial Development Revenue			
- Remuneration from farebox revenue and commercial development revenue	393.65	355.66	The transaction was in accordance with the conditions of the Concession Agreement with which the Company is required to comply.
- Prepaid project remuneration	5,086.37	3,495.20	
- Building and land taxes	14.81	1.59	
- Trade and other payables	213.21	125.15	
Space Lease for Advertising Board Installation			
- Remuneration for use of space	9.21	0.99	BMN took on space lease for advertising board installation, with the rental rate at the market price.
- Building and land taxes	1.32	10.23	

### 3. Transaction of the Company with CK Power Public Company Limited (“CKP”)

CKP operates its core business as a holding company by holding shares in other companies engaging in the business of production and sale of electricity generated from various kinds of energy and provision of consulting service and other services related to electricity production projects. CKP is connected with the Company since the Company holds shares in CKP as at December 31, 2019 representing 16.17 percent of its registered and paid-up capital. CK is a major shareholder of the Company and CKP, namely, as at August 23, 2019, CK holds shares in the Company representing 31.32 percent of its registered and paid-up capital, and as at May 2, 2019, CK holds shares in CKP representing 27.22 percent of its registered and paid-up capital. In this regard, CKP and the Company have a common director, namely, Mr. Plew Trivisvavet, and CKP’s director, namely, Mr. Prasert Marittanaporn, is the spouse of Mrs. Payao Marittanaporn, the Managing Director of the Company and acting Managing Director of NECL.

Transaction	Transaction Volume (Million Baht)		Transaction Nature/Necessity and Justification
	Accounting Period Ended December 31, 2019	Accounting Period Ended December 31, 2018	
Capital Gains from Disposal of Shares in Xayaburi Power Company Limited	-	244.16	<p>On June 28, 2018, the Company disposed of all of its shares in Xayaburi Power Company Limited to CKP, with the capital gains from such disposal of shares in the Consolidated Income Statements in the amount of Baht 244 Million.</p> <p>Such connected transaction was executed in accordance with the ordinary course of business and had the general trading conditions as approved in principle by the Audit Committee and the Board of Directors.</p>



## 13. Financial Highlights

### Summary of Auditor's Report

EY Office Limited, as the auditor for the Company and its subsidiaries, has audited the consolidated statement of financial position of Bangkok Expressway and Metro Public Company Limited and its subsidiaries, which comprise the consolidated statement of financial position as at 31 December 2019, and the related consolidated statement of income, comprehensive income, changes in shareholders' equity and cash flows for the year then ended and a summary of significant accounting policies and other explanatory information, and have also audited the separate financial statement of Bangkok Expressway and Metro Public Company Limited as at 31 December 2019. The auditor is of the opinion that the financial statements referred to above present fairly, in all material respects, the financial position of Bangkok Expressway and Metro Public Company Limited and its subsidiaries, and of Bangkok Expressway and Metro Public Company Limited, as at 31 December 2019, their operational results and cash flow for the year then ended in accordance with Thai Financial Reporting Standards.

(Unit : Baht)

Statement of financial position	2019		2018		2017	
	Amount	Percent	Amount	Percent	Amount	Percent
<b>Assets</b>						
<b>Current assets</b>						
Cash and cash equivalents	703,750,307	0.63	526,200,490	0.51	2,627,062,725	2.66
Current investments	1,157,746,702	1.04	1,282,474,987	1.24	1,449,457,222	1.47
Bank deposit for unearned fare box revenue	205,697,086	0.18	150,016,110	0.14	-	-
Trade and other receivables	481,786,671	0.43	514,055,818	0.50	426,286,028	0.43
Current portion of receivable under the concession agreement	1,649,683,274	1.48	1,649,683,274	1.59	1,649,683,274	1.67
Other current assets						
Prepaid expenses	83,599,640	0.08	78,021,423	0.07	72,857,362	0.07
Withholding tax deducted at source	128,148,743	0.11	-	-	-	-
Others	37,165,898	0.03	16,137,066	0.01	54,723,835	0.05
<b>Total current assets</b>	<b>4,447,578,321</b>	<b>3.98</b>	<b>4,216,589,168</b>	<b>4.06</b>	<b>6,280,070,446</b>	<b>6.35</b>
<b>Non-current assets</b>						
Receivable under the concession agreement, net of current portion	9,210,731,614	8.25	10,860,414,888	10.46	12,510,098,163	12.65
Investments in associates	-	-	6,368,744,918	6.13	9,592,230,802	9.70
Other long-term investments	17,096,827,328	15.31	6,688,646,612	6.44	1,654,862,090	1.67
Investment properties	120,357,493	0.11	120,357,493	0.12	120,357,493	0.12
Building and equipment	311,376,837	0.28	323,936,668	0.31	361,168,428	0.37
Rights to operate expressway sectors	32,253,366,737	28.88	35,146,019,997	33.85	38,448,873,562	38.87
Rights to use sites for expressway construction	61,467,080	0.06	390,198,219	0.38	719,073,059	0.73
Intangible asset under concession agreement of the MRT Blue Line Project	42,338,899,443	37.91	35,427,555,680	34.12	25,954,096,373	26.24
Project cost of the MRT Chalong Ratchadham Line	644,950,810	0.58	654,691,451	0.63	666,742,626	0.67
Prepaid project remuneration	5,086,367,785	4.54	3,495,195,243	3.37	2,487,433,243	2.51
Other intangible assets	74,027,004	0.06	84,777,999	0.08	75,257,871	0.08
Deferred tax assets	6,951,994	0.01	6,312,191	0.01	4,997,667	0.01
Other non-current assets	43,867,537	0.03	47,468,811	0.04	44,103,679	0.03
<b>Total non-current assets</b>	<b>107,249,191,662</b>	<b>96.02</b>	<b>99,614,320,170</b>	<b>95.94</b>	<b>92,639,295,056</b>	<b>93.65</b>
<b>Total assets</b>	<b>111,696,769,983</b>	<b>100.00</b>	<b>103,830,909,338</b>	<b>100.00</b>	<b>98,919,365,502</b>	<b>100.00</b>

(Unit : Baht)

Statement of financial position (continued)	2019		2018		2017	
	Amount	Percent	Amount	Percent	Amount	Percent
<b>Liabilities and shareholders' equity</b>						
<b>Current liabilities</b>						
Short-term loans from financial institutions	3,250,000,000	2.91	2,814,594,224	2.71	3,629,184,736	3.67
Trade and other payables	1,938,481,838	1.74	1,683,472,969	1.62	2,107,884,865	2.13
Current portion of long-term loans from financial institutions	3,166,120,069	2.83	3,041,760,069	2.93	3,808,760,069	3.85
Current portion of debentures	2,500,000,000	2.24	5,000,000,000	4.82	-	-
Unearned fare box revenue	212,234,424	0.19	163,117,129	0.16	138,261,714	0.14
Deposits on stored value ticket	79,946,797	0.07	65,265,286	0.06	54,367,547	0.05
Income tax payable	25,467,515	0.02	69,746,084	0.07	62,132,371	0.06
Current portion of provision for compensation for site acquisition cost	-	-	1,546,891,698	1.49	1,600,000,000	1.62
Other current liabilities						
Retention guarantees	56,227,880	0.05	27,735,192	0.03	18,312,525	0.02
Value added tax payable	61,238,396	0.05	76,044,732	0.07	56,978,843	0.06
Withholding tax deducted at source payable	99,118,066	0.09	90,510,248	0.09	94,180,664	0.10
Others	40,071,839	0.04	27,701,626	0.02	12,761,310	0.01
<b>Total current liabilities</b>	<b>11,428,906,824</b>	<b>10.23</b>	<b>14,606,839,257</b>	<b>14.07</b>	<b>11,582,824,644</b>	<b>11.71</b>
<b>Non-current liabilities</b>						
Long-term loans from financial institutions, net of current portion	21,745,560,898	19.46	18,373,779,608	17.70	25,801,112,363	26.08
Debentures, net of current portion	35,670,826,818	31.94	33,169,822,210	31.95	28,170,623,095	28.48
Derivative financial liabilities	112,685,174	0.10	21,808,675	0.02	52,954,374	0.05
Provision for compensation for site acquisition cost, net of current portion	-	-	-	-	1,411,401,698	1.43
Provision for long-term employee benefits	886,390,430	0.79	686,898,092	0.65	483,787,045	0.49
Deferred tax liabilities	3,025,459,610	2.71	1,353,842,048	1.30	217,152,225	0.22
Other non-current liabilities	3,758,883	0.01	5,892,925	0.01	20,211,885	0.02
<b>Total non-current liabilities</b>	<b>61,444,681,813</b>	<b>55.01</b>	<b>53,612,043,558</b>	<b>51.63</b>	<b>56,157,242,685</b>	<b>56.77</b>
<b>Total liabilities</b>	<b>72,873,588,637</b>	<b>65.24</b>	<b>68,218,882,815</b>	<b>65.70</b>	<b>67,740,067,329</b>	<b>68.48</b>

(Unit : Baht)

Statement of financial position (continued)	2019		2018		2017	
	Amount	Percent	Amount	Percent	Amount	Percent
<b>Shareholders' equity</b>						
Share capital						
Registered						
15,285,000,000 ordinary shares of Baht 1 each	15,285,000,000	13.68	15,285,000,000	14.72	15,285,000,000	15.45
Issued and paid-up						
15,285,000,000 ordinary shares of Baht 1 each	15,285,000,000	13.68	15,285,000,000	14.72	15,285,000,000	15.45
Premium on ordinary shares	5,816,938,084	5.21	5,816,938,084	5.60	5,816,938,084	5.88
Capital deficit from change in shareholding in subsidiaries	(256,942,521)	-0.23	(75,770,451)	-0.07	(32,148,702)	-0.03
Retained earnings						
Appropriated - statutory reserve	1,379,090,000	1.23	1,232,890,000	1.19	1,077,490,000	1.09
Unappropriated	15,052,068,973	13.48	12,133,780,735	11.69	8,948,481,343	9.05
Other components of shareholders' equity	1,504,565,153	1.35	1,105,927,958	1.06	(27,575,760)	-0.03
Equity attributable to shareholders of the Company	38,780,719,689	34.72	35,498,766,326	34.19	31,068,184,965	31.41
Non-controlling interests of the subsidiaries	42,461,657	0.04	113,260,197	0.11	111,113,208	0.11
<b>Total shareholders' equity</b>	<b>38,823,181,346</b>	<b>34.76</b>	<b>35,612,026,523</b>	<b>34.30</b>	<b>31,179,298,173</b>	<b>31.52</b>
<b>Total liabilities and shareholders' equity</b>	<b>111,696,769,983</b>	<b>100.00</b>	<b>103,830,909,338</b>	<b>100.00</b>	<b>98,919,365,502</b>	<b>100.00</b>

(Unit : Baht)

Income statement	2019		2018		2017	
	Amount	Percent	Amount	Percent	Amount	Percent
<b>Revenues</b>						
Revenue from expressway business	10,302,412,750	50.49	10,173,901,910	53.30	9,956,687,741	64.68
Revenue from rail business	5,022,100,349	24.61	4,736,002,363	24.81	4,520,903,061	29.37
Revenue from commercial development business	782,564,040	3.84	704,536,036	3.69	675,836,158	4.39
Other income						
Gains on sale of investments	181,078,813	0.89	499,393,573	2.62	11,887,334	0.07
Gain on reclassification of investment	3,408,628,533	16.71	2,496,266,396	13.08	-	-
Interest income	392,633,384	1.92	450,618,868	2.36	175,173,105	1.14
Dividend income	257,868,552	1.26	-	-	-	-
Others	56,312,532	0.28	26,601,445	0.14	52,743,740	0.35
<b>Total revenues</b>	<b>20,403,598,953</b>	<b>100.00</b>	<b>19,087,320,591</b>	<b>100.00</b>	<b>15,393,231,139</b>	<b>100.00</b>
<b>Expenses</b>						
Cost of expressway business	1,991,458,088	9.76	1,837,541,483	9.63	1,735,419,841	11.27
Cost of rail business	3,796,981,929	18.61	3,541,571,456	18.55	3,352,428,083	21.78
Cost of commercial development business	210,292,457	1.03	169,940,207	0.89	177,294,401	1.15
Amortisation on rights to operate completed expressway sectors and compensation for site acquisition cost	4,048,131,964	19.84	4,036,823,398	21.15	3,694,893,202	24.00
Amortisation on intangible asset under concession agreement of the MRT Blue Line Project	263,394,239	1.29	188,047,080	0.99	246,289,965	1.60
Selling expenses	139,622,388	0.68	111,421,323	0.58	95,313,153	0.62
Administrative expenses	1,196,759,191	5.87	1,252,317,805	6.56	1,049,120,611	6.82
<b>Total expenses</b>	<b>11,646,640,256</b>	<b>57.08</b>	<b>11,137,662,752</b>	<b>58.35</b>	<b>10,350,759,256</b>	<b>67.24</b>
<b>Profit before share of profit from investments in associates,     finance cost and income tax expenses</b>	<b>8,756,958,697</b>	<b>42.92</b>	<b>7,949,657,839</b>	<b>41.65</b>	<b>5,042,471,883</b>	<b>32.76</b>
Share of profit from investments in associates	172,910,981	0.85	432,797,238	2.27	405,916,311	2.63
<b>Profit before finance cost and income tax expenses</b>	<b>8,929,869,678</b>	<b>43.77</b>	<b>8,382,455,077</b>	<b>43.92</b>	<b>5,448,388,194</b>	<b>35.39</b>
Finance cost	(1,723,062,346)	-8.45	(1,857,460,775)	-9.74	(1,610,435,067)	-10.46
<b>Profit before income tax expenses</b>	<b>7,206,807,332</b>	<b>35.32</b>	<b>6,524,994,302</b>	<b>34.18</b>	<b>3,837,953,127</b>	<b>24.93</b>
Income tax expenses	(1,754,942,103)	-8.60	(1,189,146,759)	-6.23	(695,602,106)	-4.52
<b>Profit for the year</b>	<b>5,451,865,229</b>	<b>26.72</b>	<b>5,335,847,543</b>	<b>27.95</b>	<b>3,142,351,021</b>	<b>20.41</b>
<b>Profit attributable to:</b>						
Equity holders of the Company	5,434,819,325	26.64	5,317,038,037	27.86	3,123,129,324	20.29
Non-controlling interests of the subsidiaries	17,045,904	0.08	18,809,506	0.09	19,221,697	0.12
	<b>5,451,865,229</b>	<b>26.72</b>	<b>5,335,847,543</b>	<b>27.95</b>	<b>3,142,351,021</b>	<b>20.41</b>
<b>Basic earnings per share</b>						
Profit attributable to equity holders of the Company	0.36		0.35		0.20	

(Unit : Baht)

Statement of comprehensive income	2019		2018		2017	
	Amount	Percent	Amount	Percent	Amount	Percent
<b>Profit for the year</b>	5,451,865,229	26.72	5,335,847,543	27.95	3,142,351,021	20.41
<b>Other comprehensive income</b>						
<i>Other comprehensive income to be reclassified to profit or loss in subsequent periods:</i>						
Unrealised gain (loss) from cash flow hedges, net of income tax	(72,701,199)	-0.36	24,916,559	0.13	(27,476,773)	-0.18
Unrealised gain on valuation of available-for-sale securities, net of income tax	482,287,536	2.36	1,112,425,756	5.83	-	-
Share of other comprehensive income of associate recognised due to reclassification of investment	(9,019,502)	-0.04	(37,094,724)	-0.19	-	-
Share of other comprehensive income from associates	(1,929,640)	-0.01	33,256,127	0.17	72,725,277	0.47
Other comprehensive income to be reclassified to profit or loss in subsequent periods, net of income tax	398,637,195	1.95	1,133,503,718	5.94	45,248,504	0.29
<i>Other comprehensive income not to be reclassified to profit or loss in subsequent periods:</i>						
Actuarial gain (loss), net of income tax	(77,357,601)	-0.38	10,711,355	0.06	45,830,261	0.30
Share of other comprehensive income from associates	-	-	-	-	(2,635,896)	-0.01
Other comprehensive income not to be reclassified to profit or loss in subsequent periods, net of income tax	(77,357,601)	-0.38	10,711,355	0.06	43,194,365	0.29
<b>Other comprehensive income for the year</b>	321,279,594	1.57	1,144,215,073	6.00	88,442,869	0.58
<b>Total comprehensive income for the year</b>	5,773,144,823	28.29	6,480,062,616	33.95	3,230,793,890	20.99
<b>Total comprehensive income attributable to:</b>						
Equity holders of the Company	5,755,875,433	28.21	6,461,253,110	33.85	3,213,133,396	20.87
Non-controlling interests of the subsidiaries	17,269,390	0.08	18,809,506	0.10	17,660,494	0.12
	5,773,144,823	28.29	6,480,062,616	33.95	3,230,793,890	20.99



(Unit : Baht)

Cash flow statement	2019	2018	2017
<b>Cash flows from operating activities</b>			
Profit before tax	7,206,807,332	6,524,994,302	3,837,953,127
Adjustments to reconcile profit before tax to net cash provided by (paid from) operating activities:			
Amortisation and depreciation	4,026,462,692	3,866,567,954	3,544,655,128
Reversal of allowance for doubtful debt	(3,971,546)	(272,590)	272,590
Gains on sale of investments	(181,078,813)	(499,393,573)	(11,887,334)
Unrealised gain on change in value of investments	(24,997,738)	(10,442,237)	(29,720,956)
Gain on reclassification of investment	(3,408,628,533)	(2,496,266,396)	-
Loss (gain) on disposals/write-off of equipment and intangible asset under concession agreement of the MRT Blue Line Project	(1,331,425)	(1,639,242)	6,028,232
Project remuneration expense	393,651,735	355,662,416	384,806,190
Compensation for site acquisition cost	397,839,441	464,364,839	495,800,643
Provision for long-term employee benefits	102,201,396	220,232,028	76,747,586
Share of profit from investments in associates	(172,910,981)	(432,797,238)	(405,916,311)
Unrealised loss (gain) on exchange rate	276	102,702	(105,460)
Interest expenses	(392,633,384)	(450,618,868)	(175,173,105)
Dividend income	(257,868,552)	-	-
Interest expenses	1,670,220,735	1,662,162,353	1,572,881,432
Financial fees	-	98,665,000	-
Profit from operating activities before changes in operating assets and liabilities	9,353,762,635	9,031,321,450	9,296,341,762
Operating assets (increase) decrease			
Bank deposit for unearned fare box revenue	(55,680,976)	(150,016,110)	-
Trade and other receivables	(7,760,875)	(43,104,677)	155,095,799
Receivable under the concession agreement	1,649,683,274	1,649,683,275	412,420,819
Other current assets	(11,393,416)	85,434,222	101,986,629
Other non-current assets	(3,048,985)	(3,438,527)	13,393,495
Cash paid for project remuneration	(1,894,886,245)	(1,350,459,625)	(1,252,089,706)
Operating liabilities increase (decrease)			
Trade payables and other payables	181,841,193	21,244,663	8,049,920
Unearned fare box revenue	49,117,295	24,855,415	26,290,336
Deposits on stored value ticket	14,681,511	10,897,739	11,053,550
Other current liabilities	34,359,081	27,513,762	(8,194,092)
Other non-current liabilities	(2,134,042)	(14,318,960)	2,229,724
Cash paid for long-term employee benefits	(11,000,415)	(10,325,738)	(7,740,208)
Cash paid for compensation for site acquisition cost	(1,616,000,000)	(1,600,000,000)	(1,500,000,000)
Net cash flows from operating activities	7,681,540,035	7,949,286,889	7,258,838,028
Cash received from interest income	392,634,064	452,272,207	139,602,025
Cash paid for income tax	(332,798,583)	(334,491,602)	(248,930,830)
<b>Net cash flows from operating activities</b>	<b>7,747,375,516</b>	<b>8,067,067,494</b>	<b>7,149,509,223</b>

(Unit : Baht)

Cash flow statement (continued)	2019	2018	2017
<b>Cash flows from investing activities</b>			
Cash received from sales of current investments	17,447,889,696	13,949,038,431	19,366,871,411
Cash paid for purchase of current investments	(17,290,610,050)	(13,767,671,038)	(14,833,370,394)
Cash paid for purchase of investments in subsidiary	(269,240,000)	(60,284,267)	-
Cash received from sales of investments in associates	398,386,200	540,351,710	-
Cash received from sales of other long-term investments	78,219,853	2,075,443,606	-
Increase in other long-term investments	(400,000,000)	(107,436,375)	(417,012,300)
Cash received from sales of investment before amalgamation	-	-	769,741,462
Cash received from sales of equipment and intangible asset under concession agreement of the MRT Blue Line Project	1,695,689	3,215,729	7,706,184
Purchase of equipment	(46,552,497)	(23,042,080)	(89,131,306)
Advance payment for purchase of equipment	-	-	(77,040)
Cash received from interest income	-	4,676,477	21,484,010
Cash received from dividend income	488,801,682	493,938,904	551,455,191
Cash paid for project cost of the MRT Chalong Ratchadham Line	(29,307,405)	(390,955)	(65,000,000)
Cash paid for intangible asset under concession agreement of the MRT Blue Line Project	(6,840,809,764)	(9,963,513,656)	(7,906,570,615)
Cash paid for expressway construction	(706,974,948)	(284,809,045)	(130,085,647)
Interest expenses capitalised as cost of projects	(378,623,301)	(181,764,061)	(48,805,714)
Increase in other intangible assets	(15,722,417)	(30,649,444)	(25,644,761)
<b>Net cash flows used in investing activities</b>	<b>(7,562,847,262)</b>	<b>(7,352,896,064)</b>	<b>(2,798,439,519)</b>
<b>Cash flows from financing activities</b>			
Cash received from short-term loan from financial institution	4,882,000,000	10,000,000,000	-
Repayment of short-term loans from financial institutions	(4,448,000,000)	(10,816,000,000)	(1,088,000,000)
Cash received from long-term loans from financial institutions	6,530,000,000	5,300,000,000	500,000,000
Repayment of long-term loans from financial institutions	(3,041,760,069)	(13,475,010,069)	(3,536,448,559)
Cash received from debentures	5,000,000,000	10,000,000,000	5,000,000,000
Cash paid for redemption of debentures	(5,000,000,000)	-	-
Cash paid for financial fees	(11,516,532)	(181,553,849)	(8,219,329)
Interest paid	(1,618,951,836)	(1,655,419,747)	(1,534,140,236)
Dividend paid	(2,292,750,000)	(1,987,050,000)	(1,834,200,000)
<b>Net cash flows used in financing activities</b>	<b>(978,437)</b>	<b>(2,815,033,665)</b>	<b>(2,501,008,124)</b>
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>177,549,817</b>	<b>(2,100,862,235)</b>	<b>1,850,061,580</b>
Cash and cash equivalents at beginning of year	526,200,490	2,627,062,725	777,001,145
<b>Cash and cash equivalents at end of year</b>	<b>703,750,307</b>	<b>526,200,490</b>	<b>2,627,062,725</b>

## 13.2 Significant Financial Ratios

	Unit	2019	2018	2017
<b>LIQUIDITY RATIO</b>				
1. Liquidity Ratio	Time	0.28	0.20	0.46
2. Quick Ratio	Time	0.26	0.19	0.45
3. Cash Flow Ratio	Time	0.50	0.52	0.68
<b>PROFITABILITY RATIO</b>				
4. Gross Profit Margin	%	35.99	37.40	39.25
5. Cash to Profitability Ratio	%	62.84	65.77	75.11
6. Net Profit Margin	%	18.66	20.35	20.45
7. Return on Equity	%	8.38	9.90	10.31
<b>EFFICIENCY RATIO</b>				
8. Return on Total Assets	%	3.24	3.76	3.75
9. Return on Fixed Assets	%	9.80	10.57	10.81
10. Assets Turnover	Time	0.17	0.18	0.18
<b>FINANCIAL POLICY RATIO</b>				
11. Interest Bearing Debt to Equity Ratio	Time	1.37	1.34	1.37
12. Interest Coverage Ratio	Time	7.04	7.41	6.06
13. Net Debt to EBITDA	Time	6.67	6.00	5.72
<b>Per Share DATA</b>				
14. Book Value per Share	Baht	2.54	2.32	2.03
15. Net Earnings per Share	Baht	0.36	0.35	0.20
16. Dividend per Share	Baht	0.15	0.15	0.13

**Note** The Company has not presented Accounts Receivable Turnover, Average Collection Period, Accounts Payable Turnover, Average Debt Servicing Period and Cash Cycle because these ratios are not appropriated for consideration of the Company's operation according to the amount of accounts receivable and accounts payable which are not significant for the Company's nature of operation.

Not include transaction related to the novation of the M&E systems under the concession agreement of the MRT Chalong Ratchadham Line Project which the MRTA is fully responsible for both loan repayment and interest expense in accordance to the concession agreement and gain on fair value adjustment of investment due to reclassification.

## Report on Responsibilities of the Board of Directors towards the Financial Report

The Company's Board of Directors realizes the significance of its duties and responsibilities in supervising the Company's business to ensure good management in accordance with laws, objectives and the Company's Articles of Association, as well as resolutions of the shareholders' meetings with integrity and prudence. The Board of Directors protects the benefits of the Company, shareholders and general investors by ensuring that the Company's financial report contains accurate and full accounting records that reflect the Company's actual financial status and operational results.

The Company's Board of Directors appointed the Audit Committee comprising independent directors fully qualified in accordance with the requirements of the Stock Exchange of Thailand to review and ensure accuracy and sufficiency of the financial report, including accurate and complete disclosure of connected transactions or transactions with possible conflict of interest, in compliance with the requirements of the Stock Exchange of Thailand and relevant rules and regulations. In this regard, the Audit Committee has already reported its performance to the Company's Board of Directors.

The Company's Board of Directors is of the opinion that the financial statements for 2019 of the Company and the Subsidiaries, which have been reviewed by the Audit Committee in conjunction with the management, and audited by the Company's auditor, reflect accurate financial status and operational results as appropriate in material aspects in accordance with generally accepted accounting principles.



Dr. Virabongsa Ramangkura  
Chairman of the Board of Directors  
26 February 2020



Mrs. Payao Marittanaporn  
Managing Director  
26 February 2020

## 14. Management Discussion and Analysis

### Significant events in the year 2019

#### 1. The shareholding in Bangkok Metro Networks Limited (BMN)

On March 27, 2019, the Company purchased 5.08 Million ordinary shares of BMN, which is the subsidiary company, equal to 20 percent of its issued and paid-up share capital from its existing shareholders. As a result of this transaction, the Company's shareholding in BMN increased from 69.67 percent to 89.67 percent.

#### 2. Dividend payment

On April 26, 2019, the 2019 Annual General Meeting of the Company's shareholders had a resolution to approve a dividend payment from 2018 operating results of Baht 0.15 per share. The Company paid an interim dividend of Baht 0.06 per share on September 19, 2018, and a dividend of Baht 0.09 per share on May 22, 2019.

On August 9, 2019, the Meeting of the Company's Board of Directors passed a resolution to approve an interim dividend payment of Baht 0.06 per share, which was paid on September 4, 2019.

#### 3. The reclassification of the investment in TTW Public Company Limited (TTW)

During the second quarter of the year 2019, the Company has sold partial of TTW's shares, as a result, the interest in the equity of TTW decreased to 18.47 percent. Following this sale, the Company reclassified the investment in TTW from investment in associated company to investment in available-for-sale securities, which consistent with the investment proportion and the purpose of the Company investment. The Company recorded gain on fair value adjustment of investment due to reclassification in the amount of Baht 2,334 Million, net of corporate income tax.

#### 4. The progress of the MRT Blue Line Extension Project

At the end of December 2019, the progress of the installation of the M&E Systems of the MRT Blue Line Extension Project (Hua Lamphong - Lak Song and Bang Sue -Tha Phra) was at 97 percent which slightly earlier than the plan. During the year 2019, the Company has gradually operated trial run service in MRT Blue Line Extension without farebox charge as follows:

- Wat Mangkon Station to Tha Phra Station on July 29, 2019
- Bang Phai Station to Bang Wa Station on August 24, 2019
- Phetkasem 48 Station to Lak Song Station on September 21, 2019
- Bangpho Station to Sirindhorn Station on December 4, 2019
- Bang Yi khan Station to Charan 13 Station on December 23, 2019

The Company operated full commercial service of Section 2 in MRT Blue Line Extension (Hua Lamphong Station - Lak Song Station) which connected with the Initial Blue Line at Hua Lamphong Station on September 29, 2019. Moreover, the Company plans to operate full commercial service all the line within March 2020.

#### 5. The Settlement of Disputes by Extension of the periods of Concession Agreements

On February 18, 2020, the Council of Ministers' Meeting agreed to amend the Agreements for Settlement of the Disputes between the Company/the subsidiary and the Expressway Authority of Thailand (EXAT), and on February 20, 2020, the Company/the subsidiary and EXAT signed the Second Stage Expressway Agreement (Amendment) and the Bang Pa-in - Pak Kret Expressway Agreement (Amendment), which significantly amended as follows:



Expressway	Toll revenue sharing EXAT : the Company / the subsidiary	Renewal period	Remaining period of time for entitled to renewal *
The Second Stage Sector A B C	The First Stage and the Second Stage Sector A B 60 : 40 Sector C 0 : 100	15 years 8 months to October 2035	4 years 4 months
The Second Stage Sector D	0 : 100	8 years 6 months to October 2035	11 years 6 months
Bang Pa-in – Pak Kret	0 : 100	9 years 1 month to October 2035	10 years 11 months

\* The remaining periods of time entitled to renewal under the existing Agreements

Revision of fixed toll rates every 10 years from September 1, 2018 for the Second Stage Expressway Agreement, and revision of toll rates every 10 years from November 1, 2018 for the Bang Pa-in - Pak Kret Expressway Agreement, in accordance with the agreements.

## Overview Operational Results Between the year 2019 and 2018

(Unit: Million Baht)

Description	2019	2018	Changes	
			Amount	%
Revenue from expressway business	10,302	10,174	128	1.3
Revenue from rail business	5,022	4,736	286	6.0
Revenue from commercial development business	783	705	78	11.1
Total revenue from main business	16,107	15,615	492	3.2
<i>Interest income from the MRT Purple Line Project</i>	380	435	(55)	-12.6
Gains on sale of investments	181	499	(318)	-63.7
Gain on reclassification of investment	3,409	2,496	(913)	36.6
Other income	327	43	284	660.5
Total revenues	20,404	19,088	1,316	6.9
Cost of service	10,311	9,775	536	5.5
Selling and administrative expenses	1,336	1,364	(28)	-2.1
Finance cost	1,343	1,422	(79)	-5.6
<i>Interest expense from the MRT Purple Line Project</i>	380	435	(55)	-12.6
Total expenses	13,370	12,996	374	2.9
Profit before income tax expenses	7,034	6,902	942	15.5
Income tax expenses	1,755	1,189	566	47.6
Profit before share of profit from associates and NCI	5,279	4,903	376	7.7
Share of profit from investments in associates, net	173	433	(260)	-60.0
NCI	(17)	(19)	2	10.5
<b>Profit attributable to Equity holders of the Company</b>	<b>5,435</b>	<b>5,317</b>	<b>118</b>	<b>2.2</b>
Basic earnings per share (Baht)	0.36	0.35	0.01	

The Company had revenue from main business Baht 16,107 Million representing an increase from the previous year by Baht 492 Million or 3.2 percent, revenue from expressway business increased by Baht 128 Million, revenue from rail business increased by Baht 286 Million and revenue from commercial development business increased by Baht 78 Million.

In the year 2019, gain on sale of investments decreased from the previous year by Baht 318 Million due to gain on sale of all shares in Xayaburi Power Company Limited (XPCL) and some shares in CK Power Public Company Limited (CKP) in the year 2018, while the Company had only gain on sale of some shares in TTW Public Company Limited (TTW) in the year 2019. As the sale of some CKP's shares and TTW's shares, the Company had a gain on reclassification of investment in CKP of Baht 2,496 Million in the year 2018, and had a gain on reclassification of investment in TTW of Baht 3,409 Million in the year 2019. Moreover, the Company recorded dividend income instead of share of profit from investment in associates after the reclassification of the investments, in accordance with Accounting Standard. Other income which consisted of dividend income, consequently increased in the year 2019, in accordance with a decrease in share of profit from investments in associates.

Cost of service amounted to Baht 10,311 Million representing an increase from the previous year by Baht 536 Million or 5.5 percent mainly from the increase in operating expense, expenses related to the operation of Section 2 in MRT Blue Line Extension, repair and maintenance expense and amortization. Selling and administrative expenses amounted to Baht 1,336 Million representing a decrease by Baht 28 Million or 2.1 percent. Finance cost amounted to Baht 1,343 Million representing a decrease from the previous year by Baht 79 Million or 5.6 percent and income tax expenses amounted to Baht 1,755 Million representing an increase from the previous year by Baht 566 Million or 47.6 percent mainly from tax related to gain on reclassification of investment in TTW which is non-cash transaction.

Overall of the year 2019, the Company had the net profit attributable to equity holders of the Company in the amount of Baht 5,435 Million representing an increase from the previous year by Baht 118 Million or 2.2 percent.

## Segmental performance

### 1. Expressway business

The Company had revenue from Expressway business of Baht 10,302 Million, representing an increase from the previous year by Baht 128 Million or 1.3 percent, mainly from the increase in toll revenue from the Si Rat-Outer Ring Road Expressway Project (SOE). In the year 2019, SOE average traffic volume was at 64,253 trips/day representing an increase by 14.6 percent when compared to the previous year in accordance to expressway users learning behavior, together with the opening of the Connection between the Si Rat-Outer Ring Road Expressway and the Northbound Si Rat Expressway (heading to Chaeng Watthana). For the First Stage Expressway (FES), the Second Stage Expressway (SES) and the Bang Pa-in - Pak Kret Expressway (Sector C+), toll revenue was closely to the previous year.

Cost of service for operation of Expressway business consisted of costs of toll, amortization of rights to operate completed expressway sectors and compensation for site acquisition cost. For the year 2019, the cost was at Baht 6,040 Million, representing an increase from the previous year by Baht 165 Million or 2.8 percent mainly from the repair and maintenance expense and the amortization of rights to operate completed expressway sectors.

### 2. Rail business

The Company had revenue from Rail business of Baht 5,022 Million, representing an increase from the previous year by Baht 286 Million or 6 percent, mainly from farebox revenue of the MRT Blue Line as the ridership which continued to increase consecutively and including the operation in full commercial service of Section 2 in MRT Blue Line Extension, Hua Lamphong Station - Lak Song Station on September 29, 2019 which slightly affected to farebox revenue in the year 2019. The average ridership of the MRT Blue Line Project in the year 2019 was at 336,849 trips/day representing an increase from the previous year by 8.1 percent. Compared with the ridership in the forth quarter of the previous year, the ridership increased by 17.9 percent after the operation of Section 2 in MRT Blue Line Extension.

Cost of Rail business consisted of costs of farebox, O&M cost, maintenance cost and amortization of intangible asset under the MRT Blue Line Project. For the year 2019, the cost was at Baht 4,008 Million, representing an increase from the previous year by Baht 321 Million or 8.7 percent from repair and maintenance expense and expenses related to the operation of Section 2 in the MRT Blue Line Extension, Hua Lamphong Station - Lak Song Station.

### 3. Commercial Development Business

In the year 2019, total commercial development revenue was Baht 783 Million, representing an increase from the previous year by Baht 78 Million or 11.1 percent, mainly from the increase in retail revenue in Metro Mall which has gradually improved the commercial area in the station of the Chaloem Ratchamongkhon Line in modern trend which attracted more customers. Advertising and telecommunication revenue slightly increased from the operation of Section 2 in MRT Blue Line Extension, Hua Lamphong Station - Lak Song Station.

Cost of Commercial Development business for the year 2019 was at Baht 263 Million, representing an increase from the previous year by 50 Million or 23.5 percent in accordance with an increase in revenue.

#### Financial Position

(Unit: Million Baht)

Description	31 Dec 19	31 Dec 18	Changes	
			Amount	%
Total assets	111,697	103,831	7,866	7.6
Total liabilities	72,874	68,219	4,655	6.8
Total shareholders' equity	38,823	35,612	3,211	9.0

As at December 31, 2019, the Company and its subsidiaries had total assets amounted to Baht 111,697 Million, representing an increase by Baht 7,866 Million or 7.6 percent when compared with total assets as at December 31, 2018 mainly from fair value adjustment of investments in available-for-sale securities and the increase in construction in process of the Blue Line Extension Project. Total liabilities amounted to Baht 72,874 Million, representing an increase from the previous year by Baht 4,655 Million or 6.8 percent from the withdrawal of loan for the Blue Line Extension Project which is still under construction. Total shareholders' equity amounted to Baht 38,823 Million, representing an increase from the previous year by Baht 3,211 Million or 9 percent when compared to the end of the year 2018 resulted from the net profit from operation and unrealized gain on fair value adjustment of investments in available-for-sale securities.

#### Cash Flows

As at December 31, 2019, the Company and its subsidiaries had cash and cash equivalents amounting to Baht 704 Million, representing an increase from the end of the previous year by Baht 178 Million.

(Unit: Million Baht)

Description	For the year 2019
Net cash flows operating activities	7,741
Net cash flows investing activities	(7,562)
Net cash flows financing activities	(1)
Net increase in cash and cash equivalents	178
Cash and cash equivalents at beginning of year	526
Cash and cash equivalents at end of year	704

Cash used in investing activities mainly resulted from payment for the M&E equipment of the MRT Blue Line Project in the amount of Baht 6,841 Million, payment for constructions of U-turn bridge for cars and motorcycles on the railroad roads, and maintenances of the Si Rat-Outer Ring Road Expressway in the amount of Baht 707 Million.

Cash from financing activities resulted from the withdrawal of loan in the net amount of Baht 3,922 Million, dividend payment in the amount of Baht 2,293 Million and payment of interest and finance cost in the amount of Baht 1,630 Million.

### Significant Financial Ratios\*

Description	Unit	2019	2018
Net Profit Margin ratio	%	18.66	20.35
Return on Equity ratio	%	8.38	9.90
Return on Total Assets ratio	%	3.24	3.76
Debt to Equity ratio	Time	1.62	1.59
Net Interest Bearing Debt to Equity ratio	Time	1.37	1.34

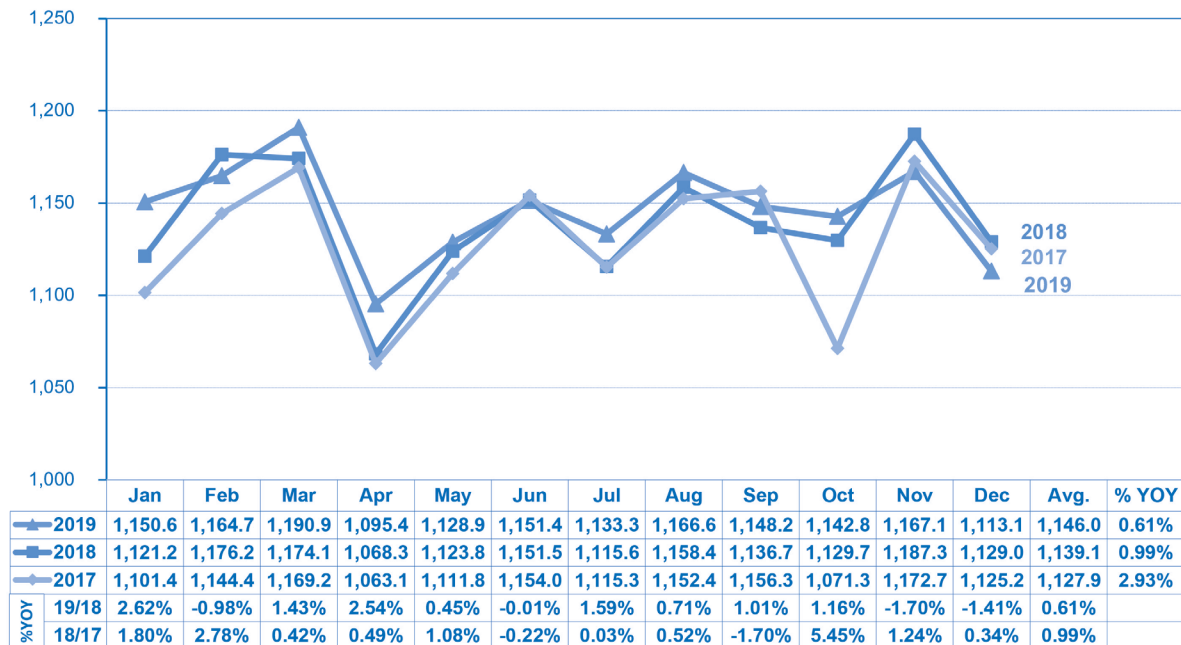
Financial ratio related to the profit decreased due to gains on sale of investments.

- \* The operational results were calculated based on the consolidated financial statements which consist of the Expressway Business, Rail Business, Commercial Development Business, and return on investment in other companies. Therefore, there was no similar type of business in the industry that can be used as a benchmark for comparison.

Not include transaction related to the novation of the M&E systems under the concession agreement of the MRT Chalong Ratchadham Line Project which the MRTA is fully responsible for both loan repayment and interest expense in accordance to the concession agreement and gain on fair value adjustment of investment.

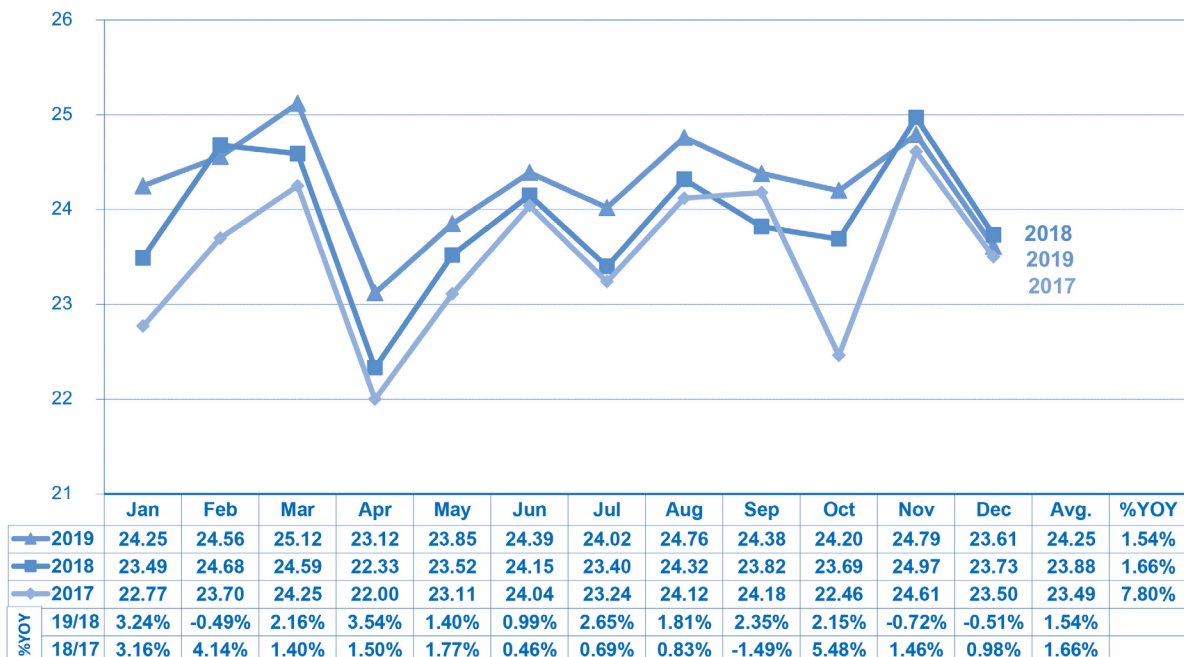
### Average Daily Traffic Volume for the First Stage Expressway, the Second Stage Expressway and the Si Rat-Outer Ring Road Expressway

(Thousand Trips / Day)



### Average Daily Toll Revenue for the First Stage Expressway, the Second Stage Expressway and the Si Rat-Outer Ring Road Expressway

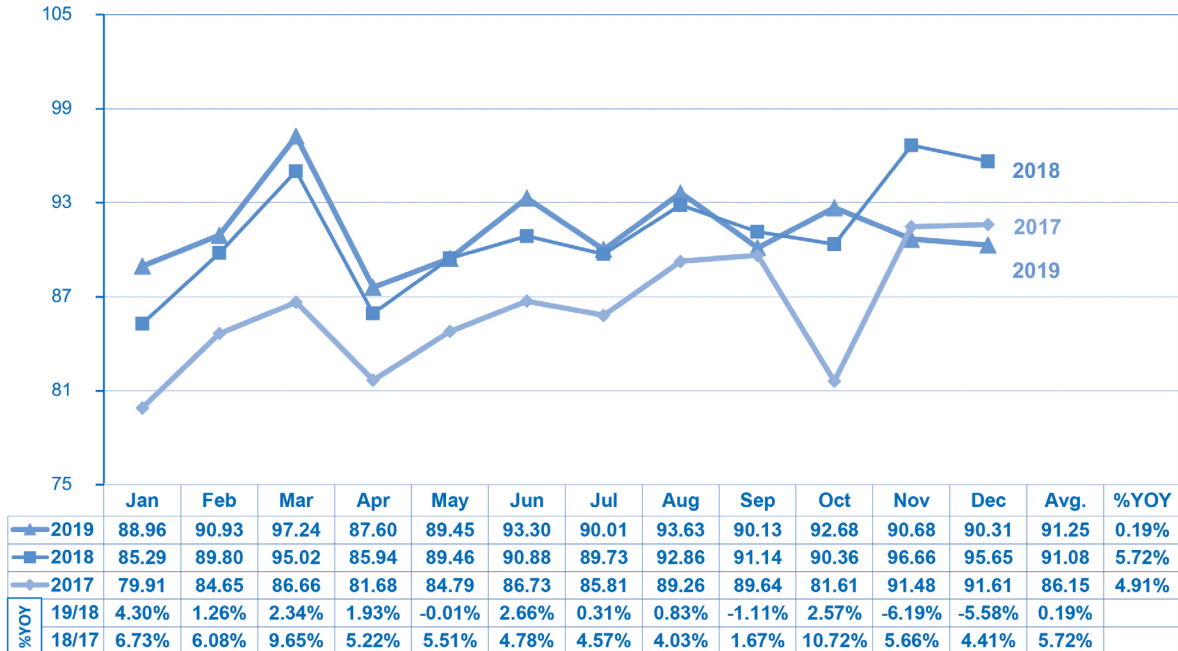
(Million Baht / Day)





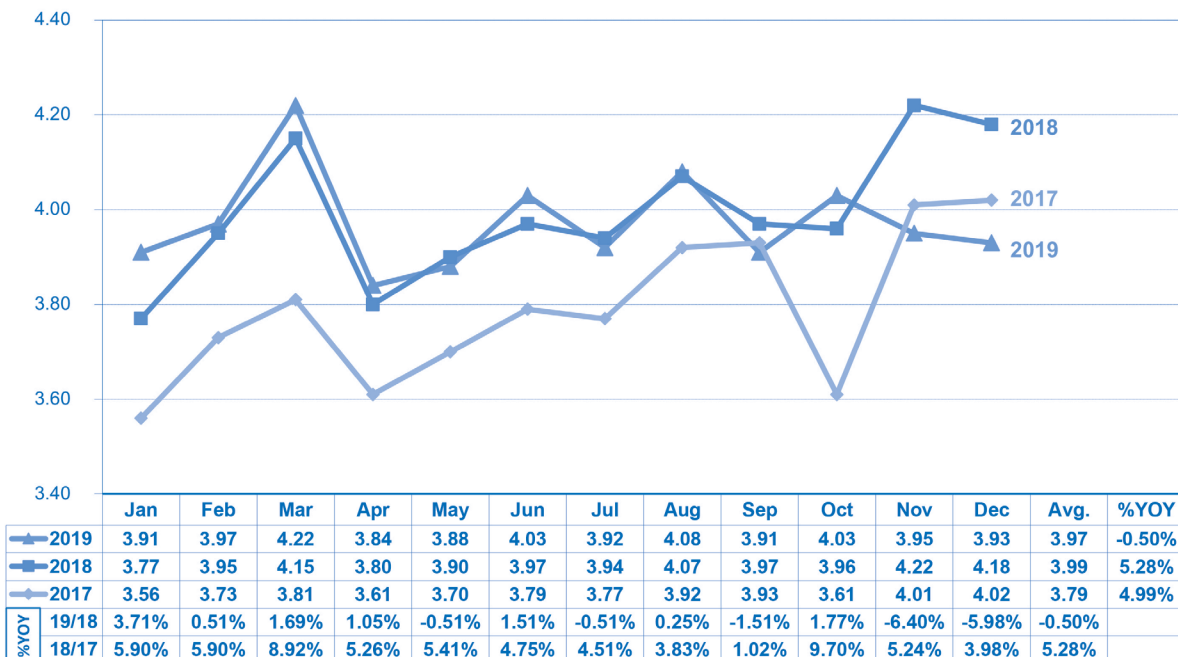
### Average Daily Traffic Volume for the Bang Pa-in - Pak Kret Expressway

(Thousand Trips / Day)



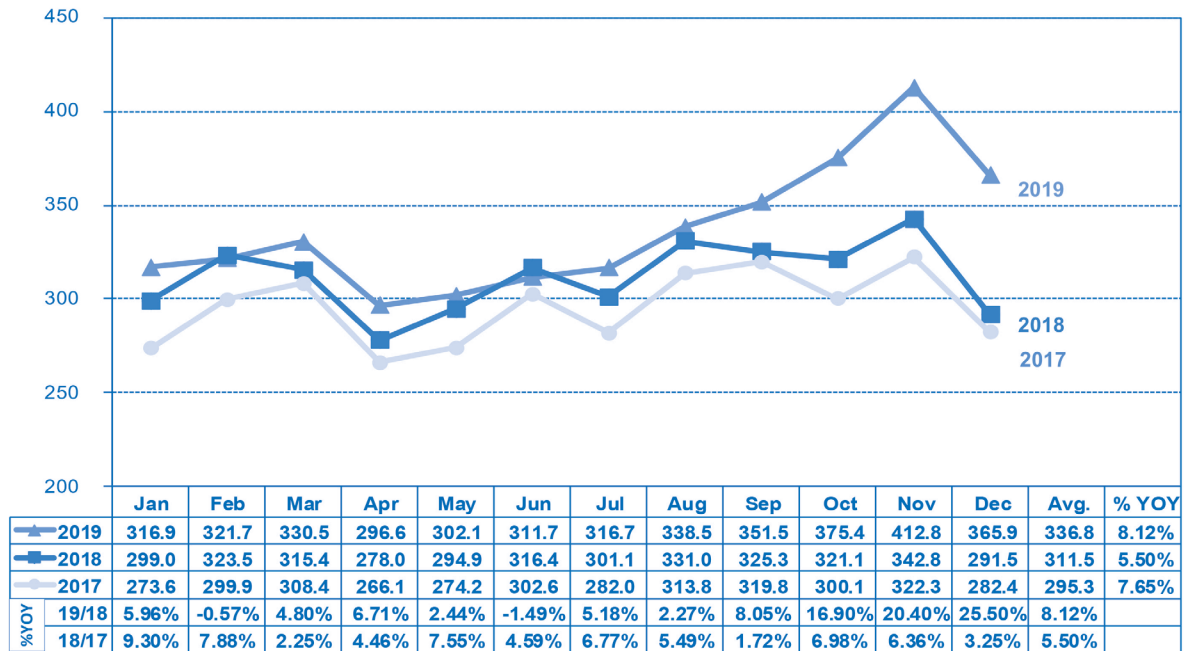
### Average Daily Toll Revenue for the Bang Pa-in - Pak Kret Expressway

(Million Baht / Day)



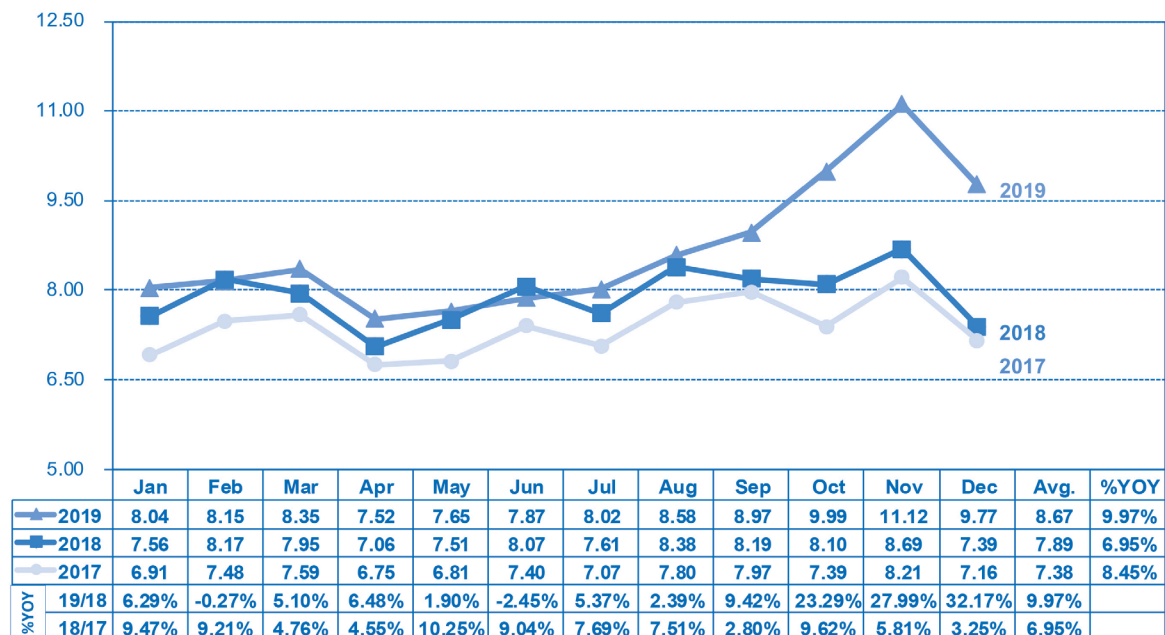
## Average Daily Ridership for Blue Line

(Thousand Trips / Day)



## Average Daily Farebox Revenue for Blue Line

(Million Baht / Day)



## Information of Directors, Executives and Company Secretary (As of December 31, 2019)

Name-Surname/Position Date of Appointment	Age (Years)	Education/Training	Shareholding in the Company	Family Relationship between Directors and Executives	Work Experience for the Past 5 Years		
					Period	Position	Organization
1 Dr. Virabongsa Ramangkura - Chairman of the Board of Directors (appointed on December 30, 2015)	76	<ul style="list-style-type: none"> <li>- Doctor of Law (Honorary), Webster University, St. Louis, USA</li> <li>- Ph.D. (Economics), University of Pennsylvania, USA</li> <li>- M.A. (Economics), University of Pennsylvania, USA</li> <li>- B.A. Political Science (First Class Honors), Chulalongkorn University</li> <li>- National Defence Course for the Joint State Private Sector, Class 1, National Defence College</li> <li>- Director Certification Program (DCP 43/2004), Thai Institute of Directors Association</li> </ul>	-	-	2005 - Present	- Chairman of the Board of Directors	<u>Listed Companies:</u> Finansia Public Company Limited Polyplex (Thailand) Public Company Limited Bangkok Expressway Public Company Limited Bangkok Airways Public Company Limited <u>Other Companies:</u> Nam Ngum 2 Power Company Limited SouthEast Asia Energy Limited Double A (1991) Public Company Limited Thai-Lao Association, Ministry of Foreign Affairs The Bank of Thailand
					2004 - Present	- Director and Audit Committee Member	
					1994 - 2015	- Chairman of the Board of Directors	
					1996 - 2012	- Director	
					2008 - Present	- Chairman of the Board of Directors	
					2006 - Present	- Chairman of the Board of Directors	
					1995 - Present	- Chairman of the Executive Board	
					2004 - 2016	- President	
					2012 - 2013	- Chairman of the Board of Directors	
2 Mr. Plew Trivisavet - Vice Chairman of the Board of Directors - Chairman of the Executive Board - Nomination and Remuneration Committee Member - Authorized Signatory Director (appointed on December 30, 2015)	74	<ul style="list-style-type: none"> <li>- Honorary Doctorate of Civil Engineering, Kasetsart University</li> <li>- Honorary Doctorate of Civil Engineering, Nakhon Phanom University</li> <li>- Honorary Doctorate of Civil Engineering, Rajamangala University of Technology Isan</li> <li>- Honorary Doctorate of Science (Engineering) Thai-Nichi Institute of Technology</li> <li>- M.Sc. (Electrical Engineering), Osaka University, Japan</li> <li>- B.Sc. (Electrical Engineering), Osaka University, Japan</li> <li>- National Defence Course for the Joint State Private Sector, Class 366, National Defence College</li> <li>- Director Certification Program (DCP 50/2004), Thai Institute of Directors Association</li> <li>- Director Accreditation Program (DAP 18/2004), Thai Institute of Directors Association</li> <li>- Finance for Non-Finance Directors (FND 13/2004), Thai Institute of Directors Association</li> <li>- Capital Market Academy Leader Program (CMA Program), Class 4/2007, Capital Market Academy</li> </ul>	0.1767% (27,009,405 shares)	-	2011 - Present	- Director	<u>Listed Companies:</u> CK Power Public Company Limited TTW Public Company Limited CH. Karnchang Public Company Limited Bangkok Expressway Public Company Limited Bangkok Metro Public Company Limited <u>Other Companies:</u> Xayaburi Power Company Limited Nam Ngum 2 Power Company Limited SouthEast Asia Energy Limited Northern Bangkok Expressway Company Limited
					2012 - Present	- Chairman of the Executive Board	
					2009 - Present	- Director	
					2008 - Present	- Vice Chairman of the Board of Directors	
					2007 - Present	- Corporate Governance and Risk Management Committee Member	
					2003 - Present	- Nomination and Remuneration Committee Member	
					1994 - Present	- Chairman of the Executive Board	
					1994 - 2015	- Chief Executive Officer	
					1994 - 2015	- Director	
						- Chairman of the Executive Board	
						- Nomination and Remuneration Committee Member	
					2004 - 2015	- Chairman of the Board of Directors	
						- Chairman of the Executive Committee	
						- Nomination and Remuneration Committee Member	
					2010 - Present	- Director and Chairman of the Executive Board	
					2006 - Present	- Director and Chairman of the Executive Board	
					2006 - Present	- Director and Chairman of the Executive Board	
					1996 - Present	- Chairman of the Board of Directors and Chairman of the Executive Board	

Name-Surname/Position Date of Appointment	Age (Years)	Education/Training	Shareholding in the Company	Family Relationship between Directors and Executives	Work Experience for the Past 5 Years		
					Period	Position	Organization
3 Mr. Vitoon Tejtassanasoontorn - Director (appointed on December 30, 2015) - Chairman of the Audit Committee (appointed on February 25, 2016) - Nomination and Remuneration Committee Member (appointed on December 30, 2015)	79	- B.A. in Commerce and Accountancy, Thammasat University - Director Certification Program (DCP 2/2000), Thai Institute of Directors Association - IOD Chartered Directors, Thai Institute of Directors Association, Class 1/2007 - Audit Committee Program (ACP 27/2009), Thai Institute of Directors Association - Advanced Audit Committee Program (AAP 3/2010), Thai Institute of Directors Association - Role of the Compensation Committee (RCC 12/2011), Thai Institute of Directors Association	0.0053% (803,893 shares)	-	2014 - Present	- Chairman of the Nomination and Remuneration Committee	<u>Listed Companies:</u> CH. Karnchang Public Company Limited  Bangkok Metro Public Company Limited  <u>Other Companies:</u> Asahi Glass Foundation of Thailand AGC Flat Glass (Thailand) Public Company Limited Kiarti Thaneey Country Club Co., Ltd. Pattaya Estate Co., Ltd. Kiarti Land Co., Ltd. Diachrome Chemicals Limited Thaisri Insurance Public Company Limited Glass Way Co., Ltd. Siracha Resort Co., Ltd. Sakata-Thai Corporation Ltd.
					2007 - Present	- Chairman of the Corporate Governance and Risk Management Committee	
					1999 - Present	- Director and Chairman of the Audit Committee	
					2007 - 2014	- Nomination and Remuneration Committee Member	
					2005 - 2015	- Independent Director, Audit Committee Member, and Nomination and Remuneration Committee Member	
					2004 - Present	- Director	
					1991 - Present	- Deputy Senior Managing Director	
					1988 - Present	- Director and Executive Director	
					1988 - Present	- Director and Executive Director	
					1988 - Present	- Director and Executive Director	
					1987 - Present	- Director	
					2015 - 2018	- Director and Chairman of the Audit Committee	
					1991 - 2018	- Director	
					1988 - 2017	- Director and Executive Director	
					1986 - 2017	- Director and Executive Director	
4 Gen. Chetta Thanajaro - Director - Chairman of the Nomination and Remuneration Committee - Audit Committee Member (appointed on December 30, 2015)	81	- Master of Arts (Political Science), Ramkhamhaeng University - Bachelor of Science, Chulachomklao Royal Military Academy, Class 9 - Infantry Basic Officer Leadership Course, United States Army Infantry School - The Royal Thai Army Command and General Staff Course - National Defence Course for The Joint State Private Sector, Class 6, National Defence College, - Director Certification Program (DCP 33/2003), Thai Institute of Directors Association - Finance for Non-Finance Directors (FND 7/2003), Thai Institute of Directors Association	-	-	2005 - 2015	- Independent Director, Chairman of the Audit Committee - Chairman of the Nomination and Remuneration Committee	<u>Listed Companies:</u> Bangkok Metro Public Company Limited  Bangkok Expressway Public Company Limited <u>Other Companies:</u> Double A (1991) Public Company Limited Ministry of Defence Ministry of Science and Technology
					1999 - 2003	- Audit Committee Member	
					2005 - Present	- Director	
					2004	- Minister of Defence	
					2003 - 2004	- Minister of Science and Technology	

Name-Surname/Position Date of Appointment	Age (Years)	Education/Training	Shareholding in the Company	Family Relationship between Directors and Executives	Work Experience for the Past 5 Years		
					Period	Position	Organization
5 Dr. Annop Tanlamai - Director - Audit Committee Member (appointed on February 25, 2016)	69	<ul style="list-style-type: none"> <li>- Ph.D. Engineering Management, University of Missouri, USA</li> <li>- M.B.A. (Quantitative Business Analysis), Indiana University, Bloomington, USA</li> <li>- M.S. in Engineering Management, University of Missouri, USA</li> <li>- Bachelor of Engineering (Mechanical Engineering), Chulalongkorn University</li> <li>- Director Certification Program (DCP 154/2011), Thai Institute of Directors Association</li> <li>- The Audit Committee's Role in Compliance and Ethical Culture Oversight Program, Thai Institute of Directors Association</li> </ul>	-	-	2012 - Present	- Director and Chairman of the Audit Committee	<b>Listed Companies:</b> MK Restaurants Group Public Company Limited Bangkok Expressway Public Company Limited  <b>Other Companies:</b> Chitralada Technology College Mahidol University Chulalongkorn University
					2001 - 2015	- Director	
					2001 - 2015	- Audit Committee Member	
					2011 - 2015	- Nomination and Remuneration Committee Member	
					2011 - 2015	- Corporate Governance and Risk Management Committee Member	
					2016 - Present	- Dean of Faculty of Business Administration	
					2012 - 2016	- Dean of College of Management	
					2007 - 2011	- Dean of Faculty of Commerce and Accountancy	
					1999 - 2007	- Director of the Committee of Master of Business Administration Program (MBA), Faculty of Commerce and Accountancy	
6 Mrs. Vallapa Assakul - Director - Chairman of the Corporate Governance and Risk Management Committee <sup>(1)</sup> (appointed on December 30, 2015)	69	<ul style="list-style-type: none"> <li>- Master of Economics, University of Detroit, USA</li> <li>- Bachelor of Economics (Second Class Honors), Chulalongkorn University</li> <li>- Audit Committee Program (ACP 21/2008), Thai Institute of Directors Association</li> <li>- Director Certification Program (DCP 86/2007), Thai Institute of Directors Association</li> <li>- Director Accreditation Program (DAP 37/2005), Thai Institute of Directors Association</li> <li>- Role of the Compensation Committee (RCC 5/2008), Thai Institute of Directors Association</li> </ul>	-	-	2006 - Present	- Director	<b>Listed Companies:</b> Ocean Life Insurance Public Company Limited  Vinythai Public Company Limited Bangkok Expressway Public Company Limited Bangkok Metro Public Company Limited  <b>Other Companies:</b> TMB Bank Public Company Limited Ocean Property Co., Ltd. Ocean Development Co., Ltd. Siam Estate Co., Ltd. Ocean Life Insurance Public Company Limited Amphan Co., Ltd. Northern Bangkok Expressway Company Limited
					2012 - 2016	- Supervision Committee Member	
					2010 - 2015	- Director	
					2009 - 2015	- Director and Executive Director	
					2012 - 2015	- Independent Director	
					2012 - 2015	- Chairman of the Risk Committee	
					2005 - 2007	- Director	
					2004 - 2007	- Senior Executive Vice President, Corporate and Investment Banking Group	
					2013 - Present	- Director	
					2013 - Present	- Director	
7 Mr. Supong Chayutsahakij - Director - Nomination and Remuneration Committee Member - Executive Director - Authorized Signatory Director (appointed on December 30, 2015)	78	<ul style="list-style-type: none"> <li>- Honorary Ph.D. (Management Science), Phranakorn Rajabhat University</li> <li>- Master of Political Science (Politics and Government), Sukhothai Thammathirat Open University</li> <li>- Executive Master of Business Administration, Sasin Graduate Institute of Business Administration of Chulalongkorn University</li> <li>- Master of Engineering (Electrical), University of Tokyo, Japan</li> <li>- Bachelor of Engineering (Electrical), University of Tokyo, Japan</li> <li>- Director Certification Program (DCP 8/2001), Thai Institute of Directors Association</li> <li>- Audit Committee Program (ACP 17/2007), Thai Institute of Directors Association</li> </ul>	-	-	2006 - Present	- Director and Audit Committee Member	<b>Listed Companies:</b> Siam Steel International Public Company Limited CK Power Public Company Limited Bangkok Expressway Public Company Limited  <b>Other Companies:</b> Xayaburi Power Company Limited SouthEast Asia Energy Limited Nam Ngum 2 Power Company Limited Thai-Nichi Institute of Technology Northern Bangkok Expressway Company Limited Bangkok Metro Networks Limited CK Power Limited
					2013 - 2016	- Director	
					1994 - 2015	- Director	
					2003 - 2015	- Vice Chairman of the Executive Board	
					2007 - 2015	- Nomination and Remuneration Committee Member	
						- Corporate Governance and Risk Management Committee Member	
					2009 - 2015	- Vice Chairman of the Board of Directors	
					2002 - 2015	- Director and Executive Committee Member	
					2014 - Present	- Director	
					2008 - Present	- Director	

Remark: <sup>(1)</sup> Mrs. Vallapa Assakul was appointed as Chairman of the Corporate Governance and Risk Management Committee on December 18, 2019 to replace Gen. Sampao Choosri who resigned his position on December 18, 2019.



Name-Surname/Position Date of Appointment	Age (Years)	Education/Training	Shareholding in the Company	Family Relationship between Directors and Executives	Work Experience for the Past 5 Years		
					Period	Position	Organization
8 M.L. Prasobchai Kasemsant - Director (appointed on December 30, 2015)	64	<ul style="list-style-type: none"> <li>- M.S. (Civil Engineering) and M.S. (Operations Research), Stanford University, USA, 1979</li> <li>- B.S. (Civil Engineering, Mathematics), Virginia Military Institute, Virginia, USA, 1976</li> <li>- Thailand Energy Academy Course for Management, Class 3, 2013</li> <li>- National Defence Course, Class 50, National Defence College</li> <li>- Director Certification Program (DCP 33/2003), Thai Institute of Directors Association</li> </ul>	-	-	1994 - 2015	- Director and Executive Director	<u>Listed Company:</u> Bangkok Expressway Public Company Limited
					Oct 2015 - Present	- Retired Military Officer	<u>Other Company:</u> Ministry of Defence
					2013 - Sep 2015	- Chairman of the Defence Advisory Board	
					2012 - 2013	- Deputy Permanent Secretary for Defence (Energy and Defence Industry)	
					2009 - 2010	- Director-General, Office of Defence Logistics, Office of Permanent Secretary for Defence	
9 Mr. Phongsarit Tantivanitchkul - Director - Corporate Governance and Risk Management Committee Member - Executive Director - Authorized Signatory Director (appointed on December 30, 2015)	47	<ul style="list-style-type: none"> <li>- Master of Engineering (Construction and Management), University of Michigan - Ann Arbor, USA</li> <li>- Bachelor of Engineering (Mechanical Engineering), Kasetsart University</li> <li>- Director Certification Program (DCP 155/2012), Thai Institute of Directors Association</li> <li>- Finance for Non-Finance Directors (FND 35/2007), Thai Institute of Directors Association</li> <li>- Understanding the Fundamental of Financial Statements (UFS 9/2007), Thai Institute of Directors Association</li> </ul>	-	-	2016 - Present	- Director and Chairman of the Executive Committee	<u>Listed Companies:</u> TTW Public Company Limited
					2016 - Present	- Senior Executive Vice President: Operation Group	CH. Kamchong Public Company Limited
					2011 - 2015	- Executive Vice President: Business Development	
					2014 - 2015	- Director and Executive Director	Bangkok Metro Public Company Limited
					2016 - Present	- Director and Executive Director	<u>Other Companies:</u> Northern Bangkok Expressway Company Limited
					Oct 2017 - Present	- Chairman of the Board of Directors	Bangkok Metro Networks Limited
					2009 - Oct 2017	- Director	
					2019 - Present	- Director	
					2012 - 2015	- Director	Eastern High-Speed Rail Linking Three Airports Company Limited
							Transit Expert Co., Ltd.
10 Miss Arisara Dharamadhaj - Director (appointed on April 26, 2019)	61	<ul style="list-style-type: none"> <li>- M.B.A., Roosevelt University, USA</li> <li>- Bachelor of Economics Program (Second-Class Honors) University of the Thai Chamber of Commerce</li> <li>- Director Certification Program (DCP 75/2006), Thai Institute of Directors Association</li> <li>- National Defence Course for the Joint State Private Sector, Class 24, National Defence College, National Defence Studies Institute</li> </ul>	-	-	2014 - Sep 2018	- Senior Executive Vice President - Managing Director, Government & State Enterprise Relations Group	<u>Listed Company:</u> Krung Thai Bank Public Company Limited
					2012 - 2014	- First Executive Vice President - Managing Director, Government & State Enterprise Relations Group	
					2005 - 2012	- Executive Vice President - Director Corporate Banking Sector 2	
					Jan 2016 - Present	- Director	<u>Other Companies:</u> KTB General Services and Security Co., Ltd.
					Apr 2014 - Apr 2019	- Chairman of the Board of Directors	Krung Thai IJB Leasing Co., Ltd.

Name-Surname/Position Date of Appointment	Age (Years)	Education/Training	Shareholding in the Company	Family Relationship between Directors and Executives	Work Experience for the Past 5 Years		
					Period	Position	Organization
11 Mr. Panit Dunnvatanachit - Director (appointed on December 30, 2015)	63	<ul style="list-style-type: none"> <li>- M.B.A. (Finance), Washington University, St. Louis, USA</li> <li>- Bachelor of Arts &amp; Science, Washington University, St. Louis, USA</li> <li>- Director Certification Program (DCP 10/2001), Thai Institute of Directors Association</li> <li>- Capital Market Academy Leader Program, Class 14/2012, Capital Market Academy</li> <li>- Broadcasting Executive Forum, Class 1/2013, Ofce of the National Broadcasting and Telecommunications Commission</li> <li>- Thailand Energy Academy Course for Management, Class 4/2014, Thailand Energy Academy</li> <li>- Public-Private Partnerships for Executive Program (PEP 1/2016)</li> </ul>	-	-	2000 - Present  2003 - 2015 2003 - 2012  2006 - Present  1994 - Present  2003 - 2016  2000 - 2010	- Executive Vice President  - Director - Executive Director  - Director  - Director  - Director and Executive Director  - Director and Member of the Executive Committee	<u>Listed Companies:</u> Bangkok Bank Public Company Limited Bangkok Expressway Public Company Limited <u>Other Companies:</u> Thai Yamaha Motor Co., Ltd. Krungthep Engineering Consultants Co., Ltd. Northern Bangkok Expressway Company Limited CBNP (Thailand) Limited
12 Mrs. Natamon Bunnak - Director (appointed on April 20, 2018)	55	<ul style="list-style-type: none"> <li>- Master of Economics (Business Economics), University of the Thai Chamber of Commerce</li> <li>- Master of Public and Private Management Program (Honors), National Institute of Development Administration</li> <li>- Bachelor of Science (Agricultural Economics), Kasetsart University</li> <li>- Director Accreditation Program (DAP 152/2018), Thai Institute of Directors Association</li> <li>- National Defence Course, Class 61, National Defence College, National Defence Studies Institute</li> </ul>	-	-	2019 - Present 2015 - 2019  2013 - 2015	- Deputy Governor (Finance) - Assistant Governor and Acting Deputy Governor (Finance) - Director of Ofce of the Governor	<u>Listed Company:</u> - None - <u>Other Company:</u> Mass Rapid Transit Authority of Thailand
13 Mr. Wichan Ekarintrakul - Director (appointed on December 27, 2018)	55	<ul style="list-style-type: none"> <li>- Master of Engineering (Traffic and Transportation Engineering), Chulalongkorn University</li> <li>- Bachelor of Engineering (Civil Engineering), Chulalongkorn University</li> <li>- Director Accreditation Program (DAP 161/2019), Thai Institute of Directors Association</li> </ul>	-	-	Apr 2018-Present  2015 - 2018  2010 - 2015  2005 - 2010 2004 - 2005 2016 - 2017	- Deputy Governor for Strategy & Planning - Deputy Governor for Technical Affairs - Director of Policy and Planning Department - Director of Planning and Project Analysis Division - Director of Expressway Engineering Division - Director	<u>Listed Company:</u> - None - <u>Other Companies:</u> Expressway Authority of Thailand      Northern Bangkok Expressway Company Limited

Name-Surname/Position Date of Appointment	Age (Years)	Education/Training	Shareholding in the Company	Family Relationship between Directors and Executives	Work Experience for the Past 5 Years		
					Period	Position	Organization
14 Dr. Sombat Kitjalaksana - Director - Corporate Governance and Risk Management Committee Member - Executive Director - Managing Director - Authorized Signatory Director (appointed on December 30, 2015)	62	- Dr. Techn. (Soil Mechanic), University of Innsbruck, Austria - Bachelor and Master of Engineering (Civil), Chulalongkorn University - Director Certification Program (DCP 81/2006), Thai Institute of Directors Association - Finance for Non-Finance Directors (FND 19/2005), Thai Institute of Directors Association - Director Accreditation Program (DAP 36/2005), Thai Institute of Directors Association	0.0196%  (2,999,141 shares)	-	2000 - Present  2006 - 2015  2014 - 2015  2011 - 2014  2004 - 2015 2004 - 2011 2001 - 2010  2000 - 2011   2016 - Present  2009 - Present	- Director and Executive Director - Director - Managing Director and Executive Director - Vice Chairman of the Executive Committee - Director - Executive Committee Member - Executive Vice President: Business Development - Managing Director  - Director and Executive Director - Director	<u>Listed Companies:</u> TTW Public Company Limited  CH. Karnchang Public Company Limited Bangkok Metro Public Company Limited  CH. Karnchang Public Company Limited Bangkok Metro Public Company Limited  <u>Other Companies:</u> Northern Bangkok Expressway Company Limited Bangkok Metro Networks Limited
15 Mrs. Payao Marittanaporn - Director - Corporate Governance and Risk Management Committee Member - Executive Director - Managing Director - Authorized Signatory Director (appointed on December 30, 2015)	62	- M.B.A., Chulalongkorn University - Higher Diploma in Auditing, Thammasat University - Bachelor of Accountancy, Chulalongkorn University - Director Certification Program (DCP 48/2004), Thai Institute of Directors Association - Role of the Compensation Committee (RCC 9/2009), Thai Institute of Directors Association - Capital Market Academy Leader Program (CMA Program), Class 11/2010, Capital Market Academy	-	-	2015 - Present   2007 - 2015  2013 - 2014   2007 - Present  2004 - Present 2011 - 2014	- Director - Chairman of the Risk Management Committee - Nomination and Remuneration Committee Member - Director and Executive Director - Managing Director - Director - Nomination and Remuneration Committee Member - Risk Management Committee Member  - Acting Managing Director  - Director and Executive Director - Director	<u>Listed Companies:</u> TTW Public Company Limited   Bangkok Expressway Public Company Limited  TTW Public Company Limited   <u>Other Companies:</u> Northern Bangkok Expressway Company Limited  Xayaburi Power Company Limited
16 Mr. Sanguan Kunatinun - Deputy Managing Director - Expressway Engineering (appointed on December 30, 2015)	59	- M.B.A., Thammasat University - Bachelor of Engineering, Chulalongkorn University - Director Certification Program (DCP 101/2008), Thai Institute of Directors Association	-	-	2015 - Present  2014 - 2015 2006 - 2014	- Deputy Managing Director - Expressway Engineering  - Deputy Managing Director, Engineering - Assistant Managing Director, Engineering	<u>Listed Companies:</u> Bangkok Expressway and Metro Public Company Limited Bangkok Expressway Public Company Limited  <u>Other Company:</u> - None -
17 Mrs. Sudruthai Prommart - Deputy Managing Director - Expressway Operation (appointed on December 30, 2015)	56	- M.B.A. (Financial Accounting), Northrop University, Inglewood, California, USA - Bachelor of Business Administration, Assumption University - Director Certification Program (DCP 151/2011), Thai Institute of Directors Association	-	-	2015 - Present  2014 - 2015 2007 - 2014	- Deputy Managing Director - Expressway Operation  - Deputy Managing Director, Operation - Assistant Managing Director, Operation	<u>Listed Companies:</u> Bangkok Expressway and Metro Public Company Limited Bangkok Expressway Public Company Limited  <u>Other Company:</u> - None -

Name-Surname/Position Date of Appointment	Age (Years)	Education/Training	Shareholding in the Company	Family Relationship between Directors and Executives	Work Experience for the Past 5 Years		
					Period	Position	Organization
18 Mr. Phakpoom Thaweewittayarat - Deputy Managing Director - Administration - Company Secretary (appointed on December 30, 2015)	53	<ul style="list-style-type: none"> <li>- M.B.A., Thammasat University</li> <li>- Bachelor of Laws, Chulalongkorn University</li> <li>- Bachelor of Accountancy, Chulalongkorn University</li> <li>- Certified Public Accountant (CPA)</li> <li>- Certified Internal Auditor (CIA)</li> <li>- Director Certification Program (DCP 102/2008), Thai Institute of Directors Association</li> <li>- Company Secretary Program (CSP 9/2005), Thai Institute of Directors Association</li> </ul>	-	-	2015 - Present	- Deputy Managing Director - Administration	<u>Listed Companies:</u> Bangkok Expressway and Metro Public Company Limited Bangkok Expressway Public Company Limited  <u>Other Company:</u> - None -
					2014 - 2015	- Deputy Managing Director, Administration	
					2012 - 2014	- Assistant Managing Director, Administration	
					2008 - 2015 2011	- Company Secretary - Senior General Manager of Administration Division	
					2008 - 2011	- Senior General Manager of Managing Director Office	
19 Miss Panan Tosuwanthaworn - Deputy Managing Director - Finance (appointed on December 30, 2015)	52	<ul style="list-style-type: none"> <li>- Master of Accountancy, Thammasat University</li> <li>- Bachelor of Accountancy, Thammasat University</li> <li>- Director Certification Program (DCP 158/2012), Thai Institute of Directors Association</li> <li>- CFO Certification Program, Class 1/2004, The Institute of Certified Accountants and Auditors of Thailand</li> <li>- Corporate Secretary Development Program, Class 13, Faculty of Commerce and Accountancy, Chulalongkorn University</li> </ul>	-	-	2015 - Present	- Deputy Managing Director - Finance	<u>Listed Companies:</u> Bangkok Expressway and Metro Public Company Limited Bangkok Expressway Public Company Limited  <u>Other Company:</u> Bangkok Metro Networks Limited
					2014 - 2015	- Deputy Managing Director, Finance	
					2012 - 2014	- Assistant Managing Director, Finance	
					2008 - 2011	- Senior General Manager of Finance Division	
					Nov 2017 - Present	- Director	
20 Mr. Witoon Hatairatan - Deputy Managing Director - Railway System Operation and Engineering (appointed on December 30, 2015)	62	<ul style="list-style-type: none"> <li>- Master of Science (Business Administration), California University of Pennsylvania, USA</li> <li>- Bachelor of Engineering (Civil), Chulalongkorn University</li> <li>- Anti-Corruption for Executive Program (ACEP 13), Thai Institute of Directors Association</li> </ul>	-	-	2015 - Present	- Deputy Managing Director - Railway System Operation and Engineering	<u>Listed Companies:</u> Bangkok Expressway and Metro Public Company Limited Bangkok Metro Public Company Limited  <u>Other Company:</u> Bangkok Metro Networks Limited
					2014 - 2015	- Deputy Managing Director - Acting Assistant Managing Director, Train Operation Group	
					2012 - 2014	- Assistant Managing Director, Operations	
					2007 - 2012	- Acting Marketing & Commercial Development Director	
					2005 - 2015	- Risk Committee Member	
					2004 - 2012	- Operations Director	
					2002 - 2004	- Traffic Manager	
					Nov 2017 - Present	- Director	

Name-Surname/Position Date of Appointment	Age (Years)	Education/Training	Shareholding in the Company	Family Relationship between Directors and Executives	Work Experience for the Past 5 Years		
					Period	Position	Organization
21 Mr. Alvin Gee - Deputy Managing Director - Operation Support (appointed on December 30, 2015)	48	- Bachelor of Science in Finance, Boston College, USA - Director Certification Program (DCP 165/2012), Thai Institute of Directors Association	-	-	2015 - Present	- Deputy Managing Director - Operation Support	<u>Listed Companies:</u> Bangkok Expressway and Metro Public Company Limited CK Power Public Company Limited SouthEast Asia Energy Limited
					2013 - Feb 2016	- Director	
					2013 - Feb 2016	- Director, Executive Director and Managing Director	
					2011 - 2013	- Deputy Managing Director, Accounting and Finance Department	
					2008 - 2011	- Investor Relations Officer	Bangkok Metro Public Company Limited
					2013 - Feb 2016	- Director, Executive Director and Managing Director	<u>Other Companies:</u> Nam Ngum 2 Power Company Limited
					2011 - 2013 2007 - 2008	- Deputy Managing Director - Business Analyst, Corporate Finance	TMB Macquarie Securities (Thailand) Limited
22 Dr. Vites Techangam - Deputy Managing Director - Technology & E-Business (appointed on October 1, 2017)	62	- Ph.D. in Computer Science, University of South Western Louisiana, USA - M.Sc. in Computer Science, University of California, USA - Bachelor of Engineering (Computer Engineering), Chulalongkorn University	-	-	2017 - Present	- Deputy Managing Director - Technology & E-Business	<u>Listed Companies:</u> Bangkok Expressway and Metro Public Company Limited Krung Thai Bank Public Company Limited
					Jun 2017 - Sep 2017	- Senior Executive Vice President - Managing Director, Special Projects	
					Jan 2015 - May 2017	- Senior Executive Vice President - Managing Director, Technology Group	
					Jun 2013 - Jan 2015	- Senior Executive Vice President - Managing Director, Electronic Banking & Cash Management Group	
					2011 - Jun 2013 2007 - 2010	- President - Vice President	<u>Other Company:</u> KTB Computer Services Co., Ltd.
23 Mr. Anawash Suwanarit - Deputy Managing Director - Business Development (appointed on January 1, 2018)	45	- Master of Telecommunications, Northwestern University, Illinois, USA - Bachelor of Engineering (Electrical Engineering), Chulalongkorn University	-	-	Jan 2019 - Present	- Deputy Managing Director - Business Development	<u>Listed Companies:</u> Bangkok Expressway and Metro Public Company Limited
					2017 - Dec 2017	- Assistant Managing Director - Acting Deputy Managing Director - Business Development	
					2015 - 2017	- Assistant Managing Director - Project Development	
					2012 - 2015	- Director of Special Project Management Division	Bangkok Metro Public Company Limited
					2019 - Present	- Director	<u>Other Companies:</u> Bangkok Metro Networks Limited
					2009 - 2012 2007 - 2009	- Deputy Managing Director - Operations Director	Metro Mall Development Limited
24 Miss Saranya Lertjiraprasert - General Manager of Accounting Division (appointed on December 30, 2015)	49	- Master of Business Administration, Ramkhamhaeng University - Higher Diploma in Auditing, Chulalongkorn University - Bachelor of Business Administration, Rajamangala University of Technology Thanyaburi	-	-	2015 - Present	- General Manager of Accounting Division	<u>Listed Company:</u> Bangkok Expressway and Metro Public Company Limited <u>Other Company:</u> - None -



## Information of Directors in the Subsidiaries and Related Companies

Names of Directors and Executives			The Company	Related Companies													
				1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Dr. Virabongsa	Ramangkura	2									2		2			
2	Mr. Plew	Trivisvavet	3,4		2,4	1,4,5	1	1,4	1	2	1	3	1,4	1,4	1,4	2	1
3	Mr. Vitoon	Tejatussanasoontorn	1			1											
4	Gen. Chetta	Thanajaro	1														
5	Dr. Annop	Tanlamai	1														
6	Mrs. Vallapa	Assakul	1														
7	Mr. Supong	Chayutsahakij	1,4		1,4								1	1	1		
8	M.L. Prasobchai	Kasemsant	1														
9	Mr. Phongsarit	Tantisuvanitchkul	1,4	2	1,4	5						1,4					
10	Dr. Sombat	Kitjalaksana	1,4	1	1,4							1,4					
11	Mrs. Payao	Marittanaporn	1,4		1,4							1					
12	Miss Arisara	Dharamadhaj <sup>(1)</sup>	1														
13	Mr. Panit	Dunnvatanachit	1														
14	Mrs. Natamon	Bunnak	1														
15	Mr. Wichan	Ekarintrakul	1														
16	Mr. Sanguan	Kunatinun	5														
17	Mrs. Sudruthai	Prommart	5														
18	Mr. Phakpoom	Thaweewittayarut	5														
19	Miss Panan	Tosuwanthaworn	5	1													
20	Mr. Witoon	Hatairatana	5	1													
21	Mr. Alvin	Gee	5														
22	Dr. Vites	Techangam	5														
23	Mr. Anawash	Suwanarit	5	1													

**Remarks:** 1. Definitions: 1 = Director; 2 = Chairman of the Board of Directors; 3 = Vice Chairman of the Board of Directors; 4 = Executive Director; 5 = Executive

2. <sup>(1)</sup> Miss Arisara Dharamadhaj was appointed as a director on April 26, 2019 to replace Mr. Werapong Suppasedsak who retired by rotation in the 2019 Annual Ordinary General Meeting of Shareholders.

3. Related Companies

- |  |   |
|--|---|
| 1 = Bangkok Metro Networks Limited                   | 2 = Northern Bangkok Expressway Company Limited |
| 3 = CH. Karnchang Public Company Limited             | 4 = Mahasiri Siam Co., Ltd.                     |
| 5 = CK Power Public Company Limited                  | 6 = CH. Karnchang Holding Co., Ltd.             |
| 7 = CH. Karnchang-Tokyu Construction Company Limited | 8 = CK. Office Tower Co., Ltd.                  |
| 9 = TTW Public Company Limited                       | 10 = SouthEast Asia Energy Limited              |
| 11 = Xayaburi Power Company Limited                  | 12 = Nam Ngum 2 Power Company Limited           |
| 13 = CH. Karnchang Real Estate Co., Ltd.             | 14 = Construction Material Supply Co., Ltd.     |

## Information of Directors in the Subsidiaries

Names of Directors		Northern Bangkok Expressway Company Limited	Bangkok Metro Networks Limited
1. Mr. Plew	Trivisvavet	Chairman of the Board of Directors and Executive Director	-
2. Mr. Supong	Chayutsahakij	Director and Executive Director	-
3. Mr. Phongsarit	Tantisuvanitchkul	Director and Executive Director	Chairman of the Board of Directors
4. Mrs. Tasanuch	Thammachot <sup>(1)</sup>	Director	-
5. Mrs. Payao	Marittanaporn	Director and Executive Director	-
6. Dr. Sombat	Kitjalaksana	Director and Executive Director	Director
7. Mr. Witoon	Hatairatana	-	Director
8. Mrs. Thipsuda	Yimwilai	-	Director
9. Mr. Anawash	Suwanarit <sup>(2)</sup>	-	Director
10. Miss Panan	Tosuwanthaworn	-	Director
11. Mr. Nattavut	Trivisvavet	-	Director

- Remarks:**
- Definitions: 1 = Director; 2 = Chairman of the Board of Directors; 3 = Vice Chairman of the Board of Directors.
  - Subsidiaries refer to material subsidiaries whose revenues exceed 10 percent of total revenues as per the consolidated statement of income of the latest accounting year.
  - <sup>(1)</sup> was appointed to hold such position on December 11, 2019 and resigned her position on January 10, 2020.
  - <sup>(2)</sup> was appointed to hold such position on April 22, 2019.

## Information of Head of the Internal Audit Unit and Head of the Compliance Unit

### 1. Head of the Internal Audit Unit

<b>Name-Surname</b>	Miss Vasana Wattananukulchai
<b>Position</b>	General Manager Internal Audit Office
<b>Education</b>	<ul style="list-style-type: none"> <li>- M.B.A., National Institute of Development Administration</li> <li>- Bachelor of Accountancy Bangkok University</li> </ul>
<b>Work Experience</b>	<p>2015 - Present     - General Manager of Internal Audit Office Bangkok Expressway and Metro Public Company Limited</p> <p>2008 - Dec 2015   - General Manager of Internal Audit Office Bangkok Expressway Public Company Limited</p> <p>2006 - 2007       - General Manager of Toll Revenue Division Bangkok Expressway Public Company Limited</p>
<b>Related Training</b>	<ul style="list-style-type: none"> <li>- Internal Auditing</li> <li>- Integrated Management ISO 9001, ISO 14001 and ISO 27001</li> <li>- Risk Management ISO 31000</li> <li>- Compliance Audit</li> <li>- Internal Control for Financial Reporting: Business Value-Added Strategy</li> <li>- Going from Good to Great in IT Governance and Outsourcing</li> <li>- In-depth Modern Risk Management Techniques</li> <li>- Anti-Corruption The Practical Guide (ACPG 15) Thai Institute of Directors Association (IOD)</li> <li>- Using Technology as an Efficient and Effective Auditing Tool</li> <li>- Employee Fraud Management Detection &amp; Prevention Workshop</li> </ul>
<b>Duties and Responsibilities</b>	<ol style="list-style-type: none"> <li>1. Internal audit work <ol style="list-style-type: none"> <li>1.1 Preparing the annual internal audit plan;</li> <li>1.2 Supervising the review of performance, adequacy, and appropriateness of the internal control system of the Company's work systems to ensure compliance with the plan;</li> <li>1.3 Concluding the results of the review, together with observations and suggestions for improvement for the audited works, as well as following up the suggested improvement;</li> <li>1.4 Reporting on the audit results to the management and the Audit Committee.</li> </ol> </li> <li>2. Works in support of the Audit Committee <ol style="list-style-type: none"> <li>2.1 Reviewing the annual and quarterly financial statements;</li> <li>2.2 Preparing information in support of the selection and nomination of the Company's auditor on a yearly basis;</li> <li>2.3 Reviewing the disclosure of information to ensure compliance with the rules and regulations and the good corporate governance principles;</li> <li>2.4 Assessing the adequacy of the Company's annual internal control system;</li> <li>2.5 Coordinating and organizing the Audit Committee's meetings.</li> </ol> </li> <li>3. Works in support of corporate risk management <ol style="list-style-type: none"> <li>3.1 Coordinating all internal work units to prepare and review the annual emergency and risk management plans as well as compiling the summary results thereof as the overall emergency and risk management plans;</li> <li>3.2 Following up and concluding the results of risk management from all relevant work units on a quarterly basis for presentation of the same to the management and the Corporate Governance and Risk Management Committee once a quarter;</li> <li>3.3 Coordinating and organizing the Corporate Governance and Risk Management Committee's meetings.</li> </ol> </li> <li>4. Work in respect of quality, environmental and information security management system activity <ol style="list-style-type: none"> <li>4.1 Following up the results of system audit conducted by the monitoring subcommittee and external certification agencies.</li> </ol> </li> <li>5. Other works as assigned by the Audit Committee.</li> </ol>

Remark: Any appointment, removal, and transfer of Head of the Internal Audit Unit shall be subject to the power of the Audit Committee.

**2. Head of the Compliance Unit**

<b>Name-Surname</b>	Mr. Phakpoom Thaweewittayarut		
<b>Position</b>	<ul style="list-style-type: none"> <li>- Deputy Managing Director, Administration</li> <li>- Company Secretary</li> </ul>		
<b>Education</b>	<ul style="list-style-type: none"> <li>- M.B.A., Thammasat University</li> <li>- Bachelor of Laws, Chulalongkorn University</li> <li>- Bachelor of Accountancy, Chulalongkorn University</li> </ul>		
<b>Work Experience</b>	2015 - Present	- Deputy Managing Director, Administration	Bangkok Expressway and Metro Public Company Limited
	Oct 2014 - Dec 2015	- Deputy Managing Director, Administration	Bangkok Expressway Public Company Limited
	2012 - Sep 2014	- Assistant Managing Director, Administration	Bangkok Expressway Public Company Limited
	Sep 2011 - Dec 2011	- Senior General Manager of Administration Division	Bangkok Expressway Public Company Limited
	2008 - Aug 2011	- Senior General Manager of Managing Director Office	Bangkok Expressway Public Company Limited
<b>Related Training</b>	<ul style="list-style-type: none"> <li>- Certified Public Accountant (CPA)</li> <li>- Certified Internal Auditor (CIA)</li> <li>- Director Certification Program (DCP 102/2008), Thai Institute of Directors Association</li> <li>- Company Secretary Program (CSP 9/2005), Thai Institute of Directors Association</li> <li>- Advances for Corporate Secretaries Program Thai Listed Companies Association</li> </ul>		
<b>Duties and Responsibilities</b>	<ol style="list-style-type: none"> <li>1. Determining the scope of the good corporate governance in line with the Company's structure in comparison with international practices or principles;</li> <li>2. Reviewing the appropriateness and adequacy of the Company's good corporate governance policy and code of ethics, as well as their revisions to meet the international practices for good corporate governance;</li> <li>3. Reviewing with the management as to compliance with the good corporate governance principles as specified by the Company for disclosure in the Annual Report;</li> <li>4. Conducting the procedures for evaluation of the performance of the Board of Directors, the Managing Directors, as well as concluding the results for presentation to the Board of Directors;</li> <li>5. Providing suggestions for the preparation of the Company's corporate governance development plan in compliance with the specified good corporate governance principles;</li> <li>6. Providing advice and suggestions on the good corporate governance practices to the Board of Directors;</li> <li>7. Performing any other functions as assigned by the Managing Directors.</li> </ol>		

# Independent Auditor's Report

To the Shareholders of Bangkok Expressway and Metro Public Company Limited

## Opinion

I have audited the accompanying consolidated financial statements of Bangkok Expressway and Metro Public Company Limited and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at 31 December 2019, and the related consolidated statements of income, comprehensive income, changes in shareholders' equity and cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies, and have also audited the separate financial statements of Bangkok Expressway and Metro Public Company Limited for the same period.

In my opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Bangkok Expressway and Metro Public Company Limited and its subsidiaries and of Bangkok Expressway and Metro Public Company Limited as at 31 December 2019, their financial performance and cash flows for the year then ended in accordance with Thai Financial Reporting Standards.

## Basis for Opinion

I conducted my audit in accordance with Thai Standards on Auditing. My responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of my report. I am independent of the Group in accordance with the Code of Ethics for Professional Accountants as issued by the Federation of Accounting Professions as relevant to my audit of the financial statements, and I have fulfilled my other ethical responsibilities in accordance with the Code. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

## Emphasis of matter

I draw attention to Note 42.1.11 to the financial statements regarding the dispute over a competing road with Udon Rattaya Expressway, which was ruled on by the Supreme Administrative Court in September 2018, in favour of the subsidiary. The dispute is only one of a number of disputes relating to the Expressway Concession Agreements of the Group and some of these disputes are still being considered by a panel, arbitral tribunals, and administrative courts, as described in Note 42 to the financial statements. The Group has negotiated with the relevant government agencies to reach a comprehensive resolution of these disputes, and on 18 February 2020, the Cabinet passed a resolution to amend the concession agreements in order to settle all of disputes between the Group and Expressway Authority of Thailand (EXAT). The Group and EXAT have agreed to settle all disputes and to cancel enforcement in accordance with the judgment of the Supreme Administrative Court described in Note 42.4 to the financial statements. On 20 February 2020, the Group and EXAT signed the Second Stage Expressway agreement (Amendment) and the Bang Pa-In - Pak Kret Expressway Project agreement (Amendment). At present, the Group and EXAT are in the process of settling all disputes and the subsidiary is in the process of cancelling enforcement in accordance with the judgment of The Supreme Administrative Court, in line with the above resolution. As a result of the cancellation of enforcement, the management has determined that the Group will not record any revenue in relation to the judgment.

My opinion is not modified in respect of this matter.

## Key Audit Matters

Key audit matters are those matters that, in my professional judgement, were of most significance in my audit of the financial statements of the current period. These matters were addressed in the context of my audit of the financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

I have fulfilled the responsibilities described in the Auditor's Responsibilities for the Audit of the Financial Statements section of my report, including in relation to these matters. Accordingly, my audit included the performance of procedures designed to respond to my assessment of the risks of material misstatement of the financial statements. The results of my audit procedures, including the procedures performed to address the matters below, provide the basis for my audit opinion on the accompanying financial statements as a whole.



Key audit matters and how audit procedures respond to each matter are described below.

#### *Capitalisation of project costs under construction*

As discussed in Notes 1 B.1 to the financial statements, as a result of the concession agreement made with the Mass Rapid Transit Authority of Thailand, the Company has significant project which are operating under concession agreement. As at 31 December 2019, project costs under construction, in the statement of financial position, amounted to Baht 12,748 million. The project costs under construction recorded as “intangible assets under concession agreement of the MRT Blue Line Project”, as disclosed in Note 19 to the financial statements. I considered the capitalisation of project costs as assets to be a significant transaction. In addition, management needed to exercise substantial judgment in determining whether the costs were direct costs and could be recognised as costs of acquiring intangible assets, and in deciding to cease capitalisation of borrowing costs when they did not meet the conditions stipulated under financial reporting standards.

I assessed the method used for recognition of project costs under construction by inquiring with management to gain an understanding of the basis applied and judgement exercised by management in capitalising expenses as project costs under construction, including the capitalisation of borrowing costs, and disclosures in the notes to the financial statements. I reviewed the minutes of meetings, contracts and documents related to the project costs under construction. I also selected and checked representative samples of supporting documents for expenses recognised as project costs under construction incurred during the year to determine whether the recognition met the criteria under financial reporting standards. In addition, I tested the calculation and the recording of the borrowing costs capitalised as project costs under construction and reviewed the disclosures in the notes to the financial statements.

#### *Disputes*

As discussed in Note 42.2.2 to the financial statements, a subsidiary was involved in a dispute, in which the Expressway Authority of Thailand demanded the subsidiary start the Phase II construction of the Udon Ratthaya Expressway, and pay compensation totaling Baht 1,587.7 million. As the dispute is in the consideration process of the Arbitral Tribunal, the management needs to exercise significant judgement in considering related laws and regulations to assess the outcome. Moreover, this dispute was included in the settlement and negotiation process for disputes related to the Second Stage Expressway (the Si Rat Expressway and Sector D) and the Bang Pa-in - Pak Kret Expressway (Udon Ratthaya Expressway) with relevant government agency, as described in Note 42.1.11 to the financial statements. However, the actual outcome of the disputes may differ from the assessment made by the management.

I inquired with the Group’s management and legal department regarding the monitoring of disputes. I also inquired into the details and progress of disputes and the methods applied by management to assess the outcomes of the disputes, assessed the judgment exercised by management in assessing the outcomes of the disputes by reading relevant conditions and provisions of agreements, together with the claims and objections submitted by the subsidiary and counterparties to the Arbitral Tribunal for the purpose of providing background into the disputes, as well as the dispute settlements. In addition, I made inquiry of and had discussion with the external legal consultant of the Group regarding the details, case status, objections to the disputes, the probability of outcomes and the results of the dispute negotiation and settlements and the progress of settlements of disputes. Moreover, I sent confirmation letters to the external legal consultant retained by the Group to obtain details of cases and their status. I also assessed the expertise, ability, independence and integrity of the external legal consultant in accordance with relevant auditing standards and determined whether the laws and conditions referred to by the external legal consulting related to the subsidiary’s disputes and the possibility of the dispute negotiation and settlements. In addition, I reviewed the disclosures relating to the disputes in the notes to the financial statements.

## **Other Information**

Management is responsible for the other information. The other information comprise the information included in annual report of the Group, but does not include the financial statements and my auditor’s report thereon. The annual report of the Group is expected to be made available to me after the date of this auditor’s report.

My opinion on the financial statements does not cover the other information and I do not express any form of assurance conclusion thereon.

In connection with my audit of the financial statements, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit or otherwise appears to be materially misstated.

When I read the annual report of the Group, if I conclude that there is a material misstatement therein, I am required to communicate the matter to those charged with governance for correction of the misstatement.

## **Responsibilities of Management and Those Charged with Governance for the Financial Statements**

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Thai Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

## **Auditor's Responsibilities for the Audit of the Financial Statements**

My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Thai Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Thai Standards on Auditing, I exercise professional judgement and maintain professional skepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide those charged with governance with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, I determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

I am responsible for the audit resulting in this independent auditor's report.



**Isaraporn Wisutthiyan**

Certified Public Accountant (Thailand) No. 7480

EY Office Limited

Bangkok: 26 February 2020

## Statement of Financial Position

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Statement of financial position

As at 31 December 2019

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
<b>Assets</b>					
<b>Current assets</b>					
Cash and cash equivalents	7	703,750,307	526,200,490	608,705,825	423,687,097
Current investments	8	1,157,746,702	1,282,474,987	1,136,558,315	1,268,648,199
Bank deposit for unearned fare box revenue	9	205,697,086	150,016,110	205,697,086	150,016,110
Trade and other receivables	10	481,786,671	514,055,818	474,295,921	525,351,600
Current portion of long-term loans to related party	6	-	-	18,000,000	18,000,000
Current portion of receivable under the concession agreement	11	1,649,683,274	1,649,683,274	1,649,683,274	1,649,683,274
Other current assets					
Prepaid expenses		83,599,640	78,021,423	78,383,203	73,597,627
Withholding tax deducted at source		128,148,743	-	128,148,743	-
Others		37,165,898	16,137,066	34,988,933	9,264,955
<b>Total current assets</b>		<b>4,447,578,321</b>	<b>4,216,589,168</b>	<b>4,334,461,300</b>	<b>4,118,248,862</b>
<b>Non-current assets</b>					
Long-term loans to and interest receivable					
from related parties, net of current portion	6	-	-	19,000,000	2,985,996,436
Receivable under the concession agreement, net of current portion	11	9,210,731,614	10,860,414,888	9,210,731,614	10,860,414,888
Investments in subsidiaries	12	-	-	633,109,867	363,869,867
Investments in associate	13	-	6,368,744,918	-	4,242,261,948
Other long-term investments	14	17,096,827,328	6,688,646,612	17,096,827,328	6,688,646,612
Investment properties	15	120,357,493	120,357,493	120,357,493	120,357,493
Building and equipment	16	311,376,837	323,936,668	269,338,043	282,540,765
Rights to operate expressway sectors	17	32,253,366,737	35,146,019,997	27,248,648,130	29,542,188,708
Rights to use sites for expressway construction	18	61,467,080	390,198,219	61,467,080	390,198,219
Intangible asset under concession agreement of					
the MRT Blue Line Project	19	42,338,899,443	35,427,555,680	41,998,706,257	35,089,506,008
Project cost of the MRT Chalong Ratchadham Line	20	644,950,810	654,691,451	644,950,810	654,691,451
Prepaid project remuneration	6	5,086,367,785	3,495,195,243	5,086,367,785	3,495,195,243
Other intangible assets	21	74,027,004	84,777,999	69,273,014	80,300,753
Deferred tax assets	35	6,951,994	6,312,191	-	-
Other non-current assets		43,867,537	47,468,811	12,629,280	18,021,920
<b>Total non-current assets</b>		<b>107,249,191,662</b>	<b>99,614,320,170</b>	<b>102,471,406,701</b>	<b>94,814,190,311</b>
<b>Total assets</b>		<b>111,696,769,983</b>	<b>103,830,909,338</b>	<b>106,805,868,001</b>	<b>98,932,439,173</b>

The accompanying notes are an integral part of the financial statements.

## Statement of Financial Position (Continued)

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Statement of financial position (continued)

As at 31 December 2019

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2019	2018	2019	2018
Liabilities and shareholders' equity					
Current liabilities					
Short-term loans from financial institutions	22	3,250,000,000	2,814,594,224	3,250,000,000	2,814,594,224
Trade and other payables	23	1,938,481,838	1,683,472,969	1,906,801,351	1,658,799,942
Current portion of long-term loans from financial institutions	24	3,166,120,069	3,041,760,069	2,541,760,069	3,041,760,069
Current portion of debentures	25	2,500,000,000	5,000,000,000	2,500,000,000	5,000,000,000
Unearned fare box revenue	9	212,234,424	163,117,129	212,234,424	163,117,129
Deposits on stored value ticket		79,946,797	65,265,286	79,946,797	65,265,286
Income tax payable		25,467,515	69,746,084	-	48,142,059
Provision for compensation for site acquisition cost	26	-	1,546,891,698	-	1,546,891,698
Other current liabilities					
Retention guarantees		56,227,880	27,735,192	51,920,211	24,474,876
Value added tax payable		61,238,396	76,044,732	50,202,207	64,873,941
Withholding tax deducted at source payable		99,118,066	90,510,248	95,264,199	87,258,577
Others		40,071,839	27,701,626	36,162,694	25,929,750
Total current liabilities		11,428,906,824	14,606,839,257	10,724,291,952	14,541,107,551
Non-current liabilities					
Long-term loans from financial institutions, net of current portion	24	21,745,560,898	18,373,779,608	18,739,920,898	16,773,779,608
Debentures, net of current portion	25	35,670,826,818	33,169,822,210	35,670,826,818	33,169,822,210
Derivative financial liabilities		112,685,174	21,808,675	112,685,174	21,808,675
Unearned revenue from advertising management rights	27	-	-	10,617,042	11,865,402
Provision for long-term employee benefits	28	886,390,430	686,898,092	862,915,385	664,553,903
Deferred tax liabilities	35	3,025,459,610	1,353,842,048	3,026,721,050	1,353,842,048
Other non-current liabilities		3,758,883	5,892,925	247,708	999,709
Total non-current liabilities		61,444,681,813	53,612,043,558	58,423,934,075	51,996,671,555
Total liabilities		72,873,588,637	68,218,882,815	69,148,226,027	66,537,779,106

The accompanying notes are an integral part of the financial statements.



## Statement of Financial Position (Continued)

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Statement of financial position (continued)

As at 31 December 2019

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
<b>Shareholders' equity</b>					
Share capital					
Registered					
15,285,000,000 ordinary shares of Baht 1 each		15,285,000,000	15,285,000,000	15,285,000,000	15,285,000,000
Issued and paid-up					
15,285,000,000 ordinary shares of Baht 1 each		15,285,000,000	15,285,000,000	15,285,000,000	15,285,000,000
Premium on ordinary shares		5,816,938,084	5,816,938,084	5,816,938,084	5,816,938,084
Capital deficit from change in shareholding in subsidiaries		(256,942,521)	(75,770,451)	-	-
Retained earnings					
Appropriated - statutory reserve	29	1,379,090,000	1,232,890,000	1,379,090,000	1,232,890,000
Unappropriated		15,052,068,973	12,133,780,735	7,501,046,895	7,095,892,083
Other components of shareholders' equity		1,504,565,153	1,105,927,958	7,675,566,995	2,963,939,900
Equity attributable to shareholders of the Company		38,780,719,689	35,498,766,326	37,657,641,974	32,394,660,067
Non-controlling interests of the subsidiaries		42,461,657	113,260,197	-	-
<b>Total shareholders' equity</b>		<b>38,823,181,346</b>	<b>35,612,026,523</b>	<b>37,657,641,974</b>	<b>32,394,660,067</b>
<b>Total liabilities and shareholders' equity</b>		<b>111,696,769,983</b>	<b>103,830,909,338</b>	<b>106,805,868,001</b>	<b>98,932,439,173</b>

The accompanying notes are an integral part of the financial statements.

## Income Statement

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Income statement

For the year ended 31 December 2019

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2019	2018	2019	2018
<b>Revenues</b>					
Revenue from expressway business		10,302,412,750	10,173,901,910	8,852,072,694	8,717,817,634
Revenue from rail business		5,022,100,349	4,736,002,363	5,022,100,349	4,736,002,363
Revenue from commercial development business	31	782,564,040	704,536,036	719,567,838	480,468,311
<b>Other income</b>					
Gains on sale of investments	8, 13	181,078,813	499,393,573	269,243,228	561,521,690
Gain on reclassification of investment	13	3,408,628,533	2,496,266,396	-	-
Interest income		392,633,384	450,618,868	438,519,210	556,402,806
Dividend income	6, 13.2	257,868,552	-	488,801,682	493,938,904
Others		56,312,532	26,601,445	238,547,217	171,687,166
<b>Total revenues</b>		<b>20,403,598,953</b>	<b>19,087,320,591</b>	<b>16,028,852,218</b>	<b>15,717,838,874</b>
<b>Expenses</b>					
Cost of expressway business		1,991,458,088	1,837,541,483	1,756,712,478	1,611,214,005
Cost of rail business		3,796,981,929	3,541,571,456	3,796,981,929	3,541,571,456
Cost of commercial development business		210,292,457	169,940,207	445,115,520	156,742,337
Amortisation on rights to operate completed expressway sectors and compensation for site acquisition cost	17, 18, 26	4,048,131,964	4,036,823,398	3,444,574,582	3,436,362,588
Amortisation on intangible asset under concession agreement of the MRT Blue Line Project	19	263,394,239	188,047,080	219,560,536	150,553,499
Selling expenses		139,622,388	111,421,323	87,025,129	63,909,367
Administrative expenses		1,196,759,191	1,252,317,805	1,113,362,485	1,179,367,366
<b>Total expenses</b>		<b>11,646,640,256</b>	<b>11,137,662,752</b>	<b>10,863,332,659</b>	<b>10,139,720,618</b>
<b>Profit before share of profit from investments in associates, finance cost and income tax expenses</b>					
Share of profit from investments in associates	13.2	172,910,981	432,797,238	-	-
<b>Profit before finance cost and income tax expenses</b>		<b>8,929,869,678</b>	<b>8,382,455,077</b>	<b>5,165,519,559</b>	<b>5,578,118,256</b>
Finance cost		(1,723,062,346)	(1,857,460,775)	(1,643,442,393)	(1,825,656,785)
<b>Profit before income tax expenses</b>		<b>7,206,807,332</b>	<b>6,524,994,302</b>	<b>3,522,077,166</b>	<b>3,752,461,471</b>
Income tax expenses	35	(1,754,942,103)	(1,189,146,759)	(598,451,284)	(645,031,218)
<b>Profit for the year</b>		<b>5,451,865,229</b>	<b>5,335,847,543</b>	<b>2,923,625,882</b>	<b>3,107,430,253</b>
<b>Profit attributable to:</b>					
Equity holders of the Company		5,434,819,325	5,317,038,037	2,923,625,882	3,107,430,253
Non-controlling interests of the subsidiaries		17,045,904	18,809,506	-	-
		<b>5,451,865,229</b>	<b>5,335,847,543</b>		
<b>Basic earnings per share</b>					
Profit attributable to equity holders of the Company	36	0.36	0.35	0.19	0.20

The accompanying notes are an integral part of the financial statements.

## Statement of Comprehensive Income

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Statement of comprehensive income

For the year ended 31 December 2019

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
<b>Profit for the year</b>		<b>5,451,865,229</b>	<b>5,335,847,543</b>	<b>2,923,625,882</b>	<b>3,107,430,253</b>
<b>Other comprehensive income</b>					
<i>Other comprehensive income to be reclassified to profit or loss in subsequent periods:</i>					
Unrealised gain (loss) from cash flow hedges, net of income tax		(72,701,199)	24,916,559	(72,701,199)	24,916,559
Unrealised gain on valuation of available-for-sale securities, net of income tax		482,287,536	1,112,425,756	4,784,328,294	2,981,386,840
Share of other comprehensive income of associate recognised due to reclassification of investment		(9,019,502)	(37,094,724)	-	-
Share of other comprehensive income from associates	13.2	(1,929,640)	33,256,127	-	-
Other comprehensive income to be reclassified to profit or loss in subsequent periods, net of income tax		398,637,195	1,133,503,718	4,711,627,095	3,006,303,399
<i>Other comprehensive income not to be reclassified to profit or loss in subsequent periods:</i>					
Actuarial gain (loss), net of income tax	28	(77,357,601)	10,711,355	(79,521,070)	10,711,355
Other comprehensive income not to be reclassified to profit or loss in subsequent periods, net of income tax		(77,357,601)	10,711,355	(79,521,070)	10,711,355
<b>Other comprehensive income for the year</b>		<b>321,279,594</b>	<b>1,144,215,073</b>	<b>4,632,106,025</b>	<b>3,017,014,754</b>
<b>Total comprehensive income for the year</b>		<b>5,773,144,823</b>	<b>6,480,062,616</b>	<b>7,555,731,907</b>	<b>6,124,445,007</b>
<b>Total comprehensive income attributable to:</b>					
Equity holders of the Company		5,755,875,433	6,461,253,110	7,555,731,907	6,124,445,007
Non-controlling interests of the subsidiaries		17,269,390	18,809,506	-	-
		<b>5,773,144,823</b>	<b>6,480,062,616</b>		

The accompanying notes are an integral part of the financial statements.

## Statement of Changes in Shareholder's Equity

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Statement of changes in shareholders' equity

For the year ended 31 December 2019

	Consolidated financial statements											(Unit: Baht)
	Equity attributable to the shareholders of the Company											
	Other components of shareholders' equity											
	Other comprehensive income											
	Capital deficit from change in shareholding in subsidiaries	Retained earnings	Unrealised gain (loss) from cash flow hedges	Unrealised gain on valuation of available-for-sale securities	Share of other comprehensive income from associates	Total other components of shareholders' equity	Total equity attributable to shareholders of the Company	Equity attributable to non-controlling interests of the subsidiaries	Total shareholders' equity			
Issued and paid-up share capital	Premium on ordinary shares	Appropriated - statutory reserve	Unappropriated									
15,285,000,000	5,816,938,084	1,077,490,000	8,948,481,343	(42,363,499)	-	14,787,739	31,088,184,965	111,113,208	31,179,298,173			
-	-	-	5,317,038,037	-	-	-	5,317,038,037	18,809,506	5,335,847,543			
-	-	-	10,711,355	24,916,559	1,112,425,756	(3,838,597)	1,144,215,073	-	1,144,215,073			
-	-	-	5,327,749,392	24,916,559	1,112,425,756	(3,838,597)	1,133,503,718	18,809,506	6,480,062,616			
-	-	-	-	-	-	-	(43,621,749)	(16,662,517)	(60,284,266)			
-	-	-	155,400,000	(155,400,000)	-	-	-	-	-			
-	-	-	(1,987,050,000)	-	-	-	(1,987,050,000)	-	(1,987,050,000)			
15,285,000,000	5,816,938,084	1,232,890,000	12,133,780,735	(17,446,940)	1,112,425,756	10,949,142	35,498,766,326	113,260,197	35,612,026,523			
15,285,000,000	5,816,938,084	1,232,890,000	12,133,780,735	(17,446,940)	1,112,425,756	10,949,142	35,498,766,326	113,260,197	35,612,026,523			
-	-	-	5,434,819,325	-	-	-	5,434,819,325	17,045,904	5,451,865,229			
-	-	-	(77,581,087)	(72,701,199)	482,287,536	(10,949,142)	321,056,108	223,486	321,279,594			
-	-	-	5,357,238,238	(72,701,199)	482,287,536	(10,949,142)	5,755,875,433	17,269,390	5,773,144,823			
-	-	-	-	-	-	-	(181,172,070)	(88,067,930)	(269,240,000)			
-	-	-	(146,200,000)	-	-	-	-	-	-			
-	-	-	(2,292,750,000)	-	-	-	(2,292,750,000)	-	(2,292,750,000)			
15,285,000,000	5,816,938,084	1,379,090,000	15,052,068,973	(90,148,139)	1,594,713,292	1,504,565,153	38,780,719,689	42,461,657	38,823,181,346			

The accompanying notes are an integral part of the financial statements.

## Statement of Changes in Shareholder's Equity

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Statement of changes in shareholders' equity

For the year ended 31 December 2019

	Separate financial statements								(Unit: Baht)
	Other components of shareholders' equity								
	Other comprehensive income								
	Retained earnings		Unrealised	Unrealised gain on valuation	Total other	Total			
Issued and paid-up share capital	Premium on ordinary shares	Appropriated - statutory reserve	Unappropriated	gain (loss) from cash flow hedges	of available-for-sale securities	shareholders' equity	shareholders' equity	shareholders' equity	
Balance as at 1 January 2018	15,285,000,000	5,816,938,084	1,077,490,000	6,120,200,475	(42,363,499)	-	(42,363,499)	28,257,265,060	
Profit for the year	-	-	-	3,107,430,253	-	-	-	3,107,430,253	
Other comprehensive income for the year	-	-	-	10,711,355	24,916,559	2,981,386,840	3,006,303,399	3,017,014,754	
Total comprehensive income for the year	-	-	-	3,118,141,608	24,916,559	2,981,386,840	3,006,303,399	6,124,445,007	
Transferred to statutory reserve (Note 29)	-	-	155,400,000	(155,400,000)	-	-	-	-	
Dividend paid (Note 37)	-	-	-	(1,987,050,000)	-	-	-	(1,987,050,000)	
Balance as at 31 December 2018	15,285,000,000	5,816,938,084	1,232,890,000	7,095,892,083	(17,446,940)	2,981,386,840	2,963,939,900	32,394,660,067	
Balance as at 1 January 2019	15,285,000,000	5,816,938,084	1,232,890,000	7,095,892,083	(17,446,940)	2,981,386,840	2,963,939,900	32,394,660,067	
Profit for the year	-	-	-	2,923,625,882	-	-	-	2,923,625,882	
Other comprehensive income for the year	-	-	-	(79,521,070)	(72,701,199)	4,784,328,294	4,711,627,095	4,632,106,025	
Total comprehensive income for the year	-	-	-	2,844,104,812	(72,701,199)	4,784,328,294	4,711,627,095	7,555,731,907	
Transferred to statutory reserve (Note 29)	-	-	146,200,000	(146,200,000)	-	-	-	-	
Dividend paid (Note 37)	-	-	-	(2,292,750,000)	-	-	-	(2,292,750,000)	
Balance as at 31 December 2019	15,285,000,000	5,816,938,084	1,379,090,000	7,501,046,895	(90,148,139)	7,765,715,134	7,675,566,995	37,657,641,974	

The accompanying notes are an integral part of the financial statements.



## Cash Flow Statement

### Bangkok Expressway and Metro Public Company Limited and its subsidiaries

#### Cash flow statement

For the year ended 31 December 2019

(Unit: Baht)

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>Cash flows from operating activities</b>				
Profit before tax	7,206,807,332	6,524,994,302	3,522,077,166	3,752,461,471
Adjustments to reconcile profit before tax to net cash provided by (paid from) operating activities:				
Amortisation and depreciation	4,026,462,692	3,866,567,954	3,362,011,432	3,212,916,480
Reversal of allowance for doubtful debt	(3,971,546)	(272,590)	-	-
Revenue recognition of unearned revenue from advertising management rights	-	-	(1,248,360)	(1,248,360)
Gains on sale of investments	(181,078,813)	(499,393,573)	(269,243,228)	(561,521,690)
Unrealised gain on change in value of investments	(24,997,738)	(10,442,237)	(24,962,055)	(10,427,852)
Gain on reclassification of investment	(3,408,628,533)	(2,496,266,396)	-	-
Gain on disposals/write-off of equipment and intangible asset under concession agreement of the MRT Blue Line Project	(1,331,425)	(1,639,242)	(1,328,045)	(696,555)
Project remuneration expense	393,651,735	355,662,416	393,651,735	355,662,416
Compensation for site acquisition cost	397,839,441	464,364,839	397,839,441	464,364,839
Provision for long-term employee benefits	102,201,396	220,232,028	98,366,202	213,502,447
Share of profit from investments in associates	(172,910,981)	(432,797,238)	-	-
Unrealised loss on exchange rate	276	102,702	276	102,702
Interest income	(392,633,384)	(450,618,868)	(438,519,210)	(556,402,806)
Dividend income	(257,868,552)	-	(488,801,682)	(493,938,904)
Interest expenses	1,670,220,735	1,662,162,353	1,593,730,537	1,635,492,763
Financial fees	-	98,665,000	-	98,665,000
Profit from operating activities before changes in operating assets and liabilities	9,353,762,635	9,301,321,450	8,143,574,209	8,108,931,951
Operating assets (increase) decrease				
Bank deposit for unearned fare box revenue	(55,680,976)	(150,016,110)	(55,680,976)	(150,016,110)
Trade and other receivables	(7,760,875)	(43,104,677)	7,054,111	(61,941,675)
Receivable under the concession agreement	1,649,683,274	1,649,683,275	1,649,683,274	1,649,683,275
Other current assets	(11,393,416)	85,434,222	(15,295,741)	86,187,884
Other non-current assets	(3,048,985)	(3,438,527)	5,392,640	(869,124)
Cash paid for project remuneration	(1,894,886,245)	(1,350,459,625)	(1,894,886,245)	(1,350,459,625)
Operating liabilities increase (decrease)				
Trade payables and other payables	181,841,193	21,244,663	176,731,078	57,066,771
Unearned fare box revenue	49,117,295	24,855,415	49,117,295	24,855,415
Deposits on stored value ticket	14,681,511	10,897,739	14,681,511	10,897,739
Other current liabilities	34,359,081	27,513,762	30,706,865	42,792,229
Other non-current liabilities	(2,134,042)	(14,318,960)	(752,001)	(751,999)
Cash paid for long-term employee benefits	(11,000,415)	(10,325,738)	(11,000,415)	(9,692,030)
Cash paid for compensation for site acquisition cost	(1,616,000,000)	(1,600,000,000)	(1,616,000,000)	(1,600,000,000)
Net cash flows from operating activities	7,681,540,035	7,949,286,889	6,483,325,605	6,806,684,701
Cash received from interest income	392,634,064	452,272,207	391,818,742	451,680,807
Cash paid for income tax	(332,798,583)	(334,491,602)	(259,889,590)	(250,907,959)
<b>Net cash flows from operating activities</b>	<b>7,741,375,516</b>	<b>8,067,067,494</b>	<b>6,615,254,757</b>	<b>7,007,457,549</b>

The accompanying notes are an integral part of the financial statements.

## Cash Flow Statement (Continued)

### Bangkok Expressway and Metro Public Company Limited and its subsidiaries

#### Cash flow statement (continued)

For the year ended 31 December 2019

(Unit: Baht)

	<b>Consolidated financial statements</b>		<b>Separate financial statements</b>	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
<b>Cash flows from investing activities</b>				
Cash received from sales of current investments	17,447,889,696	13,949,038,431	15,920,389,696	12,412,038,431
Cash paid for purchase of current investments	(17,290,610,050)	(13,767,671,038)	(15,756,208,983)	(12,228,710,197)
Cash paid for purchase of investments in subsidiary	(269,240,000)	(60,284,267)	(269,240,000)	(60,284,267)
Cash received from sales of investments in associates	398,386,200	540,351,710	398,386,200	540,351,710
Cash received from sales of other long-term investments	78,219,853	2,075,443,606	78,219,853	2,075,443,606
Increase in other long-term investments	(400,000,000)	(107,436,375)	(400,000,000)	(107,436,375)
Cash received from long-term loans to related parties	-	-	2,474,692,518	1,644,016,650
Cash received from sales of equipment and intangible asset under concession agreement of the MRT Blue Line Project	1,695,689	3,215,729	1,692,278	2,080,600
Purchase of equipment	(46,552,497)	(23,042,080)	(31,665,004)	(13,351,832)
Cash received from interest income	-	4,676,477	539,004,884	449,535,434
Cash received from dividend income	488,801,682	493,938,904	488,801,682	493,938,904
Cash paid for project cost of the MRT Chalong Ratchadham Line	(29,307,405)	(390,955)	(29,307,405)	(390,955)
Cash paid for intangible asset under concession agreement of the MRT Blue Line Project	(6,840,809,764)	(9,963,513,656)	(6,793,327,698)	(9,933,491,841)
Cash paid for expressway construction	(706,974,948)	(284,809,045)	(704,364,628)	(284,809,045)
Interest expenses capitalised as cost of projects	(378,623,301)	(181,764,061)	(378,623,301)	(181,764,061)
Increase in other intangible assets	(15,722,417)	(30,649,444)	(14,134,917)	(29,079,944)
<b>Net cash flows used in investing activities</b>	<u>(7,562,847,262)</u>	<u>(7,352,896,064)</u>	<u>(4,475,684,825)</u>	<u>(5,221,913,182)</u>
<b>Cash flows from financing activities</b>				
Cash received from short-term loan from financial institution	4,882,000,000	10,000,000,000	4,882,000,000	10,000,000,000
Repayment of short-term loans from financial institutions	(4,448,000,000)	(10,816,000,000)	(4,448,000,000)	(10,816,000,000)
Cash received from long-term loans from financial institutions	6,530,000,000	5,300,000,000	4,500,000,000	4,200,000,000
Repayment of long-term loans from financial institutions	(3,041,760,069)	(13,475,010,069)	(3,041,760,069)	(13,475,010,069)
Cash received from debentures	5,000,000,000	10,000,000,000	5,000,000,000	10,000,000,000
Cash paid for redemption of debentures	(5,000,000,000)	-	(5,000,000,000)	-
Cash paid for financial fees	(11,516,532)	(181,553,849)	(11,516,532)	(181,553,849)
Interest paid	(1,618,951,836)	(1,655,419,747)	(1,542,524,603)	(1,629,179,747)
Dividend paid	(2,292,750,000)	(1,987,050,000)	(2,292,750,000)	(1,987,050,000)
<b>Net cash flows used in financing activities</b>	<u>(978,437)</u>	<u>(2,815,033,665)</u>	<u>(1,954,551,204)</u>	<u>(3,888,793,665)</u>
<b>Net increase (decrease) in cash and cash equivalents</b>	<u>177,549,817</u>	<u>(2,100,862,235)</u>	<u>185,018,728</u>	<u>(2,103,249,298)</u>
Cash and cash equivalents at beginning of year	<u>526,200,490</u>	<u>2,627,062,725</u>	<u>423,687,097</u>	<u>2,526,936,395</u>
<b>Cash and cash equivalents at end of year</b>	<u>703,750,307</u>	<u>526,200,490</u>	<u>608,705,825</u>	<u>423,687,097</u>

#### Supplemental cash flows information

Non-cash items consist of:

Increase in payable from expressway construction	50,664,315	13,607,477	48,829,935	13,607,477
Increase in accrued interest expenses capitalised as cost of projects	17,749,896	48,098,650	17,749,896	48,098,650

The accompanying notes are an integral part of the financial statements.

**Bangkok Expressway and Metro Public Company Limited and its subsidiaries****Notes to consolidated financial statements****For the year ended 31 December 2019****1. General information**

Bangkok Expressway and Metro Public Company Limited (“the Company”) is a public company incorporated from an amalgamation on 30 December 2015 and domiciled in Thailand. The Company’s major shareholder is the CH. Karnchang Public Company Limited, which was incorporated in Thailand and its registered address is 587 Sutthisarn Road, Ratchacaphisek, Dindaeng District, Bangkok. The Company has four branches.

The Company is principally engaged in the construction and management of expressways, the operation of metro services and commercial development. Details are as follows:

**A. Construction and management of expressways**

The Group has been granted concessions by the Expressway Authority of Thailand (“EXAT”) for the construction and management of expressways, as follows:

**A.1 The Si Rat Expressway under the Second Stage Expressway agreement (Sector A, Sector B and Sector C) and the Extension of the Second Stage Expressway agreement (Sector D).**

The Company, as a concessionaire, invested in the design, construction and management of expressways. These consists of 4 sectors: Sector A (Rama IX-Ratchadapisek), Sector B (Phayathai-Bangkhlo), Sector C (Ratchadapisek-Chaeng Watthana) and Sector D (Rama IX-Srinagarindra). The concession periods are 30 years commencing on 1 March 1990 for Sector A, Sector B and Sector C, and on 17 April 1997 for Sector D. The EXAT has the rights to collect all toll revenues and is to compensate the Company in the form of toll revenue sharing at the rates specified in the concession agreement, throughout the concession period. The Company has the rights to extend the concession for two further periods of 10 years each, depending upon terms and conditions that are to be agreed between the parties.

On 18 February 2020, the Cabinet passed a resolution to amend the concession agreements in order to settle all of the disputes described in Note 42 to the financial statements. On 20 February 2020, the Company and EXAT signed the Second Stage Expressway Agreement (Amendment), of which the substance are as follows:

- The terms of the agreements for both the Second Stage Expressway (Sector A, Sector B, and Sector C) and the Extension of the Second Stage Expressway (Sector D) are extended until 31 October 2035, with the Company retaining all rights to extend the concession specified in the existing agreements. The remaining periods of the existing agreements are 4 years and 4 months for the Second Stage Expressway agreement and 11 years and 6 months for the Extension of the Second Stage Expressway Agreement (Sector D) commencing from the end of the amended agreements.
- The toll rates are to be increased every 10 years by fixed amounts specified in the agreements, commencing from 1 September 2018.

A.2 The Si Rat - Outer Ring Road Expressway Project, under a concession agreement in respect of the investment, design, construction, management, operation and maintenance.

The Company, as concessionaire, invested in the design, construction, management, operation and maintenance of the Si Rat - Outer Ring Road Expressway Project, and is also responsible for expressway operation expenses throughout the concession period, which is for 30 years commencing on 15 December 2012. The Company has the rights to collect all toll revenue and all other related income, and is to compensate the EXAT in the form of toll revenue sharing at the rates specified in the concession agreement, throughout the concession period.

The Si Rat - Outer Ring Road Expressway started operation on 22 August 2016.

On 19 July 2017, the Company signed the additional amendment agreement for design and construction of the Connection between the Si Rat-Outer Ring Road Expressway and the north of Si Rat Expressway (heading to Chaeng Watthana Road) with the EXAT with a term of 18 months.

On 30 September 2018, the Company officially started operation the Connection between the Si Rat-Outer Ring Road Expressway and the north of Si Rat Expressway (heading to Chaeng Watthana Road).

A.3 The Udon Rattaya Expressway Project under the Bang Pa-In - Pak Kret Expressway Agreement in respect of the construction and management of the expressway project of a subsidiary.

The Subsidiary, as concessionaire, invested in the design, construction and management of the expressway, together with related business under a 30-year concession commencing on 27 September 1996. The EXAT has the rights to collect all toll revenue and is to compensate the Subsidiary in the form of revenue sharing at the rates specified in the concession agreement, throughout the concession period. The Subsidiary has the rights to extend the concession for two further periods of 10 years each, depending upon terms and conditions that are to be agreed between the parties.

On 18 February 2020, the Cabinet passed a resolution to amend the concession agreements in order to settle all the disputes described in Note 42 to the financial statements. On 20 February 2020, the subsidiary and EXAT signed the Bang Pa-In - Pak Kret Expressway Project Agreement (Amendment), of which the substance is as follows:

- The Bang Pa-In - Pak Kret Expressway Project Agreement is extended until 31 October 2035, with the subsidiary retaining all rights to extend the concession specified in the existing agreement. The remaining period of the existing agreement is 10 years and 11 months, commencing from the end of the amended agreement.
- The toll rates are to be increased every 10 years by fixed amounts specified in the agreement, commencing from 1 November 2018.

B. Operation of metro services

The Company received concessions from the Mass Rapid Transit Authority of Thailand (“MRTA”) to operate metro services, as follows:

B.1 The MRT Blue Line Project.

The Company, as concessionaire of the MRTA Initial System Project - Chaloem Ratchamongkhon Line (The MRT Blue Line: Hua Lamphong Station - Bang Sue Station) under the MRTA Initial System Project - Chaloem Ratchamongkhon Line, invested in M&E Equipment and is to operate and maintain the MRTA Initial System for a concession period of 25 years, commencing on 2 July 2004.



On 28 March 2017, the Company was selected as concessionaire of the MRT Blue Line Concession Agreement, in accordance with a cabinet resolution. On 31 March 2017, the Company signed the MRT Blue Line Concession Agreement for a concession period of approximately 33 years under the Build, Transfer and Operate basis, with the MRTA. The MRT Blue Line Project consists of the MRTA Initial System Project - Chaloem Ratchamongkhon Line: Hua Lamphong Station-Bang Sue Station and the MRT Blue Line Extension: Hua Lamphong Station-Lak Song Station and Bang Sue Station-Tha Phra Station.

Under the MRT Blue Line Concession Agreement, a concession agreement with the MRTA for the MRTA Initial System Project - Chaloem Ratchamongkhon Line is deemed to be part of the MRT Blue Line Concession Agreement, and only the clauses relating the rights, duties and provisions with respect to fares, fare rates and payment of remuneration to the MRTA will remain in effect until the end of the concession agreement with the MRTA for the MRTA Initial System Project - Chaloem Ratchamongkhon Line.

The Company, as concessionaire of the MRT Blue Line Concession Agreement is responsible for the supply, installation and testing of the M&E Systems of the MRT Blue Line Extension Project (Phase 1 of the concession, which has a terms of 36 months from the commencement date of work by the MRTA) and operation of the Through Operation systems of the MRT Blue Line Project (Phase 2 of the concession, which has a term of 30 years from the commencement date of the revenue-generating service on all sectors). The Company has rights, duties and obligations to claim, collect, and retain all fares, and to generate revenue from commercial development, and is responsible for all investment, payment of operating costs, and payment of remuneration to the MRTA in accordance with the Concession.

The Company is required to gradually commence operation of the MRT Blue Line Extension Project in 3 sectors.

Sector 1: Bang Sue Station-Tao Poon Station within 15 August 2017.

Sector 2: Hua Lamphong Station-Lak Song Station within 30 months.

Sector 3: Tao Poon Station-Tha Phra Station within 36 months.

On 11 August 2017, the Company officially commenced operation of the MRT Blue Line Extension Project: Bang Sue Station-Tao Poon Station.

On 29 September 2019, the Company officially commenced operation of the MRT Blue Line Extension Project: Hua Lamphong Station-Lak Song Station.

B.2 The MRT Chalong Ratchadham Line Project (Bang Yai-Rat Burana, Bang Yai-Bang Sue Section (Khlomg Bang Phai Station-Tao Poon Station)) (the "MRT Purple Line Project") Contract 4: Concession for Supply of M&E Systems and O&M Services.

The Company, as concessionaire, invested in the M&E Systems and rolling stock. In addition, the Company provides operation and maintenance services. The MRTA has the rights to collect fare box revenues and commercial revenues from the use of all civil infrastructure and the M&E Systems, and is to compensate the Company in the form of M&E Systems equipment costs (Phase I) and operation and maintenance service fees (Phase II). Details are as below:

Phase I: Design and Build

The Company is to design, supply, install and test the M&E Systems within 1,200 days after the agreement date (4 September 2013). In return the Company is to receive remuneration and interest totaling Baht 20,011 million from the MRTA in the form of monthly payments over a period of 10 years, beginning from the date of the Commissioning Certificate.

On 6 August 2016, the Company delivered the M&E Systems and Rolling Stocks under Phase 1 of the concession agreement to the MRTA. The Company has recorded amounts receivable from the MRTA under the account of receivable under the concession agreement, as described in Note 11 to the financial statements.

Phase II: O&M services

The Company is responsible for the operation of metro services, including repair, maintenance and improvement of all equipment and materials related to the civil infrastructure works and M&E Systems from the date specified in the Commissioning Certificate until the end of the concession period. In addition, the Company shall transfer rights of civil infrastructure and M&E Systems to the MRTA when the concession agreement ends. The compensation for Phase II under the agreement, amounting to approximately Baht 57,208 million (excluding escalations for inflation and adjustments to reflect electricity prices), will be paid to the Company on a monthly basis until the expiration of the concession agreement (3 September 2043).

On 6 August 2016, the Company is delivered the operating civil infrastructure and M&E Systems equipment of the MRT Chalong Ratchadham Line from the MRTA. On that day, the operation of the MRT Chalong Ratchadham Line Project officially started.

- C. Commercial development business, which consists of commercial developments related to the expressways and the operation of metro services.

On 1 October 2018, the Company and Bangkok Metro Network Limited (a subsidiary company) agreed to terminate and replace the amendment to the commercial development rights agreement dated 11 March 2017, and terminate the contract granting commercial development rights to manage advertising services through the Passenger Information Display System (PIDs) dated 1 January 2010. Under the agreements, the Company transferred the commercial development rights to provide services relating to the MRTA Initial System Project - Chaloem Ratchamongkhon Line and to manage advertising services through PIDs in the MRTA Initial System Project - Chaloem Ratchamongkhon Line to the subsidiary. It also had the rights to receive commercial development revenue and share the revenue with the Company at the rates specified in the agreement. On the same day, the Company and the subsidiary entered into a management agreement for commercial development of the MRT Blue Line Project (the MRTA Initial System Project - Chaloem Ratchamongkhon Line and the MRT Blue Line Extension Project). Under this agreement, the Company authorised the subsidiary to act on its behalf in managing commercial development and advertising services through the Passenger Information Display System (PIDs) for the MRT Blue Line Project. The contract will expire in July 2029, and the Company is to pay a management fee to the subsidiary based on the specified rate. Therefore, for the period from 1 October 2018, the Company has recorded revenue and expenses relating to commercial development of the MRT Blue Line Project in profit or loss of the Company.

## **2. Basis of preparation**

- 2.1 The financial statements have been prepared in accordance with Thai Financial Reporting Standards enunciated under the Accounting Profession Act B.E. 2547 and their presentation has been made in compliance with the stipulations of the Notification of the Department of Business Development dated 11 October 2016, issued under the Accounting Act B.E. 2543.

The financial statements in Thai language are the official statutory financial statements of the Company. The financial statements in English language have been translated from the Thai language financial statements.

The financial statements have been prepared on a historical cost basis except where otherwise disclosed in the accounting policies.

## 2.2 Basis of consolidation

- a) The consolidated financial statements include the financial statements of Bangkok Expressway and Metro Public Company Limited (“the Company”) and its subsidiaries (“the subsidiaries”). Details are as follows:

Company's name	Nature of business	Country of incorporation	Proportion of Shareholding	
			<u>2019</u> (Percent)	<u>2018</u> (Percent)
Northern Bangkok Expressway Company Limited	Operation and management of Bang Pa-In - Pak Kret Expressway project	Thailand	99.99	99.99
Bangkok Metro Networks Limited	Management on commercial development of the MRT project	Thailand	89.67	69.67

As described in Note 12 to the financial statements, the Company made an additional investment in 20 percent of the issued and fully paid up share capital of Bangkok Metro Network Limited in March 2019.

- b) The Company is deemed to have control over an investee or subsidiaries if it has rights, or is exposed, to variable returns from its involvement with the investee, and it has the ability to direct the activities that affect the amount of its returns.
- c) Subsidiaries are fully consolidated, being the date on which the Company obtains control, and continue to be consolidated until the date when such control ceases.
- d) The financial statements of the subsidiaries are prepared using the same significant accounting policies as the Company.
- e) Material balances and transactions between the Group have been eliminated from the consolidated financial statements.
- f) Non-controlling interests represent the portion of profit or loss and net assets of the subsidiaries that are not held by the Company and are presented separately in the consolidated profit or loss and within equity in the consolidated statement of financial position.

- 2.3 The separate financial statements, which present investment in subsidiaries and associate presented under the cost method.

### 3 New financial reporting standards

#### (a) Financial reporting standards that became effective in the current year

During the period, the Group has adopted the revised (revised 2018) and new financial reporting standards and interpretations which are effective for fiscal years beginning on or after 1 January 2019. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment and providing accounting guidance for users of the standards. The adoption of these financial reporting standards does not have any significant impact on the Group's financial statements. However, the new standard involves changes to key principles, which are summarised below:

##### **IFRS 15 Revenue from Contracts with Customers**

IFRS 15 supersedes the following accounting standards together with related interpretations.

TAS 11 (revised 2017)	Construction Contracts
TAS 18 (revised 2017)	Revenue
TSIC 31 (revised 2017)	Revenue - Barter Transactions Involving Advertising Services
TFRIC 13 (revised 2017)	Customer Loyalty Programmes
TFRIC 15 (revised 2017)	Agreements for the Construction of Real Estate
TFRIC 18 (revised 2017)	Transfers of Assets from Customers

Entities are to apply this standard to all contracts with customers unless those contracts fall within the scope of other standards. The standard establishes a five-step model to account for revenue arising from contracts with customers, with revenue being recognised at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer. The standard requires entities to exercise judgement, taking into consideration all of the relevant facts and circumstances when applying each step of the model.

This standard does not have any significant impact on the Group's financial statements.

#### (b) Financial reporting standards that will become effective for fiscal years beginning on or after 1 January 2020

The Federation of Accounting Professions issued a number of new and revised financial reporting standards and interpretations, which are effective for fiscal years beginning on or after 1 January 2020. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment and providing accounting guidance for users of the standards except the following new standards which involve changes to key principles, which are summarised below.



### Financial reporting standards related to financial instruments

A set of TFRSs related to financial instruments consists of five accounting standards and interpretations, as follows:

Financial reporting standards:

TFRS 7	Financial Instruments: Disclosures
TFRS 9	Financial Instruments

Accounting standard:

TAS 32	Financial Instruments: Presentation
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Financial Reporting Standard Interpretations:

TFRIC 16	Hedges of a Net Investment in a Foreign Operation
TFRIC 19	Extinguishing Financial Liabilities with Equity Instruments

These TFRSs related to financial instruments make stipulations relating to the classification of financial instruments and their measurement at fair value or amortised cost (taking into account the type of instrument, the characteristics of the contractual cash flows and the Company's business model), calculation of impairment using the expected credit loss method, and hedge accounting. These include stipulations regarding the presentation and disclosure of financial instruments. When the TFRSs related to financial instruments are effective, some accounting standards, interpretations and guidance which are currently effective will be cancelled.

The management of the Group expects the adoption of these accounting standards to result in the following adjustments.

- Classification and measurement of investments in available-for-sale securities in listed companies
- Classification and measurement of investments in equity instruments of non-listed companies.
- Recognition of credit losses of trade receivables.

The management of the Group is currently evaluating the impact of these standards on the financial statements in the year when they are adopted.

## **TFRS 16 Leases**

TFRS 16 supersedes TAS 17 Leases together with related Interpretations. The standard sets out the principles for the recognition, measurement, presentation and disclosure of leases, and requires a lessee to recognise assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is low value.

Accounting by lessors under TFRS 16 is substantially unchanged from TAS 17. Lessors will continue to classify leases as either operating or finance leases using similar principles to those used under TAS 17.

The Group plans to adopt TFRS 16 using the modified retrospective method of adoption of which the cumulative effect is recognised as an adjustment to the retained earnings as at 1 January 2020, and the comparative information was not restated.

The management of the Group believes that adoption of this standard will not have any significant impact on the financial statements.

## **4. Significant accounting policies**

### **4.1 Revenue and expense recognition**

#### **a) Toll revenue recognition**

Toll revenue represent the invoiced value, excluding value added tax, at a point in time upon completion of the service.

#### **b) Toll revenue sharing recognition**

Toll revenue sharing represent the invoiced value, excluding value added tax, on accrual basis.

#### **c) Fare box revenue recognition**

Smart card and smart token sales are recognised as revenue at a point in time upon completion of the service. Prepaid value in stored value smart cards is recorded as unearned fare box revenue in current liabilities in the statement of financial position.

#### **d) Revenue recognition from provision of operating services**

Revenue from provision of operating services is recognised over time when services have been rendered, excluding value added tax. Service rate charged is in accordance with rates stipulated in the agreement.

#### **e) Revenue recognition from commercial development revenue**

Commercial development revenue is recognised over time when services have been rendered.

**f) Financial revenue recognition**

Financial revenue is revenue from receivable under the concession agreement and is realised over the installment period using the effective interest rate method. Revenue is recognised when installments come due, regardless of whether collection is made, and is presented under interest income in profit and loss.

**g) Other revenues and expenses recognition****Interest income**

Interest income is recognised on an accrual basis based on the effective interest rate.

**Dividends**

Dividends are recognised when the rights to receive the dividends is established.

**Other expenses**

Expenses are recognised on accrual basis.

**4.2 Cash and cash equivalents**

Cash and cash equivalents consist of cash in hand and cash at banks, and all highly liquid investments with an original maturity of three months or less and not subject to withdrawal restrictions.

**4.3 Trade and other receivables**

Trade and other receivables are stated at the net realisable value. Allowance for doubtful accounts is provided for the estimated losses that may be incurred in collection of receivables. The allowance is generally based on collection experience and analysis of debt aging.

**4.4 Receivable under the concession agreement**

Receivable under the concession agreement is stated at the contract value net of unrealised financial revenue.

**4.5 Investments**

- a) Investments in securities held for trading are stated at fair value. Changes in the fair value of these securities are recorded in profit or loss.
- b) Investments in available-for-sale securities are stated at fair value. Changes in the fair value of these securities are recorded in other comprehensive income, and will be recorded in profit or loss when the securities are sold.
- c) Investments in debt securities, both due within one year and expected to be held to maturity, are recorded at amortised cost. The premium/discount on debt securities is amortised/accreted by the effective rate method with the amortised/accreted amount presented as an adjustment to the interest income.

- d) Investment in non-marketable equity securities, which the Company classifies as other investments, are stated at cost net of allowance for impairment loss (if any).
- e) Investment in associates are accounted for in the consolidated financial statements using the equity method.
- f) Investments in subsidiaries and associates are accounted for in the separate financial statements using the cost method.

The fair value of marketable securities is based on the latest bid price of the last working day of the year. The fair value of debt instruments is determined based on the required rate of return or the yield rates quoted by the Thai Bond Market Association. The fair value of unit trusts is determined from their net asset value.

The weighted average method is used for computation of the cost of investments.

In the event the Group reclassifies investments from one type to another, such investments will be readjusted to their fair value as at the reclassification date. The difference between the carrying amount of the investments and the fair value on the date of reclassification are recorded in profit or loss or recorded as other components of shareholders' equity, depending on the type of investment that is reclassified.

On disposal of an investment, the difference between net disposal proceeds and the carrying amount of the investment is recognised in profit or loss.

#### 4.6 Investment properties

Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, investment properties are stated at cost less accumulated depreciation and allowance for loss on impairment (if any).

No depreciation has been provided for land awaiting sales.

On disposal of investment properties, the difference between the net disposal proceeds and the carrying amount of the asset is recognised in profit or loss in the period when the asset is derecognised.

#### 4.7 Building and equipment and depreciation

Building and equipment are stated at cost less accumulated depreciation and allowance for loss on impairment of assets (if any).

Depreciation of building and equipment is calculated by reference to their costs on the straight-line basis over the following estimated useful lives:

Building and construction improvement	5 years, 20 years
Furniture, fixture and equipment	3 - 5 years
Vehicles	5 - 16 years

Depreciation is included in determining income. No depreciation has been provided for assets under installations.

An item of building and equipment is derecognised upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on disposal of an asset is included in profit or loss when the asset is derecognised.

#### 4.8 Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the respective assets. All other borrowing costs are expensed in the period they are incurred. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

#### 4.9 Amortisation of rights to operate expressway sectors and amortisation

Rights to operate expressway sectors represent the cost of construction of the Second Stage Expressway System, the Si Rat - Outer Ring Road Expressway and the Bang Pa-In - Pak Kret Expressway. It is stated at cost less accumulated amortisation and allowance for loss on impairment (if any).

The rights to operate completed expressway sectors are amortised as expenses in income statements with the unit of throughput method over the concession period. The amortisation of rights to operate expressway sectors is charged to profit or loss and calculated as follows:

Amortisation for the year = Net rights to operate expressway sectors x Percentage of the number of vehicle volume for the year

Percentage of the number of vehicle volume for the year = 
$$\frac{\text{Current year's number of actual vehicle volume}}{(\text{Current year's number of actual vehicle volume} + \text{Projected vehicle volume after current year to the remaining years of the agreement})}$$

Net rights to operate expressway sectors = Total actual cost of rights to operate expressway sectors - Accumulated amortisation

No amortisation is provided for project costs under construction.



#### 4.10 Rights to use sites for expressway and amortisation

The Company initially recorded the rights to use sites for expressway at cost, equal to the present value of future compensation for site acquisition cost to be paid to the EXAT under the Second Stage Expressway System agreement. Following initial recognition, the rights are carried at cost less accumulated amortisation and allowance for loss on impairment (if any).

The Company amortises the rights to use sites for expressway as an expense in the income statement in proportion to the number of actual vehicle volume. The Company reviews for impairment of the asset whenever there are indications of impairment and reviews the amortisation method at least once per year.

#### 4.11 Intangible assets under concession agreement of the MRT Blue Line Project and amortisation

Intangible assets under concession agreement of the MRT Blue Line Project are stated at cost less accumulated amortisation and allowance for loss on impairment (if any).

The Group capitalised as assets all expenditures related to the MRT Blue Line Project, which including management and consultant fees, design costs, electrical and mechanical works and rolling stock purchased during the concession period, interest and other financing expenses. These will be amortised to expenses over the concession period after the commencement of operations.

##### Equipment - Metro system

The Company has been adopting the unit of throughput method to amortise such intangible assets, which related to equipment of metro system, over concession period of the MRT Blue Line Project and based on the following methodology:

$$\begin{aligned} \text{Amortisation for the year} &= \text{Net intangible assets under concession agreement of the MRT Blue Line Project} \\ &\quad \times \text{Percentage of passengers for the year} \\ \\ \text{Percentage of Passengers} &= \frac{\text{Current year's actual passengers}}{\text{(Actual passengers for the current year + Projected passengers during the} \\ \text{for the year} &\quad \text{remaining concession year)}} \end{aligned}$$

Equipment - Other system

Amortisation of intangible assets under concession agreement of the MRT Blue Line Project Line such as rental area improvement, telecommunication equipment at station, advertising equipment etc. is calculated by reference to its cost on the straight-line basis over the following estimated useful lives:

Equipment and rental area at station improvement	5 years and concession period
Telecommunication equipment	5 years and concession period
Advertising equipment	5 years

Net intangible assets under concession agreement of the MRT Blue Line Project = Total intangible assets under concession agreement of the MRT Blue Line Project - Accumulated amortisation

Amortisation of intangible assets under concession agreement of the MRT Blue Line Project is included in profit or loss.

No amortisation is provided on assets under installations.

**4.12 Project cost of the MRT Chalong Ratchadham Line**

Project cost of the MRT Chalong Ratchadham Line is stated at cost less accumulated amortisation and allowance for loss on impairment (if any). The amortisation is calculated on the straight-line basis over the concession period.

The amortisation is included in profit or loss.

**4.13 Prepaid project remuneration**

The Company records remuneration expense of the MRT Blue Line Project in profit or loss for each year based on the proportion of projected remuneration to projected revenue under the concession agreement over the concession period. Differences between the remuneration that the Company pays to the MRTA and the recognised remuneration expenses are recorded under “prepaid project remuneration” in the statement of financial position.

The proportion of projected remuneration to projected revenue under the concession agreement is reviewed at least once a year.

#### 4.14 Other intangible assets and amortisation

The Group is initially recognised intangible assets at cost. Following the initial recognition, the intangible assets are carried at cost less any accumulated amortisation and allowance for loss on impairment (if any).

Intangible assets with finite useful lives are amortised on a systematic basis over the economic useful life and tested for impairment whenever there is an indication that the intangible asset may be impaired. The amortisation period and the amortisation method of such intangible assets are reviewed at least at each financial year end. The amortisation is include in profit or loss.

The intangible assets with finite useful lives is computer software with 3 years, 5 years and 10 years useful lives.

#### 4.15 Deferred financial fees

Financial expenses related to borrowings that are typically incurred on or before signing facility agreements and before the actual draw down of the loans are recorded as deferred financial fees. Deferred financial fees is presented as a deduction against the related loan account and amortised proportionately to the amount of the loan facility already drawn over the term of the loans.

The amortisation of deferred financial fees is capitalised as part of the cost of the respective assets until to get ready for their intended use.

#### 4.16 Goodwill

Goodwill is initially recorded at cost, which equals to the excess of the cost of business combination over the fair value of the net assets acquired. If the fair value of the net assets acquired exceeds the cost to business combination, the excess is immediately recognised as gain in profit or loss.

Goodwill is carried at cost less any accumulated impairment losses. Goodwill is tested for impairment annually and when circumstances indicate that the carrying value may be impaired.

For the purpose of impairment testing, goodwill acquired in a business combination is allocated to each of the Company's cash generating units that are expected to benefit from the synergies of the combination. The Company estimates the recoverable amount of each cash-generating unit to which the goodwill relates. Where the recoverable amount of the cash-generating unit is less than the carrying amount, an impairment loss is recognised in profit or loss. Impairment losses relating to goodwill cannot be reversed in future periods.

#### 4.17 Related party transactions

Related parties comprise individuals or enterprises that control, or are controlled by, the Group, whether directly or indirectly, or which are under common control with the Group.

They also include associated companies, and individuals or enterprises which directly or indirectly own a voting interest in the Company that gives them significant influence over the Group, key management personnel, directors and officers with authority in the planning and direction of the Group's operations.

#### 4.18 Long-term leases

Leases of equipment which transfer substantially all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalised at the lower of the fair value of the leased assets and the present value of the minimum lease payments. The outstanding rental obligations, net of finance charges, are included in long-term payables, while the interest element is charged to profit or loss over the lease period. The assets acquired under finance leases are depreciated over the useful life of the asset.

Leases of equipment which do not transfer substantially all the risks and rewards of ownership are classified as operating leases. Operating lease payments are recognised as an expense in profit or loss on a straight line basis over the lease term.

#### 4.19 Foreign currencies

The consolidated and separate financial statements are presented in Baht, which is also the Company's functional currency. Items of each entity included in the consolidated financial statements are measured using the functional currency or that entity.

Transactions in foreign currencies are translated into Baht at the exchange rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated into Baht at the exchange rate ruling at the end of reporting period.

Gains and losses on exchange are included in determining income.

## 4.20 Impairment of assets

At the end of each reporting period, the Group performs impairment reviews in respect of their assets whenever events or changes in circumstances indicate that an asset may be impaired. An impairment loss is recognised when the recoverable amount of an asset, which is the higher of the asset's fair value less costs to sell and its value in use, is less than the carrying amount. In determining value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs to sell, an appropriate valuation model is used. These calculations are corroborated by a valuation model that, based on information available, reflects the amount that the Company could obtain from the disposal of the asset in an arm's length transaction between knowledgeable, willing parties, after deducting the costs of disposal.

The Group recognises an impairment loss in profit or loss.

## 4.21 Employee benefits

### ***Short-term employee benefits***

The Group will recognise salaries, wages, bonuses and contributions to the social security fund as expenses when incurred.

### ***Post-employment benefits***

#### *Defined contribution plans*

The Group and its employees have jointly established a provident fund. The fund is monthly contributed by employees and by the Group. The fund's assets are held in a separate trust fund and the contributions of the Group is recognised as expenses when incurred.

#### *Defined benefit plans*

The Group has obligations in respect of the severance payments they must make to employees upon retirement under labor law. The Group treats these severance payment obligations as a defined benefit plan.

The obligation under the defined benefit plan is determined by a professionally qualified independent actuary based on actuarial techniques, using the projected unit credit method.

Actuarial gains and losses arising from post-employment benefits are recognised immediately in other comprehensive income.



## 4.22 Provisions

Provisions are recognised when the Group has a present obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

### Provision for compensation for site acquisition cost

The Company records provision for compensation for site acquisition cost based on the present value of future payments to be paid to the EXAT to compensate the site acquisition cost as stated in the Second Stage Expressway System.

## 4.23 Periodic maintenance on the expressway and rail systems

All annual maintenance costs are charged directly to the income statement in the year on which they are incurred. The independent specialists have stated that if annual repairs are carried out in accordance with the specified standard, there will be no requirement for major maintenance. As a result, no further amounts are set aside as provision for maintenance.

## 4.24 Income tax

Income tax expense represents the sum of corporate income tax currently payable and deferred tax.

### **Current tax**

Current income tax is provided in the accounts at the amount expected to be paid to the taxation authorities, based on taxable profits determined in accordance with tax legislation.

### **Deferred tax**

Deferred income tax is provided on temporary differences between the tax bases of assets and liabilities and their carrying amounts at the end of each reporting period, using the tax rates enacted at the end of the reporting period.

The Group recognises deferred tax liabilities for all taxable temporary differences while they recognise deferred tax assets for all deductible temporary differences and tax losses carried forward to the extent that it is probable that future taxable profit will be available against which such deductible temporary differences and tax losses carried forward can be utilised.

At each reporting date, the Group reviews and reduce the carrying amount of deferred tax assets to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised.

The Group records deferred tax directly to shareholders' equity if the tax relates to items that are recorded directly to shareholders' equity.

## 4.25 Derivative financial instruments and hedging

### Derivative financial instruments

The Company and associated companies use derivative financial instruments to manage its risks associated with exchange rate and interest rate, such as interest rate swap agreements.

Such derivatives are initially recognised and measured at fair value on the date on which the derivative contract is entered into and are subsequently remeasured at fair value, which has been calculated using the quoted market rates, at the end of reporting period. Gains or losses resulting from changes in the fair value of the derivative financial instruments are recognised as financial assets or financial liabilities when the gain or loss occurs. However, where derivatives qualify for hedge accounting, recognition of any resultant gain or loss from changes in the fair value depends on the nature of the item being hedged.

### Hedge accounting - Cash flow hedges

The Company and associated companies apply hedge accounting when the risk that has been hedged can be clearly identified and the effectiveness of the hedge can be measured. Gains or losses arising from changes in the fair value of hedging instruments or derivatives that effectively hedge exposure to fluctuations in cash flows that are either attributable to a particular risk associated with a recognised financial asset or financial liability, or to a highly probable forecast transaction, are recognised directly in other comprehensive income and transferred to be recognised in profit or loss when the hedged cash flow transaction occurs. However, if the hedge instrument is not effective, any gain or loss from a change in the fair value of the derivative financial instrument is recognised immediately to profit or loss.

## 4.26 Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between buyer and seller (market participants) at the measurement date. The Group applies a quoted market price in an active market to measure their assets and liabilities that are required to be measured at fair value by relevant financial reporting standards. Except in case of no active market of an identical asset or liability or when a quoted market price is not available, the Group measures fair value using valuation technique that are appropriate in the circumstances and maximises the use of relevant observable inputs related to assets and liabilities that are required to be measured at fair value.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy into three levels based on categorise of input to be used in fair value measurement as follows:

Level 1 - Use of quoted market prices in an observable active market for such assets or liabilities

Level 2 - Use of other observable inputs for such assets or liabilities, whether directly or indirectly

Level 3 - Use of unobservable inputs such as estimates of future cash flows

At the end of each reporting period, the Group determines whether transfers have occurred between levels within the fair value hierarchy for assets and liabilities held at the end of the reporting period that are measured at fair value on a recurring basis.

## **5. Significant accounting judgements and estimates**

The preparation of financial statements in conformity with financial reporting standards at times requires management to make subjective judgements and estimates regarding matters that are inherently uncertain. These judgements and estimates affect reported amounts and disclosures; and actual results could differ from these estimates. Significant judgements and estimates are as follows:

### **Fair value of financial instruments**

In determining the fair value of financial instruments that are not actively traded and for which quoted market prices are not readily available, the management exercise judgement, using a variety of valuation techniques and models. The input to these models is taken from observable markets, and includes credit risks for both bank and counter parties consideration of liquidity, correlation and longer-term volatility of financial instruments. Change in assumption which is related to calculating input, could affect fair value in financial statement and the disclosure of fair value hierarchy.

### **Impairment of investment in subsidiaries**

The Company reviews impairment of investment in subsidiaries, which requires management to prepare projection of the cash flow expected to be generated by the investment in the future, and to choose a suitable discount rate in order to calculate the present value of those cash flows.

### **Building improvement and equipment/Depreciation**

In determining depreciation of building improvement and equipment, the management is required to make estimates of the useful lives and residual values of the Company's building improvement and equipment and to review estimate useful lives and residual values when there are any changes.

In addition, the management is required to review building improvement and equipment for impairment on a periodical basis and record impairment losses in the period when it is determined that their recoverable amount is lower than the carrying amount. This requires judgements regarding forecast of future revenues and expenses relating to the assets subject to the review.

### **Amortisation of rights to operate completed expressway sectors and rights to use sites for expressway construction**

In determining amortisation of rights to operate completed expressway sectors and rights to use sites for expressway construction, the management has to project vehicle volume after current year for the remaining years of the agreement. Vehicle volume is projected based on the number of vehicles as assessed by an independent appraiser, and adjusted by comparison to actual vehicle volume. However, the actual vehicle volume in the future could differ from the estimate depending upon changes in external factors that may affect toll rates and vehicle volume.

### **Amortisation of intangible asset under concession agreement of the MRT Blue Line Project**

In determining amortisation of intangible asset under concession agreement of the MRT Blue Line Project, the management has to project the number of passengers after current year for the remaining year of the agreement. Various assumptions needed to project by an accredited independent valuer, such as traffic model, network rail, average cost of fuel, and fare structure.

### **Deferred tax assets**

Deferred tax assets are recognised for deductible temporary differences and unused tax losses to the extent that it is probable that taxable profit will be available against which the temporary differences and losses can be utilised. Significant management judgement is required to determine the amount of deferred tax assets that can be recognised, based upon the likely timing and level of estimate future taxable profits.

### Post-employment benefits under defined benefit plans

The obligation under the defined benefit plan is determined based on actuarial techniques. Such determination is made based on various assumptions, including discount rate, future salary increase rate, mortality rate and staff turnover rate.

### Disputes

The Group has contingent liabilities as a result of litigation. The Company's management has used judgment to assess of the results of the litigation and believes that no loss will result. Therefore, no contingent liabilities are recorded as at the end of reporting period.

## 6. Related party transactions

During the year, the Group had significant business transactions with related parties. Such transactions arose in the ordinary course of business and were concluded on commercial terms and bases agreed upon between the Group and those related parties.

The relationship between the Group and the related parties which have transactions with during the year summarised below.

Name of related parties	Relationship with the Company
CH. Karnchang Public Company Limited	Major shareholders
Mass Rapid Transit Authority of Thailand	Shareholders
Northern Bangkok Expressway Company Limited	Subsidiary
Bangkok Metro Networks Limited	Subsidiary
TTW Public Company Limited	Related company through common directors of the Company
CK Power Public Company Limited	Related company through common directors of the Company
Krungthai Bank Public Company Limited	Related company through a director of the company's authority in the bank
Bangkok Bank Public Company Limited	Related company through a director of the company's authority in the bank
Xayaburi Power Company Limited	Related company through common directors of the Company
Bangpa-in Land Development Company Limited	Related company through common directors of the Company
Plan B Public Company Limited	Related company through having common directors with a subsidiary company between 9 February 2018 and 27 March 2019



Such significant transaction for the year ended 31 December 2019 and 2018 are summarised below.

(Unit: Million Baht)

	Consolidated		Separate		Pricing policy
	financial statements		financial statements		
	2019	2018	2019	2018	
<u>Transactions with major shareholder</u>					
Cost of rail projects	5,565	8,184	5,565	8,184	Based on contracts
Cost of expressway construction	743	217	743	217	Based on contracts
Expressway and civil works maintenance expenses	595	383	595	383	Based on contracts
Office rental and service expenses	8	8	-	-	Based on contracts
<u>Transactions with subsidiary companies</u>					
(eliminated from the consolidated financial statements)					
Commercial development revenue	-	-	2	240	Based on contracts
Interest income from long-term loans	-	-	47	106	Based on contracts
Project management income	-	-	186	150	Based on contract
Commercial development management fee	-	-	360	90	Based on contract
<u>Transactions with associated companies</u>					
Dividend income	-	-	231	494	As declared
Sale of other long-term investment	-	2,065	-	2,065	Base on contract
<u>Transactions with related companies</u>					
Commercial development revenue	33	94	33	41	Based on contracts
Interest income from M&E Systems	380	435	380	435	FDR plus stipulated margin per annum
Dividend income	258	-	258	-	As declared
Cost of commercial development	9	11	-	-	Based on contract
Remuneration from fare box (Inclusive of VAT)	376	345	376	345	Concession agreement
Remuneration from commercial development	18	11	18	11	Concession agreement
Property tax	12	1	11	1	At the rates charged by Bangkok Metropolitan Administration
Utility expenses	2	2	2	2	Based on contract
Financial fee	37	73	34	71	Based on contracts
Interest expenses on long-term loans	305	267	305	267	At the interest rate of FDR plus stipulated margin and 6M THBFX plus stipulated margin per annum (2018: MLR minus stipulated margins, 6M FDR plus stipulated margin, FDR plus stipulated margin and 6M THBFX plus stipulated margin per annum)

As at 31 December 2019 and 2018, the balances of the accounts between the Group and related parties are as follows:

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
<b><u>Trade and other receivables (Note 10)</u></b>				
<b><u>Trade receivables</u></b>				
Bangkok Metro Networks Limited	-	-	4,226	28,893
Mass Rapid Transit Authority of Thailand	337,040	374,324	337,040	374,324
Plan B Media Public Company Limited <sup>(1)</sup>	-	14,681	-	14,681
Others	-	684	-	684
Total	<u>337,040</u>	<u>389,689</u>	<u>341,266</u>	<u>418,582</u>
<b><u>Other receivables</u></b>				
Northern Bangkok Expressway Company Limited	-	-	16,585	13,375
CH. Karnchang Public Company Limited	111	119	111	119
Total	<u>111</u>	<u>119</u>	<u>16,696</u>	<u>13,494</u>
<b><u>Advance payment under service contract</u></b>				
CH. Karnchang Public Company Limited	<u>12,224</u>	<u>4,009</u>	<u>12,224</u>	<u>4,009</u>
<b><u>Long-term loans to and interest receivable</u></b>				
<b><u>from related parties</u></b>				
Northern Bangkok Expressway Company Limited	-	-	-	2,858,996
Bangkok Metro Networks Limited	-	-	37,000	145,000
Total	-	-	37,000	3,003,996
Less: current portion	-	-	(18,000)	(18,000)
Long-term loans to and interest receivable from related parties, net of current portion	<u>-</u>	<u>-</u>	<u>19,000</u>	<u>2,985,996</u>
<b><u>Receivable under the concession agreement (Note 11)</u></b>				
Mass Rapid Transit Authority of Thailand	<u>10,860,415</u>	<u>12,510,098</u>	<u>10,860,415</u>	<u>12,510,098</u>
<b><u>Prepaid project remuneration</u></b>				
Mass Rapid Transit Authority of Thailand	<u>5,086,368</u>	<u>3,495,195</u>	<u>5,086,368</u>	<u>3,495,195</u>

<sup>(1)</sup> This company is a related company between 9 February 2018 and 27 March 2019.

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	2019	2018	2019	2018
<b>Trade and other payables (Note 23)</b>				
Bangkok Metro Networks Limited	-	-	32,603	32,279
CH. Karnchang Public Company Limited	753,448	725,067	753,347	724,987
Mass Rapid Transit Authority of Thailand	213,221	125,148	213,210	125,146
Others	339	2,394	320	2,071
Total	967,008	852,609	999,480	884,483
<b>Unearned revenue</b>				
Plan B Media Public Company Limited <sup>(1)</sup>	-	1,752	-	1,752
<b>Retention guarantees</b>				
CH. Karnchang Public Company Limited	44,252	16,781	44,252	16,781
<b>Guarantees for rental</b>				
Bangkok Metro Networks Limited	-	-	800	85
<b>Unearned revenue from advertising management rights (Note 27)</b>				
Bangkok Metro Networks Limited	-	-	11,866	13,114

<sup>(1)</sup> This company is a related company between 9 February 2018 and 27 March 2019.

As at 31 December 2019 and 2018, the balance of long-term loans to and interest receivables between the Company and its subsidiaries and the movement in the separate financial statement are as follows:

	(Unit: Thousand Baht)			
	Balance as at	Increase	Decrease	Balance as at
	31 December 2018	during the year	during the year	31 December 2019
Northern Bangkok Expressway Company Limited				
Long-term loan	2,366,692	-	(2,366,692)	-
Interest receivable	492,304	42,022	(534,326)	-
Total	2,858,996	42,022	(2,901,018)	-
Bangkok Metro Networks Limited				
Long-term loan	145,000	-	(108,000)	37,000
Interest receivable	-	4,679	(4,679)	-
Total	145,000	4,679	(112,679)	37,000
Grand total	3,003,996	46,701	(3,013,697)	37,000

The assets of Northern Bangkok Expressway Company Limited such as deposits at banks, current investments, rights in the Bang Pa-In - Pak Kret Expressway System, rights in toll revenues and beneficiary rights under insurance policies are secured against the loans from the Company. However, the subsidiary is able to make withdrawals from deposit at banks and trading of current investments for use as regular operating expenses.

During the year 2019, Northern Bangkok Expressway Company Limited gradually made full settlement of loans and accrued interest receivable.

### **Directors and management's remuneration**

For the year ended 31 December 2019 and 2018, the Group had employee benefit expenses payable to their directors and management as below.

	(Unit: Thousand Baht)			
	<u>Consolidated financial statements</u>		<u>Separate financial statements</u>	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
Short-term employee benefits	176,380	154,460	158,271	134,534
Post-employment benefits	9,344	16,865	8,225	15,305
Total	<u>185,724</u>	<u>171,325</u>	<u>166,496</u>	<u>149,839</u>

## **7. Cash and cash equivalents**

	(Unit: Thousand Baht)			
	<u>Consolidated financial statements</u>		<u>Separate financial statements</u>	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
Cash	46,526	34,934	43,609	32,484
Bank deposits	657,224	491,266	565,097	391,203
Total	<u>703,750</u>	<u>526,200</u>	<u>608,706</u>	<u>423,687</u>

The Company has pledged the bank accounts used to deposit moneys received for work on the MRT Chalong Ratchadham Line Project and transferred rights to debit or withdraw from the deposit accounts used to make payment of loans and related financial fees to a group of lenders to secure the Company's loan, as described in Note 24 to the financial statements.

As at 31 December 2019, the balance of the pledged bank account amounted to Baht 1,026 (2018: Baht 1,022)

## 8. Current investments

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
<b>Investments in trading securities</b>				
Unit trusts	1,087,425	1,235,602	1,066,248	1,221,781
Add: Unrealised gain on changes in value of investments	70,321	46,873	70,310	46,867
Unit trusts - Fair value	1,157,746	1,282,475	1,136,558	1,268,648
Total current investments	1,157,746	1,282,475	1,136,558	1,268,648

## 9. Bank deposit for unearned fare box revenue

This bank account is a reserve account set aside in compliance with the Notification of the Bank of Thailand applicable to electronic card businesses. These funds cannot be used for any purpose other than making payment for fare box revenue.

## 10. Trade and other receivables

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
<u>Trade receivables</u>				
Trade receivables				
- Related parties (Note 6)	337,040	389,689	341,266	418,582
- Unrelated parties	137,513	116,002	109,798	80,785
Less: Allowance for doubtful debts	(938)	(4,910)	-	-
Total trade receivables - net	473,615	500,781	451,064	499,367
<u>Other receivables</u>				
Other receivables				
- Related parties (Note 6)	111	119	16,696	13,494
- Unrelated parties	3,308	2,631	2,616	1,966
Accrued income	4,753	10,525	3,920	10,525
Total other receivables	8,172	13,275	23,232	25,985
Trade and other receivables - net	481,787	514,056	474,296	525,352



Most of the trade receivables of the Group was within their credit terms or past due up to 3 months. As at 31 December 2019, the outstanding balances of trade receivables in the consolidated financial statements that are one year past due amounted to approximately Baht 2 million (2018: Baht 7 million) (Separate financial statements: Nil). The Group assessed the net realisable value of the receivables that were past due and recorded an allowance for doubtful accounts amounting to Baht 1 million in the consolidated financial statements (2018: Baht 5 million) (Separate financial statements: Nil).

#### 11. Receivable under the concession agreement

	(Unit: Thousand Baht)
	Consolidated and Separate financial statements
Net book value as at 1 January 2019	12,510,098
Collection	(1,649,683)
Net book value as at 31 December 2019	10,860,415
Current	1,649,683
Non-current	9,210,732
Total receivable under the concession agreement	10,860,415

Receivable under the concession agreement is a receivable for M&E Systems (Inclusive of VAT) of Phase 1 of the MRT Chalong Ratchadham Line Project as described in Note 1 B.2 to the financial statements. The MRTA will pay the remuneration and interest in the form of monthly installments until 2026. The Company transferred rights to receive cash from receivable under the concession agreement to the group of lenders, in settlement of long-term loans from financial institutions, as described in Notes 24.2 and 24.3 to the financial statements.

Amounts receivable under the concession agreement that are due in over 5 years amount to approximately Baht 2,612 million and carry interest rate of FDR plus stipulated margin.

Interest income for M&E Systems for the year end 31 December 2019 amounted to Baht 380 million (2018: Baht 435 million).

## 12. Investments in subsidiaries

Details of investments in subsidiaries as presented in separate financial statements are as follows:

Company's name	(Unit: Million Baht)											
	Registered capital		Paid-up capital		Proportion of investment		Cost		Allowance for impairment		Net book value	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
	(percent)											
Northern Bangkok Expressway Company Limited	6,000	6,000	5,250	5,250	99.99	99.99	2,604	2,604	(2,450)	(2,450)	154	154
Bangkok Metro Networks Limited	254	254	254	254	89.67	69.67	495	226	(16)	(16)	479	210
Total							3,099	2,830	(2,466)	(2,466)	633	364

In the year 2019, the Company purchased 5.1 million ordinary shares (2018: 1.1 million ordinary shares) of Bangkok Metro Networks Limited (subsidiary company) (equal to 20.0 percent of its issued and paid-up share capital (2018: 4.5 percent)) from its existing shareholders, for a total of Baht 269 million (2018: Baht 60 million). As a result of this transaction, its shareholding in the subsidiary changed from 69.67 percent to 89.67 percent (2018: its shareholding in the subsidiary changed from 65.19 percent to 69.67 percent).

The purchase transaction of investment in the subsidiary was detailed below.

	(Unit: Thousand Baht)	
	Consolidated	
	financial statements	
	<u>2019</u>	<u>2018</u>
Purchase price of investment in subsidiary	269,240	60,284
Less: Non-controlling interests of subsidiary adjusted	(88,068)	(16,662)
Capital deficit from change in shareholding interest in subsidiary	181,172	43,622

### 13. Investments in associate

#### 13.1 Details of investment in associate

(Unit: Million Baht)

			Consolidated financial statements					
Company's name	Nature of business	Incorporated country	Shareholding		Cost		Carrying amounts based on equity method	
			percentage					
			<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
			(percent)					
TTW Public Company Limited <sup>(1)</sup>	Production and sales of treated water	Thailand	-	19.29	-	6,919	-	6,369
Total					-	6,919	-	6,369

(Unit: Million Baht)

Company's name	Nature of business	Incorporated country	Separate financial statements			
			Shareholding		Cost	
			percentage			
			<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
			(Percent)			
TTW Public Company Limited <sup>(1)</sup>	Production and sales of treated water	Thailand	-	19.29	-	4,242
Total					-	4,242

#### 13.2 Share of comprehensive income and dividend received

During the year, the Company has recognised its share of profit/loss from investments in associates in the consolidated financial statements and dividend income in the separate financial statements as follows:

(Unit: Million Baht)

Company's name	Consolidated financial statements				Separate financial statements	
	Share of profit from		Share of other comprehensive			
	investments in associates		income from investments in associates		Dividend received	
	2019	2018	2019	2018	2019	2018
CK Power Public Company Limited <sup>(2)</sup>	-	28	-	26	-	32
TTW Public Company Limited <sup>(1)</sup>	173	405	(2)	7	231	462
Total	173	433	(2)	33	231	494

<sup>(1)</sup> Effective on 29 May 2019, the Company reclassified the investment from investment in associated company to investment in available-for-sale securities.

<sup>(2)</sup> Effective on 16 July 2018, the Company reclassified the investment from investment in associated company to investment in available-for-sale securities.

### 13.3 Fair value investments in listed associate

In respect of investments in associates that are listed companies on the Stock Exchange of Thailand, their fair values are as follows:

Company's name	(Unit: Million Baht)	
	Fair values as at 31 December	
	<u>2019</u>	<u>2018</u>
TTW Public Company Limited <sup>(1)</sup>	-	9,468
Total	-	9,468

### 13.4 Summarised financial information about material associate

Summarised information about financial position as at 31 December 2019 and 2018

	(Unit: Million Baht)	
	TTW Public Company Limited <sup>(1)</sup>	
	<u>2019</u>	<u>2018</u>
Current assets	-	4,216
Non-current assets	-	19,114
Current liabilities	-	(2,544)
Non-current liabilities	-	(8,421)
Non-controlling interests of the subsidiaries	-	(43)
<b>Net assets</b>	-	<b>12,322</b>
Shareholding percentage (percent)	-	19.29
<b>Share of net assets on equity method</b>	-	<b>2,377</b>
Sales of investment in associate	-	(14)
Rights to produce and sell treated water	-	1,630
Goodwill	-	2,376
<b>Carrying amounts of associates based on equity method</b>	-	<b>6,369</b>

Summarised information about comprehensive income for the year ended 31 December 2019 and 2018

	(Unit: Million Baht)	
	TTW Public Company Limited <sup>(1)</sup>	
	<u>2019</u>	<u>2018</u>
Revenue	-	5,949
Profit	-	2,842
Other comprehensive income	-	38
Total comprehensive income	-	2,880

<sup>(1)</sup> Effective on 29 May 2019, the Company reclassified the investment from investment in associated company to investment in available-for-sale securities.

**TTW Public Company Limited**

In February 2018, the Company sold 6.3 million ordinary shares of TTW Public Company Limited (“TTW”) amounting to Baht 85 million, and recorded gains on sale of investment in this associated company of Baht 32 million in profit or loss in the consolidated financial statements (Separate financial statements: Baht 50 million). As a result, its equity interest of TTW decreased from 19.45 percent to 19.29 percent.

In March 2019, the Company sold 12 million ordinary shares of TTW amounting to Baht 146 million, and recorded gains on sale of investment in this associated company of Baht 45 million and Baht 80 million in profit or loss in the consolidated and separate financial statements, respectively. As a result, its equity interest of TTW decreased from 19.29 percent to 18.99 percent.

During the second quarter of the current year, the Company sold 21 million ordinary shares of TTW amounting to Baht 253 million, and recorded gain on sale of investment in this associated company of Baht 77 million and Baht 137 million in profit or loss in the consolidated and separate financial statements, respectively. As a result, its equity interest of TTW decreased from 18.99 percent to 18.47 percent.

On 29 May 2019, a meeting of the Company’s Board of Directors passed a resolution to approve the change in the purpose of investing in TTW shares and passed a resolution to approve the reclassification of the investment in TTW from investment in associated company to investment in available-for-sale securities, which was consistent with the approval of the change in the purpose of investing in TTW shares from holding for long-term investment in order to receive returns in the form of interest and dividends to holding to convert to cash when the business opportunity and timing are appropriate.

Subsequently, the Company reclassified the investment in TTW from investment in associated company to investment in available-for-sale securities, which is consistent with the reduction of its interest in that company’s equity and the purpose of holding the investment. The Company recorded a gain of Baht 3,409 million as a result of the reclassification of the investment in profit or loss in the consolidated financial statements in the current year.

**CK Power Public Company Limited**

During the year 2018, the Company sold 115.7 million ordinary shares of CK Power Public Company Limited (“CKP”) amounted to Baht 456 million and recorded gains on sale of investment in this associated company of Baht 221 million in profit or loss in the consolidated financial statements (Separate financial statements: Baht 208 million). As a result, its equity interest of CKP decreased from 19.40 percent to 17.83 percent.



In addition, a meeting of the Board of Directors passed a resolution to approve the change in the propose of investing in CKP shares and the reclassification of investment in CKP from investment in associated company to investment in available-for-sale securities, which is consistent with the reduction of its interest in that company's equity and the change in the purpose of holding the investment. The Company recorded a gain of Baht 2,496 million as a result of the reclassification of the investment in profit or loss in the consolidated financial statements in the year 2018.

#### 14. Other long-term investments

(Unit: Thousand Baht)				
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>Investment in available-for-sale securities</b>				
CK Power Public Company Limited				
- Ordinary shares	5,178,082	5,178,082	2,813,840	2,813,840
- Warrants	93,033	120,032	114,767	148,073
TTW Public Company Limited <sup>(1)</sup>				
- Ordinary shares	9,432,320	-	4,061,076	-
Add: Unrealised gain on changes in value of investments	1,993,392	1,390,533	9,707,144	3,726,734
Investment in available-for-sale securities - Net	16,696,827	6,688,647	16,696,827	6,688,647
<b>Long-term investment</b>				
Eastern High-Speed Rail Linking				
Three Airports Co., Ltd	400,000	-	400,000	-
Total other long-term investments - Net	17,096,827	6,688,647	17,096,827	6,688,647

<sup>(1)</sup> Effective on 29 May 2019, the Company reclassified this investment from investment in associated company to investment in available-for-sale securities.

#### 15. Investment properties

As at 31 December 2019, the Company has investment properties, consisting of land, which is presented in the consolidated and separate financial statements at its fair value of Baht 321 million (2018: Baht 320 million).

The fair value of above investment properties has been determined based on the valuation performance by an accredited independent valuer, using market approach.

## 16. Building and equipment

(Unit: Thousand Baht)

	Consolidated financial statements				
	Building and construction improvement	Furniture, fixture and office equipment	Vehicles	Asset during installation	Total
<b>Cost:</b>					
1 January 2018	83,017	209,781	457,673	3,832	754,303
Additions	5,348	9,073	8,028	593	23,042
Disposals/Write off	(14,643)	(6,711)	(7,224)	-	(28,578)
Reclassification/ Transfer in (out)	2,057	(208)	1,775	(3,832)	(208)
31 December 2018	75,779	211,935	460,252	593	748,559
Additions	11,622	13,244	7,887	13,798	46,551
Disposals/Write off	-	(9,688)	(12,147)	-	(21,835)
Reclassification/ Transfer in (out)	2,130	(32)	-	(593)	1,505
31 December 2019	89,531	215,459	455,992	13,798	774,780
<b>Accumulated depreciation:</b>					
1 January 2018	51,039	143,212	198,884	-	393,135
Depreciation for the year	8,780	21,374	28,728	-	58,882
Accumulated depreciation on disposals/write off	(14,573)	(6,474)	(6,140)	-	(27,187)
Reclassification	-	(208)	-	-	(208)
31 December 2018	45,246	157,904	221,472	-	424,622
Depreciation for the year	9,824	21,848	28,579	-	60,251
Accumulated depreciation on disposals/write off	-	(9,638)	(11,832)	-	(21,470)
31 December 2019	55,070	170,114	238,219	-	463,403
<b>Net book value:</b>					
31 December 2018	30,533	54,031	238,780	593	323,937
31 December 2019	34,461	45,345	217,773	13,798	311,377
<b>Depreciation for the year</b>					
2018 (Baht 30 million included in cost of services and the balance in selling and administrative expense)					58,882
2019 (Baht 29 million included in cost of services and the balance in selling and administrative expense)					60,251

(Unit: Thousand Baht)

	Separate financial statements				
	Building and construction improvement	Furniture, fixture and office equipment	Vehicles	Asset during installation	Total
<b>Cost:</b>					
1 January 2018	70,425	156,028	448,545	3,832	678,830
Additions	3,497	6,410	3,444	-	13,351
Disposals/Write off	(14,643)	(6,346)	(4,871)	-	(25,860)
Reclassification/Transfer in (out)	2,057	(208)	1,775	(3,832)	(208)
31 December 2018	61,336	155,884	448,893	-	666,113
Additions	-	10,253	7,887	13,525	31,665
Disposals/Write off	-	(9,238)	(12,147)	-	(21,385)
31 December 2019	61,336	156,899	444,633	13,525	676,393
<b>Accumulated depreciation:</b>					
1 January 2018	47,340	121,863	193,814	-	363,017
Depreciation for the year	6,223	11,546	27,470	-	45,239
Accumulated depreciation on disposals/write off	(14,573)	(6,116)	(3,787)	-	(24,476)
Reclassification	-	(208)	-	-	(208)
31 December 2018	38,990	127,085	217,497	-	383,572
Depreciation for the year	6,061	11,479	26,963	-	44,503
Accumulated depreciation on disposals/write off	-	(9,188)	(11,832)	-	(21,020)
31 December 2019	45,051	129,376	232,628	-	407,055
<b>Net book value:</b>					
31 December 2018	22,346	28,799	231,396	-	282,541
31 December 2019	16,285	27,523	212,005	13,525	269,338
<b>Depreciation for the year</b>					
2018 (Baht 21 million included in cost of services and the balance in selling and administrative expense)					45,239
2019 (Baht 20 million included in cost of services and the balance in selling and administrative expense)					44,503

As at 31 December 2019, the Group had vehicles with net book value of Baht 5 million (2018: Baht 6 million) (The Company only: Baht 2 million, 2018: Baht 3 million) which were acquired under finance lease agreements.

As at 31 December 2019, the Group have certain items of building and equipment which were fully depreciated but are still in use. The gross carrying amount before deducting accumulated depreciation of those assets amounted to approximately Baht 265 million (2018: Baht 267 million) (The Company only: Baht 255 million, 2018: Baht 261 million).

## 17. Rights to operate expressway sectors

(Unit: Thousand Baht)

	Consolidated financial statements		
	Rights to operate		Total
	completed expressway sector	Project costs under construction	
<b>Cost:</b>			
1 January 2018	85,790,579	67,107	85,857,686
Additions	39,956	229,649	269,605
Transfer in (out)	291,148	(291,148)	-
31 December 2018	86,121,683	5,608	86,127,291
Additions	320,200	437,439	757,639
Transfer in (out)	5,608	(5,608)	-
31 December 2019	86,447,491	437,439	86,884,930
<b>Accumulated amortisation:</b>			
1 January 2018	47,408,812	-	47,408,812
Amortisation for the year	3,572,459	-	3,572,459
31 December 2018	50,981,271	-	50,981,271
Amortisation for the year	3,650,292	-	3,650,292
31 December 2019	54,631,563	-	54,631,563
<b>Net book value:</b>			
31 December 2018	35,140,412	5,608	35,146,020
31 December 2019	31,815,928	437,439	32,253,367
<b>Amortisation for the year</b>			
2018			3,572,459
2019			3,650,292

(Unit: Thousand Baht)

	Separate financial statements		
	Rights to operate		
	completed	Project costs under	
	expressway sector	construction	Total
<b>Cost:</b>			
1 January 2018	72,946,289	67,107	73,013,396
Additions	39,956	229,649	269,605
Transfer in (out)	291,148	(291,148)	-
31 December 2018	73,277,393	5,608	73,283,001
Additions	320,200	432,994	753,194
Transfer in (out)	5,608	(5,608)	-
31 December 2019	73,603,201	432,994	74,036,195
<b>Accumulated amortisation:</b>			
1 January 2018	40,768,815	-	40,768,815
Amortisation for the year	2,971,997	-	2,971,997
31 December 2018	43,740,812	-	43,740,812
Amortisation for the year	3,046,735	-	3,046,735
31 December 2019	46,787,547	-	46,787,547
<b>Net book value:</b>			
31 December 2018	29,536,581	5,608	29,542,189
31 December 2019	26,815,654	432,994	27,248,648
<b>Amortisation for the year</b>			
2018			2,971,997
2019			3,046,735



**18. Rights to use sites for expressway construction**

The net book value of rights to use sites for expressway construction as at 31 December 2019 and 2018 are presented below.

	(Unit: Thousand Baht)	
	Consolidated and Separate	
	financial statements	
	<u>2019</u>	<u>2018</u>
Cost	6,644,790	6,644,790
Less: Accumulated amortisation	(6,583,323)	(6,254,592)
Net book value	<u>61,467</u>	<u>390,198</u>

A reconciliation of the net book value of the rights to use sites for expressway construction for the years 2019 and 2018 are summarised below.

	(Unit: Thousand Baht)	
	Consolidated and Separate	
	financial statements	
	<u>2019</u>	<u>2018</u>
Net book value at the beginning of the year	390,198	719,073
Amortisation for the year	(328,731)	(328,875)
Net book value at the end of the year	<u>61,467</u>	<u>390,198</u>

The rights to use sites for expressway construction is a part of rights to operate expressway sectors.

## 19. Intangible asset under concession agreement of the MRT Blue Line Project

(Unit: Thousand Baht)

	Consolidated financial statements		
	Intangible asset under concession agreement of the MRT Blue Line Project	Project costs under construction	Total
<b>Cost:</b>			
1 January 2018	21,945,053	7,988,251	29,933,304
Additions	62,028	9,369,801	9,431,829
Interest cost	-	229,863	229,863
Disposals/write-off	(778)	-	(778)
Transfer in (out)	9,046	(9,046)	-
31 December 2018	22,015,349	17,578,869	39,594,218
Additions	752,415	6,062,954	6,815,369
Reclassification	(1,505)	-	(1,505)
Interest cost	28,649	332,224	360,873
Transfer in (out)	11,226,336	(11,226,336)	-
31 December 2019	34,021,244	12,747,711	46,768,955
<b>Accumulated amortisation:</b>			
1 January 2018	3,979,208	-	3,979,208
Amortisation for the year	188,047	-	188,047
Accumulated amortisation on disposals/write off	(593)	-	(593)
31 December 2018	4,166,662	-	4,166,662
Amortisation for the year	263,394	-	263,394
31 December 2019	4,430,056	-	4,430,056
<b>Net book value:</b>			
31 December 2018	17,848,687	17,578,869	35,427,556
31 December 2019	29,591,188	12,747,711	42,338,899
<b>Amortisation for the year</b>			
2018			188,047
2019			263,394

(Unit: Thousand Baht)

	Separate financial statements		
	Intangible asset under concession agreement of the MRT Blue Line Project	Project costs under construction	Total
<b>Cost:</b>			
1 January 2018	21,361,888	7,988,251	29,350,139
Additions	48,629	9,353,178	9,401,807
Interest cost	-	229,863	229,863
Transfer in (out)	9,046	(9,046)	-
31 December 2018	21,419,563	17,562,246	38,981,809
Additions	706,726	6,061,162	6,767,888
Interest cost	28,649	332,224	360,873
Transfer in (out)	11,209,713	(11,209,713)	-
31 December 2019	33,364,651	12,745,919	46,110,570
<b>Accumulated amortisation:</b>			
1 January 2018	3,741,750	-	3,741,750
Amortisation for the year	150,553	-	150,553
31 December 2018	3,892,303	-	3,892,303
Amortisation for the year	219,561	-	219,561
31 December 2019	4,111,864	-	4,111,864
<b>Net book value:</b>			
31 December 2018	17,527,260	17,562,246	35,089,506
31 December 2019	29,252,787	12,745,919	41,998,706
<b>Amortisation for the year</b>			
2018			150,553
2019			219,561

During the year, the Company has capitalised the borrowing cost as part of intangible asset under concession agreement of the MRT Blue Line Project. The weighted average rate used to determine the amount of borrowing cost eligible from capitalisation was 3.17 percent (2018: 2.88 percent).

## 20. Project cost of the MRT Chalong Ratchadham Line

The net book value of project cost of the MRT Chalong Ratchadham Line as at 31 December 2019 and 2018 is presented below.

(Unit: Thousand Baht)		
Consolidated and		
Separate financial statements		
	<u>2019</u>	<u>2018</u>
Cost	731,769	715,460
Less: Accumulated amortisation	(86,818)	(60,769)
Net book value	<u>644,951</u>	<u>654,691</u>

A reconciliation of the net book value of project cost of the MRT Chalong Ratchadham Line for the years 2019 and 2018 are summarised below.

(Unit: Thousand Baht)		
Consolidated and Separate		
financial statements		
	<u>2019</u>	<u>2018</u>
Net book value at the beginning of the year	654,691	666,743
Additions	16,309	13,998
Amortisation for the year	(26,049)	(26,050)
Net book value at the end of the year	<u>644,951</u>	<u>654,691</u>

## 21. Other intangible assets

The net book value of other intangible assets which are computer software as at 31 December 2019 and 2018 is presented below.

(Unit: Thousand Baht)			
Consolidated		Separate	
financial statements		financial statements	
	<u>2019</u>	<u>2018</u>	
Cost	211,655	195,933	199,432 185,297
Less: Accumulated amortisation	(137,628)	(111,155)	(130,159) (104,996)
Net book value	<u>74,027</u>	<u>84,778</u>	<u>69,273</u> <u>80,301</u>

A reconciliation of the net book value of other intangible assets for the years 2019 and 2018 is presented below.

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
Net book value at the beginning of the year	84,778	75,258	80,301	70,297
Acquisition of computer software	15,722	30,650	14,135	29,080
Amortisation for the year	(26,473)	(21,130)	(25,163)	(19,076)
Net book value at the end of the year	<u>74,027</u>	<u>84,778</u>	<u>69,273</u>	<u>80,301</u>

## 22. Short-term loans from financial institutions

	(Unit: Thousand Baht)		
	Consolidated and Separate		
	Interest rate	financial statements	
	(Percent per annum)	<u>2019</u>	<u>2018</u>
Short-term loans - promissory notes	At the fixed rate	3,250,000	2,816,000
Less: Deferred financial fees		-	(1,406)
Total		<u>3,250,000</u>	<u>2,814,594</u>

## 23. Trade and other payables

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
Trade payables - related parties (Note 6)	882,909	779,566	915,381	811,497
Trade payables - unrelated parties	432,705	347,047	394,213	314,246
Accrued interest - related parties (Note 6)	-	1,132	-	1,132
Accrued interest - unrelated parties	205,868	188,799	205,244	188,238
Accrued expense - related parties (Note 6)	84,099	71,911	84,099	71,854
Accrued expense - unrelated parties	304,224	280,845	281,327	260,840
Other payables	28,677	14,173	26,537	10,993
Total trade and other payables	<u>1,938,482</u>	<u>1,683,473</u>	<u>1,906,801</u>	<u>1,658,800</u>

## 24. Long-term loans from financial institutions

Loans	Credit facility	Objective	Interest rate	Period of repayment	Consolidated financial statements		Separate financial statements	
					2019	2018	2019	2018
(Unit: Thousand Baht)								
24.1 Long-term loan (Fully drew down)	8,000	Working capital	At the fixed rate (percent)	Repayment installments in every six month commencing May 2017 to May 2021	2,500,000	4,000,000	2,500,000	4,000,000
24.2 Tranche A (Fully drew down)	13,557	To invest in the MRT Chalong Ratchadham Line Project	Interest rate of FDR plus stipulated margins	Repayment in monthly installments commencing October 2017 to July 2026	10,103,776	11,638,526	10,103,776	11,638,526
24.3 Tranche B (Fully drew down)	62	To invest in the MRT Chalong Ratchadham Line Project	Interest rate of FDR plus stipulated margins	Repayment in monthly installments commencing October 2017 to July 2026	46,144	53,154	46,144	53,154
24.4 Long-term loan (Available credit facilities to be drawn down Baht 5,300 million)	14,000	To invest in the MRT Blue Line Extension Project	Interest rate of 6M THBFX plus stipulated margins	Repayment in quarterly installments commencing December 2021 to December 2035	8,700,000	4,200,000	8,700,000	4,200,000
24.5 Long-term loan (Fully drew down)	3,630	Repayment for loan obtained from the Company	Interest rate of 6M FDR plus stipulated margins	Repayment in quarterly installments within September 2024	3,630,000	1,600,000	-	-
Total	39,249				24,979,920	21,491,680	21,349,920	19,891,680
Less: Current portion of long-term loans					(3,166,120)	(3,041,760)	(2,541,760)	(3,041,760)
Less: Deferred financial fees					(68,239)	(76,140)	(68,239)	(76,140)
Long-term loans - net of current portion					21,745,561	18,373,780	18,739,921	16,773,780



Movements in the long-term loans account for the year ended 31 December 2019 and 2018 are as follows:

	(Unit: Thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
Balance at the beginning of the year	21,491,680	29,666,690	19,891,680	29,166,690
Add: Drawdown during the year	6,530,000	5,300,000	4,500,000	4,200,000
Less: Repayment during the year	(3,041,760)	(13,475,010)	(3,041,760)	(13,475,010)
Balance at the end of the year	<u>24,979,920</u>	<u>21,491,680</u>	<u>21,349,920</u>	<u>19,891,680</u>

#### For the long-term loan number 24.1

The Company entered into an interest rate swap contract to change the interest rate from a floating rate of 6M THBFIX plus stipulated margins to a fixed rate.

Under the loan agreements, the Company must comply with normal financial covenants relating to various matters, such as the maintenance of debt service coverage ratio and debt to equity ratio.

#### For the long-term loans number 24.2 to 24.3

The Company pledged bank accounts used to deposit moneys received for work on the M&E system of Phase 1 of the MRT Chalong Ratchadham Line (Note 7) and transferred rights to receive payments for such work to the group of lenders (Note 11) as collateral to secure these loans. The Company had interest expenses amounting to Baht 380 million on such loans for the year ended 31 December 2019 (2018: Baht 435 million).

Under the Credit Facility Agreement, the Company must comply with normal financial covenants relating to various matters, such as maintenance of debt service coverage ratio and debt to equity ratio, dividend payment and conditions for mandatory prepayment.

#### For Long-term loan number 24.4

The Company entered into interest rate swap agreements for parts of these loans to change the interest rate from a floating rate of 6M THBFIX plus a stipulated margins to a fixed rate.

Under the Credit Facility Agreements, the Company must comply with normal financial covenants relating to various matters, such as maintenance of debt service coverage ratio and debt to equity ratio, dividend payment and conditions for mandatory prepayment.

#### For Long-term loan number 24.5

This is a loan of a subsidiary company. Under the loan agreement, the subsidiary must comply with normal financial covenants relating to various matters, such as the maintenance of debt service coverage ratio and debt to equity ratio, dividend payment and conditions for mandatory prepayment.

## 25. Debentures

Debentures as at 31 December 2019 and 2018 have the following details:

					(Unit: Thousand Baht)	
					Consolidated and Separate	
					financial statements	
Type of debenture	Term	Issuance date	Maturity date	Interest rate	2019	2018
				(% per annum)		
1. No. 1/2016						
- Tranche 1	3 years	24 June 2016	24 June 2019	2.22	-	5,000,000
- Tranche 2	5 years	24 June 2016	24 June 2021	2.52	1,615,000	1,615,000
- Tranche 3	7 years	24 June 2016	24 June 2023	3.00	2,000,000	2,000,000
- Tranche 4	10 years	24 June 2016	24 June 2026	3.30	3,335,000	3,335,000
- Tranche 5	12 years	24 June 2016	24 June 2028	3.61	2,750,000	2,750,000
2. No. 2/2016	12 years	11 August 2016	24 June 2028	3.61	500,000	500,000
3. No. 3/2016						
- Tranche 1	4 years	21 October 2016	21 October 2020	2.62	2,500,000	2,500,000
- Tranche 2	9 years	21 October 2016	21 October 2025	3.78	2,500,000	2,500,000
- Tranche 3	11 years	21 October 2016	21 October 2027	3.95	3,000,000	3,000,000
4. No. 1/2017						
- Tranche 1	5 years	7 September 2017	7 September 2022	2.65	2,000,000	2,000,000
- Tranche 2	7 years	7 September 2017	7 September 2024	3.10	3,000,000	3,000,000
5. No. 1/2018						
- Tranche 1	3 years	5 April 2018	5 April 2021	2.05	3,000,000	3,000,000
- Tranche 2	5 years	5 April 2018	5 April 2023	2.46	3,500,000	3,500,000
- Tranche 3	7 years	5 April 2018	5 April 2025	3.01	3,500,000	3,500,000
6. No. 1/2019						
- Tranche 1	3 years	9 May 2019	9 May 2022	2.65	1,000,000	-
- Tranche 2	5 years	9 May 2019	9 May 2024	3.18	2,000,000	-
- Tranche 3	7 years	9 May 2019	9 May 2026	3.59	1,000,000	-
- Tranche 4	10 years	9 May 2019	9 May 2029	3.84	1,000,000	-
Total					38,200,000	38,200,000
Less: Current portion of debenture					(2,500,000)	(5,000,000)
Less: Deferred debenture issuing cost					(29,173)	(30,178)
Debentures - net of current portion					35,670,827	33,169,822

Movements in the debentures account for the year ended 31 December 2019 and 2018 are summarised below.

	(Unit: Thousand Baht)	
	Consolidated and Separate financial statements	
	<u>2019</u>	<u>2018</u>
Balance at the beginning of the year	38,200,000	28,200,000
Add: Issuance of debentures during the year	5,000,000	10,000,000
Less: Redemption of debentures during the year	(5,000,000)	-
Balance at the end of the year	<u>38,200,000</u>	<u>38,200,000</u>

All of the Company's debentures are registered debentures, unsubordinated, and unsecured, without a debenture holders' representative, except for the debenture number 6 which has a holders' representative, that pay interest semi-annually. The debentures contain covenants relating to maintenance of interest bearing debt to equity ratio.

## 26. Provision for compensation for site acquisition cost

	(Unit: Thousand Baht)	
	Consolidated and Separate financial statements	
	<u>2019</u>	<u>2018</u>
Provision for compensation for site acquisition cost		
as at the beginning of the year	1,546,892	3,011,402
Payment during the year	(1,616,000)	(1,600,000)
Interest cost	<u>69,108</u>	<u>135,490</u>
Provision for compensation for site acquisition cost		
at the end of the year	-	1,546,892
Less: Current portion	<u>-</u>	<u>(1,546,892)</u>
Provision for compensation for site acquisition cost		
- net of current portion	<u>-</u>	<u>-</u>

The Company is committed to make payments totaling Baht 16,816 million to compensate the EXAT for site acquisition costs, from the 15th year to the 30th year of the agreement, or year 2004 to year 2019 as stipulated in the Second Stage Expressway Agreement.

As at 31 December 2019, the Company had already fully paid.

## 27. Unearned revenue from advertising management rights

The Company received remuneration of Baht 35 million from the subsidiary for granting the rights to manage advertising services through the Passenger Information Display System (PIDs), as described in Note 1 C. to the financial statements, on the execution date of the agreement (1 January 2010) and this rights will expire in July 2029. The amount is presented under the caption of “Unearned revenue from advertising management rights” and is being amortised to revenue throughout the contract period.

Movements in unearned revenue from advertising management rights account in the separate financial statements are summarised below.

	(Unit: Thousand Baht)
Balance as at 1 January 2018	14,362
Less: Recognise to revenue during the year	(1,248)
Balance as at 31 December 2018	13,114
Less: Recognise to revenue during the year	(1,248)
Balance as at 31 December 2019	11,866
Less: Current portion	(1,249)
Unearned revenue from advertising management rights - net of current portion	10,617

## 28. Provision for long-term employee benefits

Provision for long-term employee benefits, which represents compensation payable to employees after they retire, are as follows:

	(Unit: Thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>Provision for long-term employee benefits</b>				
at beginning of the year	686,898	483,787	664,554	467,539
Included in profit or loss:				
Current service cost	100,972	75,870	97,728	72,898
Interest cost	12,823	18,667	12,232	18,152
Past service costs and losses on settlement	1,026	132,289	1,026	129,046
Included in other comprehensive income:				
Actuarial (gain) loss arising from				
- Demographic assumptions changes	617	18,883	600	18,883
- Financial assumptions changes	107,476	(22,904)	108,955	(22,904)
- Experience adjustments	(12,422)	(9,368)	(11,180)	(9,368)
Benefits paid during the year	(11,000)	(10,326)	(11,000)	(9,692)
<b>Provision for long-term employee benefits</b>				
at end of the year	886,390	686,898	862,915	664,554

The Group recorded the effect of the change in the legal severance pay rates for employees who have worked for an uninterrupted period of twenty years or more, which entitles such employees to receive not less than 400 days compensation at the latest wage rate, by recognising past service costs as expenses immediately in the 2018 income statement.

The Group expects to pay Baht 43 million of long-term employee benefits during the next year (Separate financial statements: Baht 43 million) (2018: Baht 3 million, Separate financial statements: Baht 3 million).

As at 31 December 2019, the weighted average duration of the liabilities for long-term employee benefit is 12.43 - 17.78 years (Separate financial statements: 12.43 - 17.78 years) (2018: 12.62 - 17.13 years, Separate financial statements: 12.62 - 17.13 years).

Significant actuarial assumptions are summarised below.

	(Unit: Percent per annum)			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Discount rate	1.6, 1.7, 2.3	2.6, 3.0, 3.3	1.6, 1.7	3.0, 3.3
Future salary increase rate	4.6, 5.5	5.5	5.5	5.5
Staff turnover rate (depending on age)	1.0 - 8.0	1.0 - 9.0	1.0 - 8.0	1.0 - 9.0

The result of sensitivity analysis for significant assumptions that affect the present value of the long-term employee benefit obligation as at 31 December 2019 and 2018 are summarised below:

	(Unit: Million Baht)			
	As at 31 December 2019			
	Consolidated financial statements		Separate financial statements	
	Increase 1%	Decrease 1%	Increase 1%	Decrease 1%
Discount rate	(83)	99	(81)	96
Future salary increase rate	94	(81)	91	(79)
Staff turnover rate	(87)	64	(84)	63

	(Unit: Million Baht)			
	As at 31 December 2018			
	Consolidated financial statements		Separate financial statements	
	Increase 1%	Decrease 1%	Increase 1%	Decrease 1%
Discount rate	(61)	73	(59)	70
Future salary increase rate	71	(62)	68	(59)
Staff turnover rate	(66)	46	(63)	45

## 29. Statutory reserve

Pursuant to Section 116 of the Public Company Limited Act B.E. 2535, the Company is required to set aside to a statutory reserve at least 5 percent of its net profit, after deducting accumulated deficit brought forward (if any), until the reserve reaches 10 percent of the registered capital. The statutory reserve is not available for dividend distribution.

## 30. Toll revenues

30.1 Under the Construction and Management Contract of the Si Rat Expressway Project (the Second Stage Expressway System) and the Bang Pa-In - Pak Kret Expressway Project, the Group and the EXAT agreed to share toll revenues receive as follows:

	The Company	The EXAT
	(Percent)	(Percent)
<u>Urban Network (FES and SES Sector A and Sector B)</u>		
(a) First 9 years from the "Priority Component Opening Date" (PCOD) (already expired)	60	40
(b) Last 9 years ending 29 February 2020	40	60
(c) Period between (a) and (b) above (already expired)	50	50
<u>Suburban Network (SES Sector C)</u>		
(a) The earlier of the PCOD to the completion of SES Sector B or 19 October 1996 (already expired)	60	40
(b) Period after (a) above until end of contract period (29 February 2020)	100	Nil
<u>Suburban Network (SES Sector D)</u>		
From the construction completion date of relevant Sections until end of contract period (21 April 2027)	100	Nil
<u>Bang Pa-In - Pak Kret Expressway</u>		
From the construction completion date of relevant Sections until end of contract period (26 September 2026)	100	Nil

30.2 Under a concession agreement of the Si Rat - Outer Ring Road Expressway Project, the Company and the EXAT agreed to share toll revenues receive as follows:

	The Company	The EXAT
	(Percent)	(Percent)
<u>The Si Rat - Outer Ring Road Expressway</u>		
From the construction completion date of relevant Sections until end of contract period (14 December 2042)	100	Nil



**31. Revenue from commercial development business**

Revenue from commercial development business derived from various sources of income, as presented in the separate financial statements for the year ended 31 December 2019, consisted of revenue from expressway system amounting to Baht 44 million (2018: Baht 42 million) and revenue from rail system amounting to Baht 675 million (2018: Baht 438 million). This included revenue from advertising management rights amounting to Baht 1 million (2018: Baht 1 million) (Note 27).

**32. Revenue from telecommunications network services and income from provision of space and facilities for the installation of telecommunications equipment**

The Company's revenue from telecommunications network services and income from provision of space and facilities for the installation of telecommunications equipment for the year ended 31 December 2019 was as follows:

	(Unit: Thousand Baht)
Telecommunications Business License Type 2	208,892
with its own telecommunication network	
Income from provision of space and facilities for the	1,500
installation of telecommunications equipment	
	<hr/>
	210,392

**33. Remuneration from fare box revenue and commercial development revenue****33.1 The Concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line**

The Company agrees to apportion revenues derived under the MRTA Initial System Project - Chaloem Ratchamongkhon Line concession agreement to the MRTA. These consist of remuneration from fares, remuneration from commercial development, apportionment of profit in excess of stipulated Return on Equity (ROE) and any benefit derived from the interest rate on a loan being lower the rate specified in the Concession Agreement

As described in Note 1 B.1 to the financial statement, the Company signed the MRT Blue Line Project Concession Agreement on 31 March 2017. Under the MRT Blue Line Concession Agreement, the MRTA Initial System Project - Chaloem Ratchamongkhon Line concession agreement is deemed to be part of the MRT Blue Line Concession Agreement, and only the clauses relating the rights, duties and provisions with respect to fares, fare rates and payment of remuneration to the MRTA will remain in effect until the end of the concession agreement with the MRTA for the MRTA Initial System Project - Chaloem Ratchamongkhon Line.

Remuneration paid to the MRTA under the MRTA Initial System Project - Chaloem Ratchamongkhon Line concession agreement is summarised in Part I of Note 33.2 to the financial statements.

### 33.2 The MRT Blue Line Concession agreement

Under the MRT Blue Line Project concession agreement dated 31 March 2017, the Company agrees to apportion revenue under the concession agreement to the MRTA, which can be divided into two parts, as follows:

Part I: Remuneration from fares and commercial development revenues of the MRTA Initial System Project - Chaloem Ratchamongkhon Line earned under the related concession agreement until 1 July 2029, with detail as follow:

a) Remuneration from fare revenue

Annual remuneration

The Company has agreed to apportion fare revenue to the MRTA on an annual basis for the period from 2 July 2014 to 1 July 2029. The total amount payable is Baht 43,567 million (inclusive of VAT) divided into annual payments in amounts stipulated in the MRTA Initial System Project - Chaloem Ratchamongkhon Line concession agreement.

As at 31 December 2019, the Company recorded accumulated annual remuneration totaling Baht 6,778 million (2018: Baht 4,990 million).

Percentage remuneration

The Company has agreed to apportion to the MRTA 1 percent to 15 percent of the fare revenue of the MRTA Initial System Project - Chaloem Ratchamongkhon Line (inclusive of VAT) from 2 July 2004 to 1 July 2029, in the form of monthly payments.

b) Remuneration from commercial development revenues

Annual remuneration

The Company has agreed to apportion commercial development revenues to the MRTA on an annual basis for the period from 2 July 2004 to 1 July 2029. The total amount payable is Baht 930 million (inclusive of VAT) divided into annual payments in amounts stipulated in the MRTA Initial System Project - Chaloem Ratchamongkhon Line concession agreement.

As at 31 December 2019, the Company recorded accumulated annual remuneration totaling Baht 455 million (2018: Baht 405 million).

Percentage remuneration

The Company has agreed to apportion to the MRTA 7 percent of commercial development revenues of the MRTA Initial System Project - Chaloem Ratchamongkhon Line (inclusive of VAT) from 2 July 2004 to 1 July 2029, in the form of monthly payments.

Part II: Remuneration from fares and commercial development revenues of the MRT Blue Line Extension Project from 31 March 2017 until end of the MRT Blue Line concession period and remuneration from fares and commercial development revenues of the MRTA Initial System Project - Chaloem Ratchamongkhon Line from 2 July 2029 until end of the MRT Blue Line concession period.

The Company is to pay remuneration to MRTA when the Company earns a return on investment over the rate stipulated in the concession agreement, from its operation of the MRT Blue Line Extension Project, as from 31 March 2017, and from its operation of the MRTA Initial System Project - Chaloem Ratchamongkhon Line, as from 2 July 2029, until the end of the MRT Blue Line concession period. The compensation rates are as stipulated in the MRT Blue Line concession agreement

### 34. Expenses by nature

Significant expenses classified by nature are as follows:

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
Amortisation and depreciation	4,026,463	3,866,568	3,362,011	3,212,916
Salaries, wages and other employee benefits				
for the Group's staff	2,365,977	2,342,993	2,261,593	2,252,152
Salary, wages and other benefits of the				
employees of the EXAT	882,421	844,046	722,169	689,244
Repair and maintenance expenses	1,877,830	1,656,583	1,827,233	1,609,392
Compensation for site acquisition cost	397,839	464,365	397,839	464,365
Utilities expenses	645,492	591,121	624,983	571,546
Project remuneration expenses	393,652	355,662	393,652	355,662
Expenses with respect to facilitation and				
safety on expressway and stations	523,786	475,069	484,509	438,883
Insurance expenses	105,817	105,103	99,738	98,901

### 35. Income tax

Income tax expenses for the years ended 31 December 2019 and 2018 are made up as follows:

	(Unit: Thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
<b>Current income tax:</b>				
Current income tax for the year	167,079	340,420	83,657	262,327
Adjustment in respect of current income tax of previous year	(58)	364	(58)	268
<b>Deferred tax:</b>				
Relating to origination and reversal of temporary differences	1,587,921	848,363	514,852	382,436
<b>Income tax expense reported in the income statement</b>	<u>1,754,942</u>	<u>1,189,147</u>	<u>598,451</u>	<u>645,031</u>

The amounts of income tax relating to each component of other comprehensive income for the years ended 31 December 2019 and 2018 are as follows:

	(Unit: Thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
Deferred tax related to				
- Unrealised gain (loss) from cash flow hedges	(18,175)	6,229	(18,175)	6,229
- Unrealised gain on valuation of available-for-sale securities	120,572	278,106	1,196,082	745,347
- Actuarial gain (loss)	(19,340)	2,678	(19,880)	2,678
<b>Total</b>	<u>83,057</u>	<u>287,013</u>	<u>1,158,027</u>	<u>754,254</u>

The reconciliation between accounting profit and income tax expense is shown below.

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Accounting profit before tax	7,206,807	6,524,994	3,522,077	3,752,461
Applicable tax rate	20%	20%	20%	20%
Accounting profit before tax multiplied by applicable tax rate	1,441,361	1,304,999	704,415	750,492
Adjustment in respect of income tax of previous year	(58)	364	(58)	268
Effects of elimination entry on the consolidated financial statements	17,718	12,480	-	-
Effects of:				
Tax-exempt revenues	(49,601)	-	(95,788)	(98,788)
Share of profit from investment in associates	(34,582)	(86,559)	-	-
Gain on reclassification of investment	392,523	(32,013)	-	-
Non-deductible expenses	806	2,585	806	2,585
Additional expense deductions allowed	(9,596)	(10,812)	(6,134)	(6,914)
Others	(3,629)	(1,897)	(4,790)	(2,612)
Total	295,921	(128,696)	(105,906)	(105,729)
Income tax expenses reported in the income statement	1,754,942	1,189,147	598,451	645,031

The components of deferred tax assets and deferred tax liabilities as at 31 December 2019 and 2018 are as follows:

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	2019	2018	2019	2018
<b>Deferred tax assets (liabilities)</b>				
Allowance for doubtful accounts	188	325	-	-
Accrued bonus	10,923	7,589	9,283	6,551
Others accrued expense	2,503	2,554	2,074	2,074
Allowance for asset impairment	-	37	-	37
Provision for long-term employee benefits	177,278	137,380	172,583	132,911
Provision for compensation for site acquisition cost	-	309,378	-	309,378
Accumulated amortisation - Rights to operate				
expressway sectors	(443,190)	(465,759)	(443,190)	(465,759)
Rights to use sites for expressway construction	(12,293)	(78,040)	(12,293)	(78,040)
Prepaid project remuneration	(828,889)	(510,638)	(828,889)	(510,638)
Unrealised gain from revaluation of trading				
securities	(14,062)	(9,374)	(14,062)	(9,374)
Unrealised gain from revaluation in available-for-sale				
securities	(398,678)	(278,106)	(1,941,429)	(745,347)
Gain on reclassification of investment	(1,542,751)	(467,241)	-	-
Gain from sale of investments	7,926	3	6,665	3
Derivative financial liabilities	22,537	4,362	22,537	4,362
Deferred tax assets (liabilities) - net	<u>(3,018,508)</u>	<u>(1,347,530)</u>	<u>(3,026,721)</u>	<u>(1,353,842)</u>
<b>Presentation in the financial statements</b>				
Deferred tax assets	6,952	6,312	-	-
Deferred tax liabilities	<u>(3,025,460)</u>	<u>(1,353,842)</u>	<u>(3,026,721)</u>	<u>(1,353,842)</u>
	<u>(3,018,508)</u>	<u>(1,347,530)</u>	<u>(3,026,721)</u>	<u>(1,353,842)</u>

### 36. Earnings per share

Basic earnings per share is calculated by dividing profit for the year attributable to equity holders of the Company (excluding other comprehensive income) by the weighted average number of ordinary shares in issue during the year.



### 37. Dividends

Dividend declared for the year ended 31 December 2019 and 2018 in the consolidated and separate financial statements consisted of the following:

Dividend	Approved by	Total dividend (Million Baht)	Dividend per share (Baht)	Paid on
Dividend for the second half of the year 2018	Annual General Meeting of the shareholders on 26 April 2019	1,376	0.09	22 May 2019
Dividend for the first half of the year 2019	Meeting of the Board of Directors on 9 August 2019	917	0.06	4 September 2019
Total dividend for the year ended 31 December 2019		2,293	0.15	
Dividend for the second half of the year 2017	Annual General Meeting of the shareholders on 20 April 2018	1,070	0.07	14 May 2018
Dividend for the first half of the year 2018	Meeting of the Board of Directors on 22 August 2018	917	0.06	19 September 2018
Total dividend for the year ended 31 December 2018		1,987	0.13	

### 38. Promotional privileges

The Company has received promotional privileges from the Board of Investment for the investment of the MRT Blue Line Project, pursuant to the investment promotion certificate No. 60-1074-1-00-1-0 issued on 27 July 2017. Subject to certain imposed conditions, the privileges include an exemption from corporate income tax for a period of 8 years from the date the promoted operations begin generating revenues (11 August 2017).

The Company's operating revenues for the years ended 31 December 2019 and 2018, divided between promoted and non-promoted operations, are summarised below.

(Unit: Thousand Baht)						
	Promoted operations		Non-promoted operations		Total	
	2019	2018	2019	2018	2019	2018
Revenue from expressway business	-	-	8,852,073	8,717,818	8,852,073	8,717,818
Revenue from rail business	3,139,915	2,878,850	1,882,185	1,857,152	5,022,100	4,736,002
Revenue from commercial development business	-	-	719,568	480,468	719,568	480,468
Other income	2,205	2,495	1,432,906	1,781,056	1,435,111	1,783,551
Total revenue	3,142,120	2,881,345	12,886,732	12,836,494	16,028,852	15,717,839

### 39. Segment information

Operating segment information is reported in a manner consistent with the internal reports that are regularly reviewed by the chief operating decision maker in order to make decisions about the allocation of resources to the segment and assess its performance.

For management purposes, the Group is organised into business units based on its products and services and have four reportable segments as follows:

- 1) The expressway business segment includes the construction and operation of the expressway.
- 2) The rail business segment includes the operation of the rapid transit system.
- 3) The commercial development business segment includes the rental of retail space, and the provision of advertising media services and telecommunication services inside and outside underground train stations and on expressway.
- 4) Other segments are segments where the Company is employed to operate Udon Raththaya Expressway project of the subsidiary.

The chief operating decision maker monitors the operating results of the business units separately for the purpose of making decisions about resource allocation and assessing performance. Segment performance is measured based on operating profit or loss and total assets and on a basis consistent with that used to measure operating profit or loss and total assets in the financial statements.

The basis of accounting for any transactions between reportable segments is consistent with that for third party transactions.

The following tables present revenue and profit and total assets information regarding the Group's operating segments for the year ended 31 December 2019 and 2018.

	(Unit: Million Baht)									
	Expressway		Rail		Commercial		Elimination of		Consolidation	
	business	segment	business	segment	development	business segment	Other	inter-segment	revenues	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Revenue from external customers	10,302	10,174	5,022	4,736	783	705	-	-	16,107	15,615
Inter-segment revenues	-	-	-	-	363	330	186	(549)	-	-
Total revenues	10,302	10,174	5,022	4,736	1,146	1,035	186	(549)	16,107	15,615
Segment profit	4,262	4,299	1,014	1,049	520	492	-	-	5,796	5,840
Unallocated income and expenses:										
Interest income									393	451
Gain on sale of investments									181	499
Gain on reclassification of investment									3,409	2,496
Other income									314	27
Share of profit from investments in associates									173	433
Selling expenses									(139)	(112)
Administrative expenses									(1,197)	(1,252)
Finance cost									(1,723)	(1,857)
Income tax expenses									(1,755)	(1,189)
Non-controlling interests of the subsidiaries									(17)	(19)
Profit for the year									5,435	5,317
Rights to operate expressway sectors	32,253	35,146	-	-	-	-	-	-	32,253	35,146
Intangible asset under concession agreement of the MRT Blue Line Project	-	-	41,070	34,584	1,267	844	-	-	42,339	35,428
Project cost of the MRT Chalong Ratchaham Line	-	-	645	655	-	-	-	-	645	655
Unallocated assets	-	-	-	-	-	-	37,190	(730)	36,460	32,602
Total assets									111,697	103,831

Transfer prices between business segments are as set out in Note 6 to the financial statements.

## **Geographic information**

The Group operates in Thailand only. As a result, all the revenues and assets as reflected in these financial statements pertain exclusively to this geographical reportable segment.

## **Major customers**

For the years 2019 and 2018, the Group has no major customer with revenue of 10 percent or more of an entity's revenues.

### **40. Provident fund**

The Group and its employees have participated in TISCO Ruamtun 2 Registered Provident Fund as approved by Ministry of Finance in accordance with the Provident Fund Act B.E. 2530. Employees, the Group contributed to the fund monthly at the rates of 3 - 10 percent of basic salary. The fund, which is managed by TISCO Asset Management Company Limited, will be paid to employees upon termination in accordance with the fund rules. During the year 2019, the Group recognised the contribution of Baht 95 million in the consolidated financial statements (2018: Baht 93 million) as expenses and recognised the contribution of Baht 92 million in the separate financial statements (2018: Baht 90 million).

### **41. Commitments and contingent liabilities**

#### **41.1 Capital commitments**

The Group has capital commitments as follows:

	As at 31 December	
	2019	2018
a) Performance improvement for farebox collection systems	Baht 105 million and USD 2 million	Baht 26 million and USD 3 million
b) Acquisition of equipment	Baht 23 million	-
c) Supply, installation and testing of the M&E Systems of the MRT Blue Line Project	Baht 2,483 million and EUR 4 million	Baht 8,026 million and EUR 5 million
d) Improvement for civil infrastructure of expressway	Baht 50 million	Baht 3 million
e) Improvement of computerised maintenance management system	Baht 3 million	Baht 28 million
f) Other capital commitments	Baht 6 million	Baht 16 million

## 41.2 Long-term service commitments

The Group has commitments in respect of the Procurement of M&E equipment contract and the Maintenance of M&E equipment and trackwork and infrastructure and civil works contracts of the M&E Project which were signed in September 2017, October 2017, August 2018, December 2018, February 2019 and March 2019 with six companies. These contracts will expire during 2023 until 2029.

Future minimum service fees payable under these contracts, excluding escalation in accordance with the general consumer price index are as follows:

(Unit: Million)

	As at 31 December									
	2019					2018				
	<u>Baht</u>	<u>USD</u>	<u>EUR</u>	<u>SGD</u>	<u>YEN</u>	<u>Baht</u>	<u>USD</u>	<u>EUR</u>	<u>SGD</u>	<u>YEN</u>
Payable:										
In up to 1 year	1,712	-	5	-	379	961	-	3	1	380
In over 1 year and up to 5 years	5,559	2	18	1	1,518	4,958	2	20	6	1,518
In over 5 years	4,383	2	19	1	601	4,287	2	22	3	980

## 41.3 Commitments under various service agreements

The Group has commitments under various service agreements as follows:

(Unit: Million Baht)

	As at 31 December	
	2019	2018
Payable:		
In up 1 year	497	372
In over 1 year and up to 5 years	362	269

#### 41.4 Operating lease commitments

The Group had entered into several lease agreements in respect of the lease of office building space, equipment and motor vehicles. The terms of the agreements are generally between 2 and 5 years.

Future minimum lease payments required under these operating lease agreements were as follows:

	(Unit: Million Baht)	
	As at 31 December	
	2019	2018
Payable:		
In up to 1 year	28	17
In over 1 year and up to 5 years	37	18

#### 41.5 Guarantees

There were the following outstanding performance bonds and bank guarantees issued by banks on behalf of the Company.

	(Unit: Million Baht)	
	As at 31 December	
	2019	2018
a) Issued to the EXAT in accordance with the operation of the Si Rat-Outer Ring Road Expressway Project agreement	-	6
b) Issued to the MRTA in accordance with the operation of the MRT Blue Line Concession agreement	210	210
c) Issued to MRTA in accordance with the Agreement for the MRT Chalong Ratchadham Project agreement	200	200
d) Issued to the Metropolitan Electricity Authority to guarantee electricity under rail projects	118	118
e) Other guarantees	14	14



**41.6 Other commitments**

	(Unit: Million Baht)	
	As at 31 December	
	2019	2018
a) Commitments in respect of the uncalled portion of investments		
Northern Bangkok Expressway Company Limited	750	750
b) Commitment in respect of Expressway inspection, replacement and improvement agreements (paid within one year)	27	22

**42. The disputes with Expressway Authority of Thailand (EXAT)**

As at 31 December 2019, the Group had a total of 19 disputes with EXAT, which were referred to the Panel and the Arbitral Tribunal in accordance with the dispute settlement procedures under the Agreements and in the Administrative Court. The essence of each dispute was as follows:

**42.1 Disputes submitted by the Group claiming for damages in 11 disputes, with the total amount until the date of submission of the disputes of approximately Baht 54,503.7 million****42.1.1 Priority Component Opening Date under the Second Stage Expressway Agreement**

On 9 July 2001, the Company submitted a statement of claim requiring EXAT to compensate for the deficient revenue with interest in the amount of Baht 3,831.4 million, due to different opinions as to which date was the Priority Component Opening Date, which affected the commencement of the toll revenue sharing with the Company under the Agreement, which the Arbitral Tribunal, on 15 December 2008, rendered its arbitral award on the dispute requiring EXAT to pay the toll revenue sharing including interest under the Agreement as required by the Company.

EXAT refused to comply with the arbitral award and submitted a petition to the Central Administrative Court requesting the Court to revoke the arbitral award. Whereas the Company submitted a petition requesting a judgment from the Central Administrative Court to enforce compliance with the arbitral award and calculate the interest up to the date on which the Company submitted the petition to the Court, amounting to Baht 1,189.7 million, with the total disputed amount of Baht 5,021.1 million. On 13 September 2013, the Central Administrative Court then adjudged to dismiss EXAT's petition requesting the Court to revoke the arbitral award and adjudged to enforce the Company's petition.

On 11 October 2013, EXAT lodged an appeal against the Central Administrative Court's judgment with the Supreme Administrative Court.

It is pending the Supreme Administration Court's consideration.

#### 42.1.2 Issuance of variation orders by EXAT

On 9 December 2009, the Company submitted a statement of claim requiring EXAT to compensate the Company for damages caused by EXAT's issuance of additional variation orders for certain construction work of the Si Rat Expressway in the total amount of Baht 209.1 million (excluding interest), which the Arbitral Tribunal, on 20 December 2013, unanimously rendered its arbitral award requiring EXAT to pay the construction costs and expenses as per the Notice of Variation in the total amount of Baht 382.5 million, together with interest under the Agreement.

EXAT refused to comply with such arbitral award and submitted a petition to the Central Administrative Court requesting the Court to revoke the arbitral award. Whereas, the Company submitted a petition to the Central Administrative Court requesting a judgment to enforce compliance with the arbitral award.

On 19 September 2019, the Central Administrative Court adjudge to revoke the arbitral award and dismiss the Company's petition to enforce the arbitral award. On 18 October 2019, the Company lodged an appeal against the Central Administrative Court's judgment with the Supreme Administrative Court.

It is pending the Supreme Administration Court's consideration.

#### 42.1.3 Revision of toll rates of the Chalem Mahanakorn Expressway and the Si Rat Expressway for the year 2003

On 14 May 2008, the Company submitted a statement of claim requiring EXAT to compensate the Company for damages caused by the revision of toll rates of the Chalem Mahanakorn Expressway and the Si Rat Expressway for 2003, which was not in accordance with the Agreement, thereby causing the damages, including interest, in the total amount of Baht 4,368 million, which the Arbitral Tribunal, on 12 February 2016, by the majority of votes, rendered its arbitral award requiring EXAT to compensate the Company for damages in the amount of Baht 4,368 million, together with interest under the Agreement.

A) the dispute whereby EXAT requested the revocation of the arbitral award, EXAT refused to comply with such arbitral award and submitted a petition to the Central Administrative Court requesting the Court to revoke the arbitral award. On 14 May 2019, the Central Administrative Court delivered the verdict revoke EXAT requested the revocation of the arbitral award. Then, on 12 June 2019, EXAT filed an appeal against the Central Administrative Court to the Supreme Administrative Court.

It is pending the Supreme Administrative Court for consideration.

B) the dispute whereby the Company requested a judgement to enforce of the arbitral award, on 12 February 2019, the Company submitted a petition to the Central Administrative Court requesting a judgment to enforce compliance with the arbitral award.

It is pending the Central Administrative Court's consideration.

#### 42.1.4 Revision of toll rates of the Chalem Mahanakorn Expressway and the Si Rat Expressway for the year 2008

On 13 June 2013, the Company submitted a statement of claim to the Arbitral Tribunal requiring EXAT to compensate the Company for damages caused by the revision of toll rates (of the Chalem Mahanakorn Expressway and the Si Rat Expressway) for the year 2008, which was not in accordance with the Agreement, in the total amount of Baht 9,091.8 million, together with interest under the Agreement.

On 24 October 2018, the Arbitral Tribunal rendered the unanimously judgment awarded requiring EXAT to compensate the Company for damages caused by the revision of toll rates (of the Chalem Mahanakorn Expressway and the Si Rat Expressway) for the year 2008 which was not in accordance with the Agreement together with interest, in the total amount of Baht 9,091.8 million, and interest under the Agreement shall be calculated on the principle of the damages, in the amount of Baht 7,909.6 million from 1 June 2013 until EXAT will make such payment in full and compensation for damages from the difference of toll revenue sharing based on the toll rates under the Ministry of Transport's Announcement dated 15 August 2008 and the toll rates which the Company entitled to receive under the Agreement, by calculating based on the actual number of vehicles in each category using the expressways on a daily basis from 1 June 2013 onwards, including default interest under the Agreement from 1 June 2013 onwards until the EXAT will be paid such damage together interest in full to the Company.

On 25 January 2019, EXAT submitted a petition to the Central Administrative Court requesting the Court to revoke the arbitral award.

It is pending the Central Administrative Court's consideration.

#### 42.1.5 Revision of toll rates of the Chalerm Mahanakorn Expressway and the Si Rat Expressway for the year 2013

On 16 August 2018, the Company submitted a statement of claim to the Arbitral Tribunal requiring EXAT to compensate the Company for damages caused by the revision of toll rates (the Chalerm Mahanakorn Expressway and the Si Rat Expressway) for the year 2013, which was not in accordance with the Agreement, in the total amount of Baht 14,662.7 million, together with interest under the Agreement.

It is pending the proceedings of the Thai Arbitration Institute.

#### 42.1.6 Revision of toll rates of Sector D of the Si Rat Expressway for the year 2003

On 24 July 2008, the Company submitted a statement of claim requiring EXAT to compensate the Company for damages caused by the revision of toll rates of Sector D of the Si Rat Expressway for the year 2003, which was not in accordance with the Agreement, in the total amount of Baht 1,048.2 million.

On 22 April 2019, the Arbitral Tribunal rendered the judgment awarded requiring EXAT to compensate the Company for damages caused by the revision of toll rates (Sector D of the Si Rat Expressway) for the year 2003, which was not in accordance with the Agreement together with interest, in the total amount of Baht 1,048.2 million, and interest under the Agreement shall be calculated on the principle of the damages, in the amount of Baht 914.3 million from 1 June 2008 until EXAT will make such payment in full and compensation for damages from the difference of toll revenue sharing based on the toll rates under the Ministry of Transport's Announcement dated 29 August 2003 and the toll rates which the Company entitled to receive under the Agreement, by calculating based on the actual number of vehicles in each category using the expressways on a daily basis from 1 June 2008 to 31 August 2008, including default interest under the Agreement from 1 June 2008 onwards until EXAT will be paid such damage together interest in full to the Company.

On 25 July 2019, EXAT refused to comply with the arbitral award and submitted a petition to the Central Administrative Court requesting the Court to revoke the arbitral award.

It is pending the Central Administrative Court's consideration.

#### 42.1.7 Revision of toll rates of Sector D of the Si Rat Expressway for the year 2008

On 28 June 2013, the Company submitted a statement of claim to the Arbitral Tribunal requiring EXAT to compensate the Company for damages caused by the revision of toll rates of Sector D of the Si Rat Expressway for the year 2008, which was not in accordance with the Agreement, in the total amount of Baht 4,062.8 million, together with interest under the Agreement.

It is pending the proceedings of the Thai Arbitration Institute.

#### 42.1.8 Revision of toll rates of Sector D of the Si Rat Expressway for the year 2013

On 21 August 2018, the Company submitted a statement of claim to the Arbitral Tribunal requiring EXAT to compensate the Company for damages caused by the revision of toll rates of Sector D of the Si Rat Expressway for the year 2013, which was not in accordance with the Agreement, in the total amount of Baht 6,936.4 million, together with interest under the Agreement.

It is pending the proceedings of the Thai Arbitration Institute.

#### 42.1.9 Revision of toll rates of Udon Ratthaya Expressway for the year 2003

On 22 October 2013, the subsidiary submitted a statement of claim to the Arbitral Tribunal requiring EXAT to compensate the subsidiary for damages, caused by the revision of toll rates of the Udon Ratthaya Expressway for the year 2003, which was not in accordance with the Agreement, in the amount of Baht 908.7 million, together with interest under the Agreement.

It is pending the proceedings of the Thai Arbitration Institute.

#### 42.1.10 Revision of toll rates of Udon Ratthaya Expressway for the year 2008 and 2013

On 21 August 2018, the subsidiary submitted a statement of claim to the Arbitral Tribunal requiring EXAT to compensate the subsidiary for damages, caused by the revision of toll rates of the Udon Ratthaya Expressway for the year 2008 and 2013, which was not in accordance with the Agreement, in the amount of Baht 4,724.8 million, together with interest under the Agreement.

It is pending the proceedings of the Thai Arbitration Institute.

#### 42.1.11 Competing road with the Udon Rattaya Expressway for the year 1999 - 2000

On 20 December 2004, the subsidiary submitted a statement of claim requiring EXAT to compensate for the deficient revenue, based on the ground that the Government granted permission for construction of the Extension of the Don Muang Tollway Project, from the National Memorial to Rangsit Section, which constituted a competing road under the Agreement, and affected the financial position of the subsidiary, thereby rendering such damages until the date of submission of the dispute (excluding interest) to Baht 1,790 million, which the Arbitral Tribunal, on 27 November 2008, rendered its arbitral award on the dispute requiring EXAT to compensate for the deficient revenue with interest as required by the subsidiary.

EXAT refused to comply with such arbitral award and submitted a petition to the Central Administrative Court requesting the Court to revoke the arbitral award. Whereas, the subsidiary submitted a petition to the Central Administrative Court requesting a judgment to enforce compliance with the arbitral award, with the disputed amount of Baht 3,296 million. On 3 May 2013, The Central Administrative Court subsequently adjudged to dismiss EXAT's petition requesting the Court to revoke the arbitral award and issued a judgment to enforce compliance with the arbitral award.

On 31 May 2013, EXAT lodged an appeal against the Central Administrative Court's judgment with the Supreme Administrative Court. On 21 September 2018, the Supreme Administrative Court ruled to affirm the Judgement of the Administrative Court to enforce the arbitral award of the arbitral tribunal to compensate for the deficient revenue from the projection to the subsidiary under the Bang Pa-In - Pak Kret Expressway Agreement in total of Baht 1,790 million which composed of the compensation for the year 1999 in the total of Baht 730.8 million with interest from 14 June 2000 until the payment is paid in full and the compensation for the year 2000 in the total of Baht 1,059.2 million with interest from 22 March 2001 until the payment is paid in full. EXAT shall be required to fully comply with the Judgement within 90 days from the date the Supreme Administrative Court has ruled the Judgement, which will be due on 20 December 2018.



On 2 October 2018, the Council of Ministers' Meeting resolved that in order to alleviate the loss and damage which would occur to the Government and to protect the utmost benefits of the Government sector in the case that the Government agency has the dispute under the Court of Arbitration or is filed a lawsuit with the Administrative Court as one or several cases in the same issue or as connected thereto, for instance, the case under the responsibility of the Ministry of Transport (Expressway Authority of Thailand), on which the Arbitral Tribunal rendered its arbitral award, thereby giving rise to the case proceedings in the Supreme Administrative Court, in which case, the Arbitral Tribunal rendered its arbitral award requiring the Government agency to compensate for the damages or others; as a result, the resolution has been passed to require that such Government agency may conduct a negotiation with its disputing party to alleviate the damage of the Government and to ensure the justice to the people, provided that such negotiation shall be conducted transparently and legitimately by mainly taking into account the benefits of the nation.

Subsequently, EXAT issued a letter dated 31 October 2018 to the subsidiary, informing that the Board of EXAT has appointed a subcommittee to consider determining the guidelines for compliance with the judgment of the Supreme Administrative Court of the dispute in the case of the competing road between EXAT and the subsidiary, so as to consider determining the guidelines for compliance with such judgment of the Supreme Administrative Court, as well as conducting a negotiation with the subsidiary and inviting the subsidiary to attend the negotiation meeting to reach an agreement for such matter.

On 19 December 2018, EXAT and the subsidiary issued their letters to reply the letter of the Bureau of Administrative Case Execution dated 11 October 2018 regarding the compliance with the Supreme Administrative Court's judgement that it is pending on the negotiation process to conclude the Supreme Administrative Court's judgement.

During December 2018, the subcommittee attended the meetings for negotiation with the Group several times for the dispute settlement of all cases between EXAT and the Group under the Second Stage Expressway Agreement (Sector A, Sector B and Sector C), the Agreement for the Extension of the Second Stage Expressway System (Sector D), and the Bang Pa-In - Pak Kret Expressway Agreement. On 21 December 2018, the Group has reached the agreement with EXAT for the negotiation and dispute settlement for all disputes as described in Note 42 to the financial statements.

The agreement can be summarised as follows;

- A) EXAT and the Group has agreed to settle all disputes which already took place or would take place in the future in the same issues in relation with the Concession Agreements.
- B) EXAT and the Group has mutually agreed to review and amend the Concession Agreements as follows;
  - B1. The respective periods of time of the Second Stage Expressway Agreement (Sector A, Sector B and Sector C), the Agreement for the Extension of the Second Stage Expressway System (Sector D), and the Bang Pa-In - Pak Kret Expressway Agreement, shall be extended from which would formerly end in 2020, 2027 and 2026 respectively, to end on 21 April 2057;
  - B2. The Company shall provide the O&M Services of the Second Stage Expressway and the subsidiary shall provide the O&M Services of the Bang Pa-In - Pak Kret Expressway, provided that the Group is entitled to receive toll revenue sharing throughout the respective agreement periods at the rates ranging from 40 to 100 percent according to the rates specified in the Agreements;
  - B3. The revision of toll rates shall be revised to constantly increase every 10 years;
  - B4. The Company shall have duty to invest, construct and improve the Second Stage Expressway in the total investment amount of approximately Baht 31,500 million to solve the traffic congestion problem.

As at 31 December 2019, the results of the negotiation and disputes settlement are pending for the relevant government agency to propose to the Cabinet for an approval in conformity with the Private Investment in State Undertaking Act B.E. 2556, in which there might be the possibilities to be altered from which summarised in A) and B).

On 18 February 2020, the Cabinet passed a resolution to amend the concession agreements in order to settle all the disputes for both the Second Stage Expressway (The Si Rat Expressway including Sector D) and the Bang Pa-In - Pak Kret Expressway Project (The Udon Rattaya Expressway) as described in Note 42.4 to the financial statements.

## **42.2 Disputes submitted by EXAT claiming for damages in 3 disputes, with the total amount until the date of submission of the disputes of approximately Baht 1,589.2 million**

### **42.2.1 Cost of arrangements of the entrance - exit and resolution of complaints**

On 11 May 2007, EXAT submitted a statement of claim requiring the Company to be responsible for the cost of arrangements of the entrance - exit claimed by complainants, and the cost of free flow drains, in the total amount of Baht 0.4 million, which the Arbitral Tribunal rendered its arbitral award ruling that EXAT had no right to claim for such costs.

EXAT submitted a petition for revocation of the arbitral award to the Central Administrative Court. The Central Administrative Court subsequently issued the judgment, on 30 August 2017, to revoke the arbitral award only on the second ground part - the cost of free flow drains. The Court rules that the Arbitral Tribunal has illegally received the claim because EXAT submitted the case when the ground part was precluded by prescription.

On 29 September 2017, the Company appealed the Central Administrative Court's judgment to the Supreme Administrative Court.

It is pending the Supreme Administration Court's consideration.

### **42.2.2 Construction of the Udon Ratthaya Expressway, Phase 2**

On 29 January 2016, EXAT submitted a statement of claim to the Arbitral Tribunal requiring the subsidiary to construct the Udon Ratthaya Expressway, Phase 2, in accordance with the conditions of the Bang Pa-In - Pak Kret Expressway Agreement, and compensate for the amount of Baht 1,587.7 million, together with interest under the Agreement. The Agreement states that although the conditions of the Agreement to commence the construction has been fulfilled, the subsidiary shall not yet be obliged to carry out the construction if EXAT breach of the Agreement causing the subsidiary to suffer financial set back materially. EXAT are in breach of the Agreement with the competing road and the revision of toll rates, as described in Notes 42.1.9, 42.1.10 and 42.1.11 to the financial statements. Therefore, the subsidiary acquired its rights to not commence the construction and EXAT is not entitled to claim for indemnity.

It is pending the proceedings of the Thai Arbitration Institute.

#### 42.2.3 Cost of utilisation of the Control Center Building (Bang Phun)

On 27 February 2009, EXAT submitted a statement of claim to the Arbitral Tribunal requiring the subsidiary to be responsible for the cost of utilisation of the Control Center Building (Bang Phun) in the amount of Baht 1.1 million, which the subsidiary was of the view that such cost claimed by EXAT was not within its scope of responsibility under the Agreement.

It is pending the proceedings of the Thai Arbitration Institute.

As at 31 December 2019, the disputes are under the negotiation and disputes settlement, the Group therefore did not record such entries in the financial statements.

#### **42.3 Disputes submitted by the Group claiming for damages which was in the Panel proceedings, in 5 disputes, with the total amount to date of submission of the disputes of approximately Baht 78,181.9 million.**

##### 42.3.1 Revision of toll rates of the Chalem Mahanakorn Expressway and the Si Rat Expressway for the year 2018

On 16 November 2018, the Company requested EXAT to compensate for the damages from 1 September 2018 to 31 October 2018, together with the interest, in an amount of Baht 592.9 million, and the interest of the principle damage in an amount of Baht 590.8 million on a daily basis from 1 November 2018 onwards, and compensate for the differences of toll revenue according to the Notification of the Ministry of Transport dated 2 August 2013 from 1 November 2018 onwards together with the default interest under the Agreement. On 5 July 2019, EXAT and the Company could not reach the amicable settlement in the date of appearance. Therefore, the Panel agreed to terminate the consideration and referred the dispute into the arbitration class.

It is pending to submit to the Thai Arbitration Institute.

##### 42.3.2 Revision of toll rates of the Si Rat Expressway - Sector D for the year 2018

On 16 November 2018, the Company requested EXAT to compensate for the damages from 1 September 2018 to 31 October 2018, together with the interest, in an amount of Baht 289.3 million, and the interest of the principle damage in an amount of Baht 288.3 million on a daily basis from 1 November 2018 onwards, and compensate for the differences of toll revenue according to the Notification of the Ministry of Transport dated 2 August 2013 from 1 November 2018 onwards together with the default interest under the Agreement. On 5 July 2019, EXAT and the Company could not reach the amicable settlement in the date of appearance. Therefore, the Panel agreed to terminate the consideration and referred the dispute into the arbitration class.

It is pending to submit to the Thai Arbitration Institute.

#### 42.3.3 Revision of toll rates of Udon Ratthaya Expressway for the year 2018

On 16 November 2018, the subsidiary requested EXAT to compensate for the damages from 1 November 2018 to 11 November 2018, together with the interest, in an amount of Baht 24.9 million, and the interest of the principle damage in an amount of Baht 24.9 million on a daily basis from 12 November 2018 onwards, and compensate for the differences of toll revenue according to the Notification of the Ministry of Transport dated 2 August 2013 from 12 November 2018 onwards together with the default interest under the Agreement. On 5 July 2019, EXAT and the Company could not reach the amicable settlement in the date of appearance. Therefore, the Panel agreed to terminate the consideration and referred the dispute into the arbitration class.

It is pending to submit to the Thai Arbitration Institute.

#### 42.3.4 Competing road with the Udon Ratthaya Expressway for the year 2001 - 2017

As a result of the Government's permission to the construction of the Don Muang Tollway extension project from the National Memorial to Rangsit Section, which the Supreme Administrative Court has ruled in the year 1999 - 2000 case of the same on 17 September 2018 for EXAT to compensate for the deficit revenue to the subsidiary. Therefore, it is clear and settle that the subsidiary affected by the construction of the competing road. On 3 May 2019, the subsidiary requested the EXAT compensate for the deficit revenue from the estimated according to the Appendix VIII attached to the Bang Pa-In - Pak Kret Expressway Agreement for the year 2001 - 2017 for the total of Baht 46,300.2 million together with the cumulative interest calculated until 30 April 2019 in the total of Baht 25,925.3 million, and compensate for the interest of the principle amount total Baht 46,300.2 million calculated from 1 May 2019 until EXAT shall pay the principle amount together with the interest in the amount of Baht 72,225.5 million in full to the subsidiary.

It is pending to submit to the Thai Arbitration Institute.

#### 42.3.5 Competing road with the Udon Ratthaya Expressway for the year 2018

On 29 October 2019, the subsidiary requested the EXAT compensate for the deficit revenue, as mentioned on Notes 42.3.4 to the financial statements. From the estimated according to the Appendix VIII attached to the Bang Pa-In Pak Kret Expressway Agreement for the year 2018 for the total of Baht 4,771 million together with the cumulative interest calculated until 29 October 2019 in the total of Baht 278.3 million, and compensate for the interest of the principle amount total Baht 4,771 million calculated from 30 October 2019 until EXAT shall pay the principle amount together with the interest in the amount of Baht 5,049.3 million in full to the subsidiary.

It is pending to the proceeding of the Panel.

## 42.4 Disputes Settlement

As described in Note 42.1.11 to the financial statements, on 6 January 2020, EXAT and the Group reached agreements to settle all disputes, subject to the approval of the Cabinet. The substance of the agreements was as follows;

- 1) EXAT and the Group agreed to settle all existing disputes and potential future disputes over the same issues in relation to the Concession Agreements.
- 2) The disputes were settled by extending the concessions without requiring investment in and improvement of the Second Stage Expressway, and construction of the Double Deck, with the terms of all three agreements extended until 31 October 2035.
- 3) The Group retains all rights to extend the concessions specified in the existing agreements. The remaining periods of the existing agreements are 4 years and 4 months for the Second Stage Expressway agreement, 11 years and 6 months for the Extension of the Second Stage Expressway agreement (Sector D) and 10 years and 11 months for the Bang Pa-In - Pak Kret Expressway Project agreement, commencing from the end of the amended agreements.
- 4) The toll rates are to be increased every 10 years by fixed amounts specified in the agreements.

On 18 February 2020, the Cabinet passed a resolution to amend the concession agreements in order to settle all disputes for both the Second Stage Expressway Project (The Si Rat Expressway including Sector D) and the Bang Pa-In - Pak Kret Expressway Project (the Udon Ratthaya Expressway). On 20 February 2020, the Group and EXAT signed the Second Stage Expressway Agreement (Amendment) and the Bang Pa-In - Pak Kret Expressway Project Agreement (Amendment) as described in Notes 1 A.1 and A.3 to the financial statements.

At present, the Group and EXAT are in the process of settling all disputes, as described in Note 42 to the financial statements, and the Subsidiary is in the process of cancelling enforcement in accordance with the judgement of the Supreme Administrative Court (Note 42.1.11). As a result of cancellation of enforcement, the management has determined that the Group will not record any revenue in relation to the judgment.



### 43. Fair value hierarchy

As at 31 December 2019 and 2018, the Group had the assets and liabilities that were measured or disclosed at fair value using different levels of inputs as follows:

(Unit: Million Baht)

	Consolidated financial statements							
	Level 1		Level 2		Level 3		Total	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
<b>Asset measured at fair value</b>								
Current investment								
Unit trust	-	-	1,158	1,282	-	-	1,158	1,282
Investment in available-for- sale securities	16,697	6,689	-	-	-	-	16,697	6,689
<b>Liabilities measured at fair value</b>								
Derivative								
Interest rate swap	-	-	113	22	-	-	113	22
<b>Asset for which fair value are disclosed</b>								
Investment in associates	-	9,468	-	-	-	-	-	9,468
Investment properties	-	-	-	-	321	320	321	320

(Unit: Million Baht)

	Separated financial statements							
	Level 1		Level 2		Level 3		Total	
	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>	<u>2019</u>	<u>2018</u>
<b>Asset measured at fair value</b>								
Current investment								
Unit trust	-	-	1,137	1,269	-	-	1,137	1,269
Investment in available-for- sale securities	16,697	6,689	-	-	-	-	16,697	6,689
<b>Liabilities measured at fair value</b>								
Derivative								
Interest rate swap	-	-	113	22	-	-	113	22
<b>Asset for which fair value are disclosed</b>								
Investment in associates	-	9,468	-	-	-	-	-	9,468
Investment properties	-	-	-	-	321	320	321	320

## 44. Financial instruments

### 44.1 Financial risk management

The financial instruments of the Group, as defined under Thai Accounting Standard No. 107 “Financial Instruments: Disclosure and Presentations”, principally comprise cash and cash equivalents, current investments, bank deposit for unearned fare box revenue, trade and other receivables, long-term loans and interest receivables to related parties, receivable under the concession agreement, other long-term investments, short-term loans from financial institution, trade and other payable, long-term loans and debentures. The financial risks associated with these financial instruments and how they are managed is described below.

#### ***Credit risk***

The Group is exposed to credit risk primarily with respect to trade and other accounts receivable. The Group manages the risk by adopting appropriate credit control policies and procedures and therefore do not expect to incur material financial losses. The maximum exposure to credit risk is limited to the carrying amounts of trade and other accounts receivable as stated in the statements of financial position.

#### ***Interest rate risk***

The Group is exposed to interest rate risk relate primarily to their cash at financial institution, current investments, long-term loans and interest receivables to related parties, short-term loans, debentures and long-term loans. However, since most the financial assets and liabilities of the Group bears floating interest rates or fixed interest rates which are close to the market rate, the interest rate risk is expected to be minimal.

Significant financial assets and liabilities classified by type of interest rate are summarised in the table below, with those financial assets and liabilities that carry fixed interest rates further classified based on the maturity date, or the repricing date if this occurs before the maturity date.

(Unit: Million Baht)

## Consolidated financial statements

As at 31 December 2019

	Fixed interest rates			Floating interest rate	Non-interest bearing	Total	Effective interest rate (% p.a.)
	Within 1 year	1 - 5 years	Over 5 years				
<b>Financial assets</b>							
Cash and cash equivalents	-	-	-	520	184	704	0.35 - 1.50
Current investments	-	-	-	-	1,158	1,158	-
Bank deposit for unearned fare box revenue	-	-	-	206	-	206	1.50 - 2.00
Trade and other receivables	-	-	-	-	482	482	-
Receivable under the concession agreement	-	-	-	10,860	-	10,860	Note 11
Other long-term investments	-	-	-	-	17,097	17,097	-
	-	-	-	11,586	18,921	30,507	
<b>Financial liabilities</b>							
Short-term loans from financial institution	3,250	-	-	-	-	3,250	2.02 - 2.50
Trade and other payables	-	-	-	-	1,938	1,938	-
Long-term loans	1,000	1,494	-	22,418	-	24,912	Note 24
Debentures	2,500	18,115	17,556	-	-	38,171	Note 25
	6,750	19,609	17,556	22,418	1,938	68,271	

(Unit: Million Baht)

## Consolidated financial statements

As at 31 December 2018

	Fixed interest rates			Floating interest rate	Non-interest bearing	Total	Effective interest rate (% p.a.)
	Within 1 year	1 - 5 years	Over 5 years				
<b>Financial assets</b>							
Cash and cash equivalents	-	-	-	367	159	526	0.38 - 1.30
Current investments	-	-	-	-	1,282	1,282	-
Bank deposit for unearned fare box revenue	-	-	-	150	-	150	0.38
Trade and other receivables	-	-	-	-	514	514	-
Receivable under the concession agreement	-	-	-	12,510	-	12,510	Note 11
Other long-term investments	-	-	-	-	6,689	6,689	-
	-	-	-	13,027	8,644	21,671	
<b>Financial liabilities</b>							
Short-term loans from financial institution	2,815	-	-	-	-	2,815	1.85 - 2.50
Trade and other payables	-	-	-	-	1,683	1,683	-
Long-term loans	1,500	2,491	-	17,425	-	21,416	Note 24
Debentures	5,000	14,615	18,555	-	-	38,170	Note 25
Provision for compensation for site acquisition cost	1,547	-	-	-	-	1,547	4.50
	10,862	17,106	18,555	17,425	1,683	65,631	

(Unit: Million Baht)

Separated financial statements							
As at 31 December 2019							
	Fixed interest rates			Floating	Non-interest		Effective
	Within 1 year	1 - 5 years	Over 5 years	interest rate	bearing	Total	interest rate
							(% p.a.)
<b>Financial assets</b>							
Cash and cash equivalents	-	-	-	446	163	609	0.35 - 1.50
Current investments	-	-	-	-	1,137	1,137	-
Bank deposit for unearned fare box revenue	-	-	-	206	-	206	1.50 - 2.00
Trade and other receivables	-	-	-	-	474	474	-
Long-term loans and interest receivable from related parties	-	-	-	37	-	37	Note 6
Receivable under the concession agreement	-	-	-	10,860	-	10,860	Note 11
Other long-term investments	-	-	-	-	17,097	17,097	-
	-	-	-	11,549	18,871	30,420	
<b>Financial liabilities</b>							
Short-term loans from financial institution	3,250	-	-	-	-	3,250	2.02 - 2.50
Trade and other payables	-	-	-	-	1,907	1,907	-
Long-term loans	1,000	1,494	-	18,788	-	21,282	Note 24
Debentures	2,500	18,115	17,556	-	-	38,171	Note 25
	6,750	19,609	17,556	18,788	1,907	64,610	

(Unit: Million Baht)

Separated financial statements							
As at 31 December 2018							
	Fixed interest rates			Floating	Non-interest		Effective
	Within 1 year	1 - 5 years	Over 5 years	interest rate	bearing	Total	interest rate
							(% p.a.)
<b>Financial assets</b>							
Cash and cash equivalents	-	-	-	281	143	424	0.38 - 1.30
Current investments	-	-	-	-	1,269	1,269	-
Bank deposit for unearned fare box revenue	-	-	-	150	-	150	0.38
Trade and other receivables	-	-	-	-	525	525	-
Long-term loans and interest receivable from related parties	-	-	-	2,512	492	3,004	Note 6
Receivable under the concession agreement	-	-	-	12,510	-	12,510	Note 11
Other long-term investments	-	-	-	-	6,689	6,689	-
	-	-	-	15,453	9,118	24,571	
<b>Financial liabilities</b>							
Short-term loans from financial institution	2,815	-	-	-	-	2,815	1.85 - 2.50
Trade and other payables	-	-	-	-	1,659	1,659	-
Long-term loans	1,500	2,491	-	15,825	-	19,816	Note 24
Debentures	5,000	14,615	18,555	-	-	38,170	Note 25
Provision for compensation for site acquisition cost	1,547	-	-	-	-	1,547	4.50
	10,862	17,106	18,555	15,825	1,659	64,007	

The Company entered into an interest rate swap contract with the local commercial banks to manage risk associated with some of its long-term loan, carrying interest at a floating rate. As at 31 December 2019, the Company has interest rate swap contract, granting facilities of long-term loan of Baht 5,500 million, to swap a floating interest rate of 6M THBFIX plus stipulated margins to a fixed rate. The interest rate swap contract terminates in 2021 and 2026.

### ***Foreign currency risk***

The Company has a significant foreign currency risk in respect of construction payable. As at 31 December 2019, the Company has outstanding financial liabilities denominated in foreign currency amounting to JPY 102 million, EUR 0.6 million, USD 0.3 million and SGD 0.1 million (2018: JPY 101 million, SGD 0.4 million and EUR 0.1 million) which have not yet been hedged against foreign exchange risk (the majority of these liabilities are repayable within 1 year).

## **44.2 Fair values of financial instruments**

Since the majority of the financial instruments of the Group are short-term in nature or carrying interest at rates close to the market interest rates, their fair value is not expected to be materially different from the amounts presented in the statements of financial position. However, the Company has long-term liabilities in the form of debentures of which carrying value is different from the fair value. As at 31 December 2019, the book value of the Company's debentures was Baht 38,171 million, whereas the fair value was Baht 39,829 million (2018: book value of the Company's debentures was Baht 38,170 million, whereas the fair value was Baht 37,998 million).

The fair value of debentures is determined using the yield curve announced by the Thai Bond Market Association.

During the current year, there were no transfer within the hierarchy of the fair value.

## **45. Capital management**

The primary objective of the Company's capital management is to ensure that it has an appropriate financial structure to preserve the ability to continue its business as a going concern and maximise shareholder value.

The Company manages its capital position with reference to its debt-to-equity ratio in order to comply with a condition in a long-term loan agreements, which requires the Company to maintain a debt-to-equity ratio of not more than 2.5:1

#### **46. Events after the reporting period**

On 26 February 2020, a meeting of the Board of Directors passed a resolution to propose a dividend payment from the 2019 earnings at a rate of Baht 0.15 per share to the Annual General Meeting of the shareholders for approval. The Company paid an interim dividend at the rate of Baht 0.06 per share on 4 September 2019 and the final dividend payment at the rate of at the rate Baht 0.09 per share will be paid within May 2020. This dividend payment is subject to the approval of the Annual General Meeting of the shareholders.

#### **47. Approval of financial statements**

These financial statements were authorised for issue by the Company's Board of Directors on 26 February 2020.





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