

# Being a Leader

for the Limitless Potential  
of the Integrated Transport System



BANGKOK EXPRESSWAY AND METRO

# CONTENTS

3	FINANCIAL SUMMARY
6	MESSAGE FROM THE CHAIRMAN OF THE BOARD OF DIRECTORS
7	REPORT OF THE AUDIT COMMITTEE
8	REPORT OF THE NOMINATION AND REMUNERATION COMMITTEE
9	REPORT OF THE CORPORATE GOVERNANCE AND RISK MANAGEMENT COMMITTEE
10	THE BOARD OF DIRECTORS
16	MANAGEMENT TEAM
17	ORGANIZATION STRUCTURE
18	THE MRT CHALONG RATCHADHAM LINE PROJECT (MRT PURPLE LINE)
20	THE MRT SAFETY CAMPAIGN ACTIVITY
21	MASS RAPID TRANSIT MASTER PLAN IN BANGKOK METROPOLITAN REGION
22	FACILITATION FOR MRT PASSENGERS
23	FACILITIES FOR PERSONS WITH DISABILITIES IN THE MRT SYSTEM
24	THE SI RAT - OUTER RING ROAD EXPRESSWAY
28	EXPRESSWAY SYSTEM MAP
32	FIRST CLASS EXPRESSWAY SERVICES
34	CORPORATE SOCIAL AND ENVIRONMENTAL ACTIVITIES
44	THE PROMOTION AND CAMPAIGN ACTIVITIES FOR USING THE MRT SYSTEM IN 2016
45	BUSINESS POLICY AND OVERVIEW
53	NATURE OF BUSINESS OPERATIONS
87	RISK FACTORS
92	PROPERTY USED IN BUSINESS OPERATIONS
97	LEGAL DISPUTES
100	GENERAL INFORMATION AND OTHER SIGNIFICANT INFORMATION
109	INFORMATION ON SECURITIES AND SHAREHOLDERS
113	MANAGEMENT STRUCTURE
124	CORPORATE GOVERNANCE
164	CORPORATE SOCIAL RESPONSIBILITY
184	INTERNAL CONTROL AND RISK MANAGEMENT
185	CONNECTED TRANSACTIONS
191	FINANCIAL HIGHLIGHTS
200	REPORT ON RESPONSIBILITIES OF THE BOARD OF DIRECTORS TOWARDS THE FINANCIAL REPORT
201	MANAGEMENT DISCUSSION AND ANALYSIS
207	INFORMATION OF COMPANY EXECUTIVES
219	FINANCIAL STATEMENTS



**A LEADING, FULLY-INTEGRATED  
TRANSPORTATION SERVICE PROVIDER**  
in Thailand and ASEAN



BANGKOK EXPRESSWAY AND METRO

BEM is committed to creating  
infrastructure projects as a foundation  
for Thailand economy to ensure progress  
and growth in parallel with  
the good quality of Thai people life.







# BEM

BANGKOK EXPRESSWAY AND METRO





# FINANCIAL SUMMARY

## Financial Summary of the Consolidated Financial Statements of Bangkok Expressway and Metro Public Company Limited and its Subsidiaries

### Financial Highlights

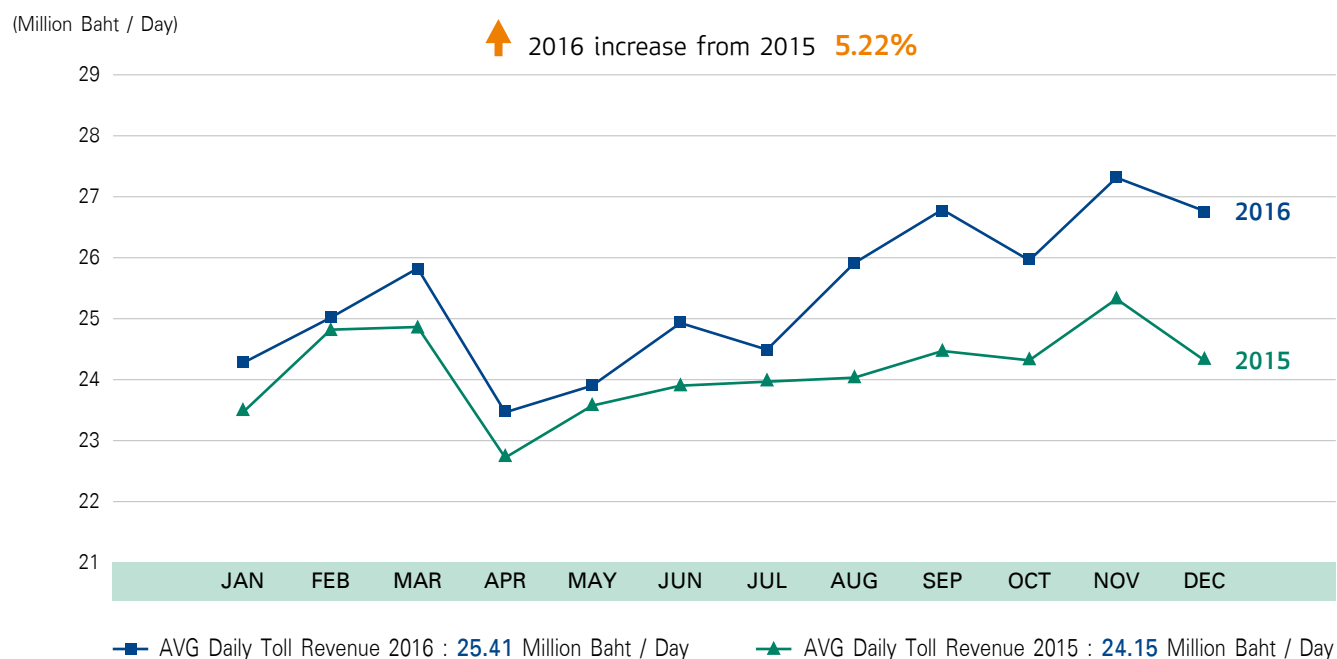
Unit : Million Baht

<b>Consolidated Financial Statements</b> (As at December 31)	<b>2016</b>	<b>2015</b>
Total assets	82,786	78,095
Total liabilities	53,003	48,965
Shareholders' equity	29,783	29,130

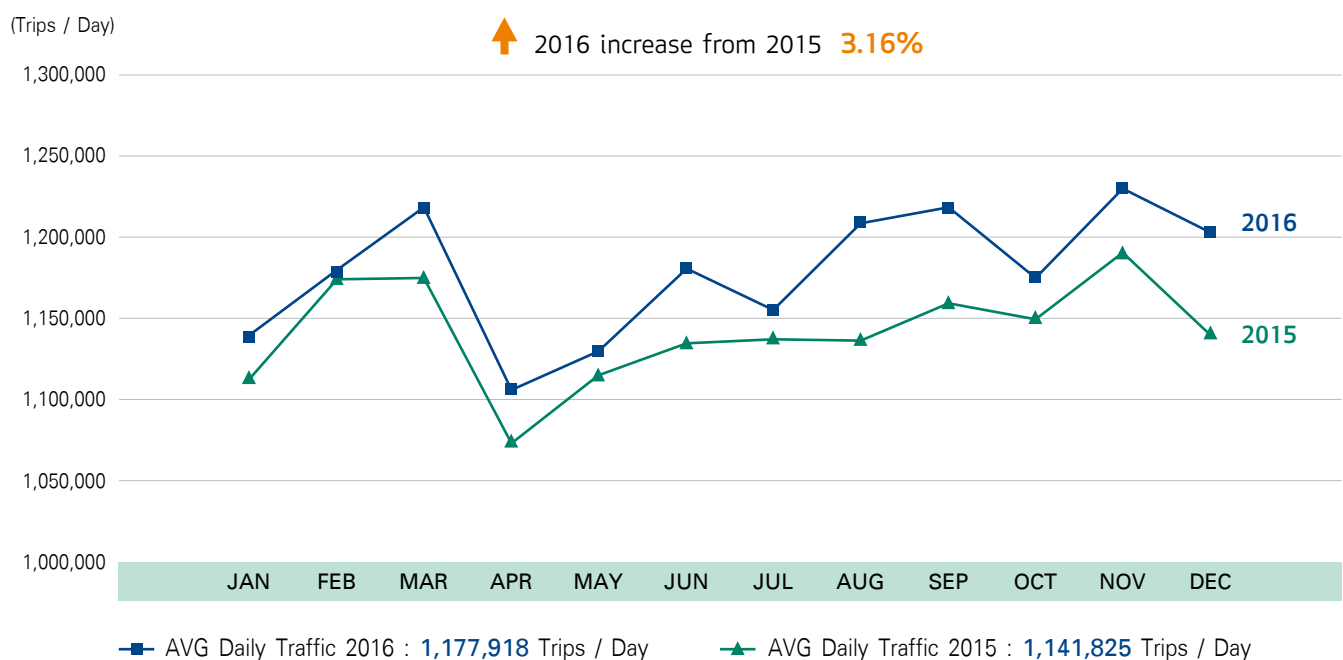
<b>Operating Results</b> (For the year ended December 31)	<b>2016</b>	<b>2015</b>
Revenue from expressway business	9,301	8,815
Revenue from rail business	3,230	2,374
Revenue from commercial development business	573	549
Total revenues	13,233	13,105
Gross profit	5,275	4,643
Net profit attributable to the Company	2,606	2,650

<b>Financial Ratios</b>	<b>2016</b>	<b>2015</b>
Net profit margin (%)	19.69	20.22
Return on shareholders' equity (%)	8.87	9.76
Return on total assets (%)	3.25	3.65
Debt to equity ratio (times)	1.78	1.68
Interest bearing debt to equity ratio (times)	1.33	1.20
Book value per share (Baht)	1.94	1.90

## AVERAGE DAILY TOLL REVENUE : Chalmern Mahanakorn, Si Rat, Udon Rattthaya Expressway and Si Rat - Outer Ring Road Expressway



## AVERAGE DAILY TRAFFIC : Chalmern Mahanakorn, Si Rat ,Udon Rattthaya Expressway and Si Rat - Outer Ring Road Expressway

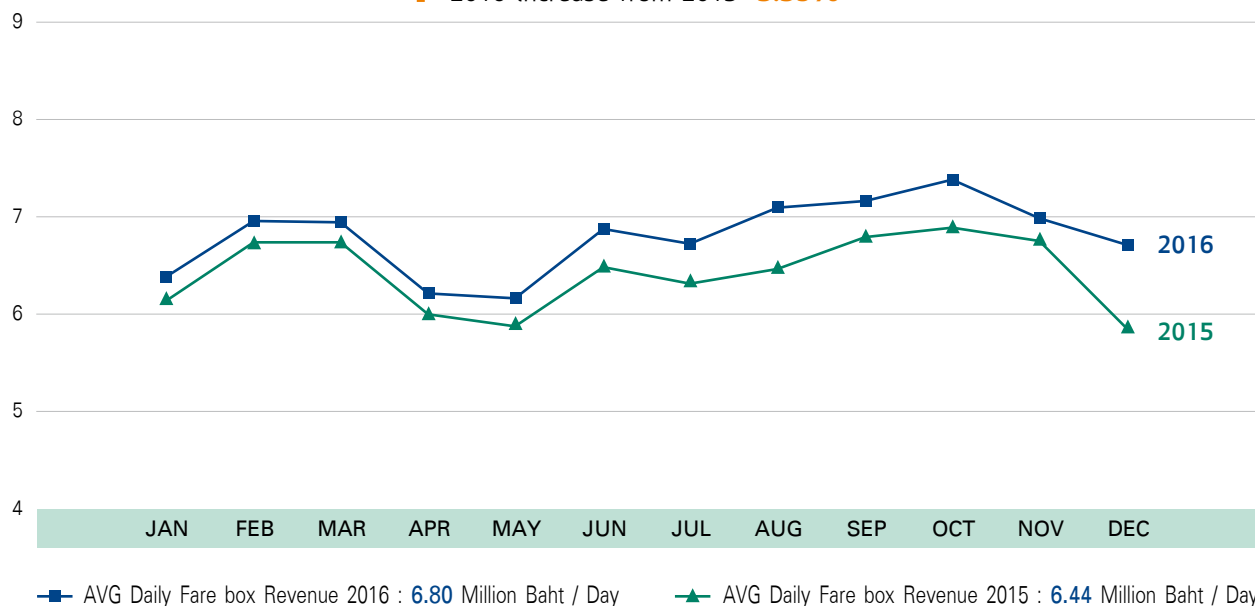




## AVERAGE DAILY FARE BOX REVENUE : the MRT Chaloem Ratchamongkhon Line

(Million Baht / Day)

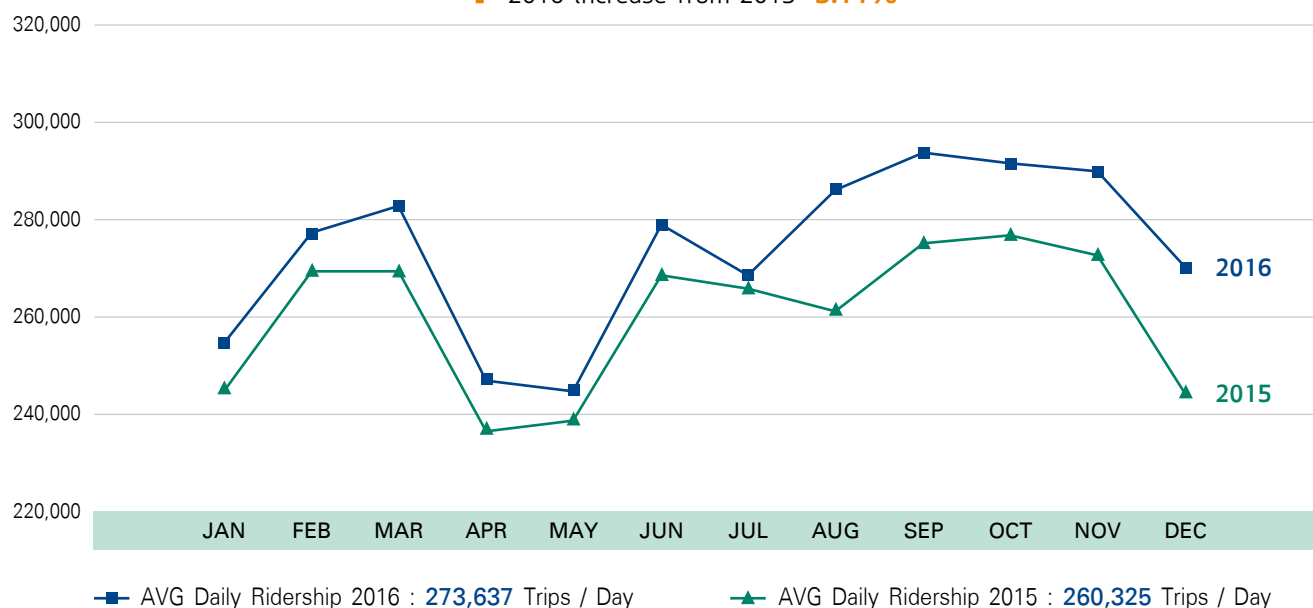
↑ 2016 increase from 2015 **5.59%**



## AVERAGE DAILY RIDERSHIP : the MRT Chaloem Ratchamongkhon Line

(Trips / Day)

↑ 2016 increase from 2015 **5.11%**





## MESSAGE FROM THE CHAIRMAN OF THE BOARD OF DIRECTORS

the outstanding private-sector debenture issuer in the bond market fund raising in 2016, which met the demands of the Company and investors in an appropriate time, with operations pursuant to the good corporate governance principles, ensuring confidence of both debenture holders and shareholders.

2016 was the year of the tremendous loss of Thailand resulting from the passing of His Majesty King Bhumibol Adulyadej. Thai people have been mourning with their greatest gratitude to our beloved King who, throughout the past 70 years, had been ruling with righteousness, perfectly with the Ten Virtues of the King, and had been working hard in all possible ways to make his people live peacefully and happily under his reign. We, Bangkok Expressway and Metro Public Company Limited, then gratefully embrace the royal wishes with our commitment to doing good deeds and operating our businesses under the good corporate governance principles with corporate social responsibility.

In this year, Bangkok Expressway and Metro Public Company Limited or BEM has opened two national infrastructure projects for service, namely, the MRT Chalong Ratchadham Line Project (MRT Purple Line), Bang Yai - Tao Poon Section, name of which was graciously given on the occasion of the 70<sup>th</sup> Anniversary Celebrations of His Majesty the King Rama IX's Accession to the Throne, and Her Royal Highness Princess Maha Chakri Sirindhorn graciously presided over the opening ceremony of the train operation on August 6, 2016; and the Si Rat - Outer Ring Road Expressway Project which was opened for service on August 22, 2016. Both projects will help alleviate traffic problems and upgrade the quality of people's life in Bangkok and its surrounding provinces.

BEM's securities were selected by the Stock Exchange of Thailand as new securities used for calculation in SET50 Index in the second half of 2016, as their market value were high with regularly high liquidity and continued growth of the Company. With respect to financial management, the Company issued debentures in the total amount of Baht 23,200 Million, with maturity of 3-12 years, thereby minimizing the Company's risk from fluctuating interest rates and reducing the costs amounting to approximately Baht 400 Million per year. In addition, BEM was granted the Issuer of the Year 2016 Award by the Thai Bond Market Association as

With respect to the operational results of the Company and its subsidiaries for 2016, the net earnings amounted to Baht 2,606 Million. The Board of Directors resolved to propose the matter to the shareholders' meeting for seeking approval for dividend payment for the second half of 2016 at the rate of Baht 0.06 per share. During the year, the Board of Directors resolved to approve the interim dividend payment for the first half to shareholders at the rate of Baht 0.05 per share, and therefore, the total dividend payment in 2016 was at the rate of Baht 0.11 per share.

We would like to extend our thanks to all stakeholders for your supports which have strengthened BEM's operations in all aspects; to the government sector for giving us the opportunity to operate and manage the current and future transportation system projects; to our shareholders, counterparts and financial institutions for continued supports to our businesses; to the expressway and metro users for your trust in our services; to all our staff for concerted efforts, contributions and collaboration for our sustainable development. Rest assured that Bangkok Expressway and Metro Public Company Limited will always be committed to the code of ethics, integrity and transparency in our business operations, including compliance with the good corporate governance principles with corporate social responsibility in order to deliver the good and efficient services.

**(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 Company's Board of Directors, comprises four independent directors, namely, Mr. Vitoon Tejatussanasoontorn, as the Audit Committee Chairman, General Chetta Thanajaro, General Sampao Choosri and Dr. Annop Tanlamai, as the Audit Committee Members. The Audit Committee Chairman 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. In 2016, the Audit Committee held four meetings for discussion and sharing of opinions with the management and internal auditor, and a meeting with the auditor without the management's presence, for independent discussion on the essence in the preparation of the financial statements and the annual audit plan.

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

**1. Review of Financial Report:** The Audit Committee reviewed the financial statements of the Company and its subsidiaries, including changes in the accounting policy, the adjustments which materially affected the financial statements, and correct and complete disclosure of information, to ensure 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 shareholders or information users for making an investment decision.

In review of the financial statements and compliance with the relevant regulations and laws, the Audit Committee was of the opinion that the Company complied with the relevant laws, the accounting system and financial report were correct and reliable, with sufficient disclosure.

**2. Review of Effectiveness of Internal Control System:** The Audit Committee reviewed the assessment result of the internal control system to ensure the effective performance in all work units, compliance with various laws and requirements, and sufficiency in order to control and prevent corruption. The Internal Audit Office independently examined and evaluated the sufficiency of the internal control, as well as reporting directly to the Audit Committee, taking into consideration the operations, resource utilization, property management, risk prevention and minimization, and reliability of financial report, and focusing on the internal control of the information system, subject to further review and monitoring by both internal auditor and the auditor.

**3. Supervision of Internal Audit:** The Audit Committee reviewed and approved the internal audit plan and scope of work, considered the audit report, monitored the corrections under the audit report, provided suggestions in the improvement regarding the audit performance, to ensure appropriate and effective audit system. It also considered internal auditor development plan to keep pace with changes in business, along with ongoing self-improvement in the direction of the organization's business operations and the international standards, as well as approved the consideration for appointment, transfer or termination of employment of Head of the Internal Audit Unit or any other unit responsible for internal audit.

**4. Review of Good Corporate Governance:** The Audit Committee reviewed the Company's operations 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 duly and properly complied with the relevant laws and requirements in a timely manner.



**5. Consideration of Connected Transactions:** The Audit Committee reviewed and provided opinions on 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 to ensure transparency, justifications, and benefits to the Company's business operations and shareholders as a whole.

**6. Consideration for Selection and Nomination of the Auditor and Determination of Annual Remuneration for the Auditor:** The Audit Committee had the duties to select and nominate, re-elect, or terminate the engagement of the auditor, and consider the remuneration for the auditor, as well as ensure disclosure of the auditing fee and non-audit fee paid to the auditor.

In the proposal for appointment of the auditor for 2017, the Audit Committee assessed the previous audit and considered the reasonableness of the auditing fee and was of the view that the auditor from EY Office Limited was independent, knowledgeable and experienced regarding the audit, provision of advice on the accounting standards, certification of the financial statements in a timely manner, and concluded that the auditing fee was reasonable. Therefore, it proposed the matter to the Board of Directors to consider and seek approval of the meeting of shareholders for appointment of the auditor from EY Office Limited as the Company's auditor for 2017, with the remuneration in an amount not exceeding Baht 3,350,000 per year.

**7. Preparation for Participation in Private Sector Collective Action Coalition Against Corruption:** The Audit Committee assigned the management and the Internal Audit Office to conduct a study in detail and to prepare a self-evaluation in accordance with the self-evaluation form regarding anti-corruption measures, as well as to monitor and follow up on the compliance with the anti-corruption measures, to ensure readiness in submission of an application for certification.

In summary, the Audit Committee fully performed its duties as specified in the Audit Committee Charter as approved by the Board of Directors, by using sufficient knowledge, abilities, prudence and independence 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 that the business operations complied with the good corporate governance principles, applicable laws and requirements relating to the Company's business.

(Mr. Vitoon Tejatussanasoontorn)

Audit Committee Chairman



## 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 2016, there were a total of three Nomination and Remuneration Committee's Meetings to consider various matters. The essence of the performance of duties can be summarized as follows:

### 1. Considering criteria and procedures of nomination as well as selecting and proposing qualified persons to hold the position of the Company's directors by:

- 1) 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 performance of duties in the previous year of six directors who retired by rotation and proposed the 2016 Annual Ordinary General Meeting of Shareholders to re-appoint them for another term.

- 2) Nominating persons to be appointed as directors to replace those directors who vacate office.

The Board of Directors considered the qualifications of persons to be nominated as the Company's directors to replace the directors who vacate office due to directors' resignations and death, by proposing the Board of Directors' Meeting to appoint four persons having knowledge, ability and experience which would be beneficial to the Company, and having qualifications in line with that of directors in listed companies, as the Company's directors to replace such vacancies.

### 2. Considering determining criteria on consideration of remuneration for directors and Managing Directors

The Board of Directors considered reviewing the criteria on consideration of remuneration for directors and Managing Directors and was of the opinion that the Company's criteria remained appropriate.

### 3. Considering determining remuneration for directors and proposing the same to the shareholders' meeting for consideration and approval

The Board of Directors considered determining remuneration for directors for 2016 and was of the opinion that the criteria on consideration of remuneration for directors was appropriate for 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 same to the shareholders' 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* -  
(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 appointed the Corporate Governance and Risk Management Committee by having General Sampao Choosri as Chairman of the Corporate Governance and Risk Management Committee, Mrs. Vallapa Assakul, Mr. Phongsarit Tantisuvanitchkul, 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, including code of 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.

In 2016, there were a total of four Corporate Governance and Risk Management Committee's Meetings with the high-ranking management team every quarter to consider reviewing policies and follow up progress of compliance with the good corporate governance principles and risk management plan of the Company. The essence of the 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 good corporate governance guidelines 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 2016, the results of the Company's corporate governance survey were shown at the very good level and the results of assessment of the 2016 Annual Ordinary General Meeting of Shareholders were shown at the very good level.



## 2. Risk management

The Board of Directors, in association with the high-ranking management, considered studying and following up movement, tendency to review the risk management plan and strategies for risk management to deal with risks to stay at an acceptable level as appropriate for the ongoing changing situations and in line with the Company's work plan in 2016.

In conclusion, the Corporate Governance and Risk Management Committee has fulfilled their duties under the responsibilities as assigned by the Board of Directors with prudence, due care and independence as sufficient to provide the opinions and suggestions for the overall benefits of the Company.

General   
(Sampao Choosri)

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 (First Class Honors), Chulalongkorn University
- National Defence Course for the Joint State Private Sector, National Defence College
- Director Certification Program (DCP), Thai Institute of Directors Association

- **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 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. Plew Trivisvavet**





**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

- 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
- The Joint State-Private Sector Regular Course, National Defence College
- Director Certification Program (DCP), Thai Institute of Directors Association
- Finance for Non-Finance Directors (FND), Thai Institute of Directors Association
- Board & CEO Assessment, Thai Institute of Directors Association



**General Chetta Thanajaro**

- DIRECTOR
- CHAIRMAN OF THE CORPORATE GOVERNANCE AND RISK MANAGEMENT COMMITTEE
- AUDIT COMMITTEE MEMBER

#### Academic Achievement

- Chulachomklao Royal Military Academy
- Royal Military Academy (Saint Cyr), France
- The Army Command and General Staff College
- National Defence Course for the Joint State Private Sector, National Defence College
- Director Accreditation Program (DAP), Thai Institute of Directors Association



**General Sampao Choosri**

# THE BOARD OF DIRECTORS



**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

- DIRECTOR
- CORPORATE GOVERNANCE AND RISK MANAGEMENT COMMITTEE MEMBER

## Academic Achievement

- Master of Economics, University of Detroit, USA
- Bachelor of Economics (Second Class Honors), 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



**Mrs. Vallapa Assakul**

- 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



**Mr. Supong Chayutsahakij**



**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
- National Defence Course, National Defence College
- Director Certification Program (DCP), Thai Institute of Directors Association

- **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



**Mr. Phongsarit Tantisuvanitchkul**



**Mr. Werapong Suppasedsak**

- **DIRECTOR**

**Academic Achievement**

- Master of Economics (Financial Economics), National Institute of Development Administration
- Bachelor of International Economics, Ramkhamhaeng University
- TLCA Executive Development Program (EDP) Thai Listed Companies Association
- Director Accreditation Program (DAP), Thai Institute of Directors Association
- Executive Development Program (ELDP) Fiscal Policy Research Institute Foundation (FPRI)



# THE BOARD OF DIRECTORS



**Mr. Panit Dunnvatanachit**

- **DIRECTOR**

**Academic Achievement**

- M.B.A. (Finance), Washington University, St. Louis, USA
- Bachelor of Arts & Science, Washington University, St. Louis, USA
- Board and CEO Assessment Program, Thai Institute of Directors Association
- 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

- **DIRECTOR**

**Academic Achievement**

- Master of Public Administration, National Institute of Development Administration (NIDA)
- Bachelor of Laws, Ramkhamhaeng University
- Sulkarak School Graduate Diploma, Customs Department
- Graduate Diploma in Public Law, Thammasat University
- Capital Market Academy Program (CMA)



**Mr. Yuttana Yimgarund**



**Mr. Theeraphan Tachasirinugune**

- **DIRECTOR**

**Academic Achievement**

- Master of Engineering Science (Development Technologies), University of Melbourne, Australia
- Bachelor of Engineering, Kasetsart University
- Director Accreditation Program (DAP), Thai Institute of Directors Association



**Mr. Dumkerng Pankam**

- **DIRECTOR**

*Academic Achievement*

- Bachelor of Laws, Thammasat University
- Barrister at Law, The Institute of Legal Education
- Graduate Diploma in Business Law, Thammasat University

- **DIRECTOR**
- **CORPORATE GOVERNANCE AND RISK MANAGEMENT COMMITTEE MEMBER**
- **EXECUTIVE DIRECTOR**
- **MANAGING DIRECTOR**
- **AUTHORIZED SIGNATORY DIRECTOR**

*Academic Achievement*

- Dr. Techn. in 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



**Dr. Sombat Kitjalaksana**



**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

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**Mrs. Payao Marittanaporn**  
Managing Director

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**Mr. Sanguan Kunatinun**  
Deputy Managing Director  
Expressway Engineering

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**Mrs. Sudruthai Prommart**  
Deputy Managing Director  
Expressway Operation

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**Miss Panan Tosuwanthaworn**  
Deputy Managing Director  
Finance

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**Mr. Witoon Hatairatana**  
Deputy Managing Director  
Railway System Operation and  
Engineering

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**Mr. Alvin Gee**  
Deputy Managing Director  
Operation Support

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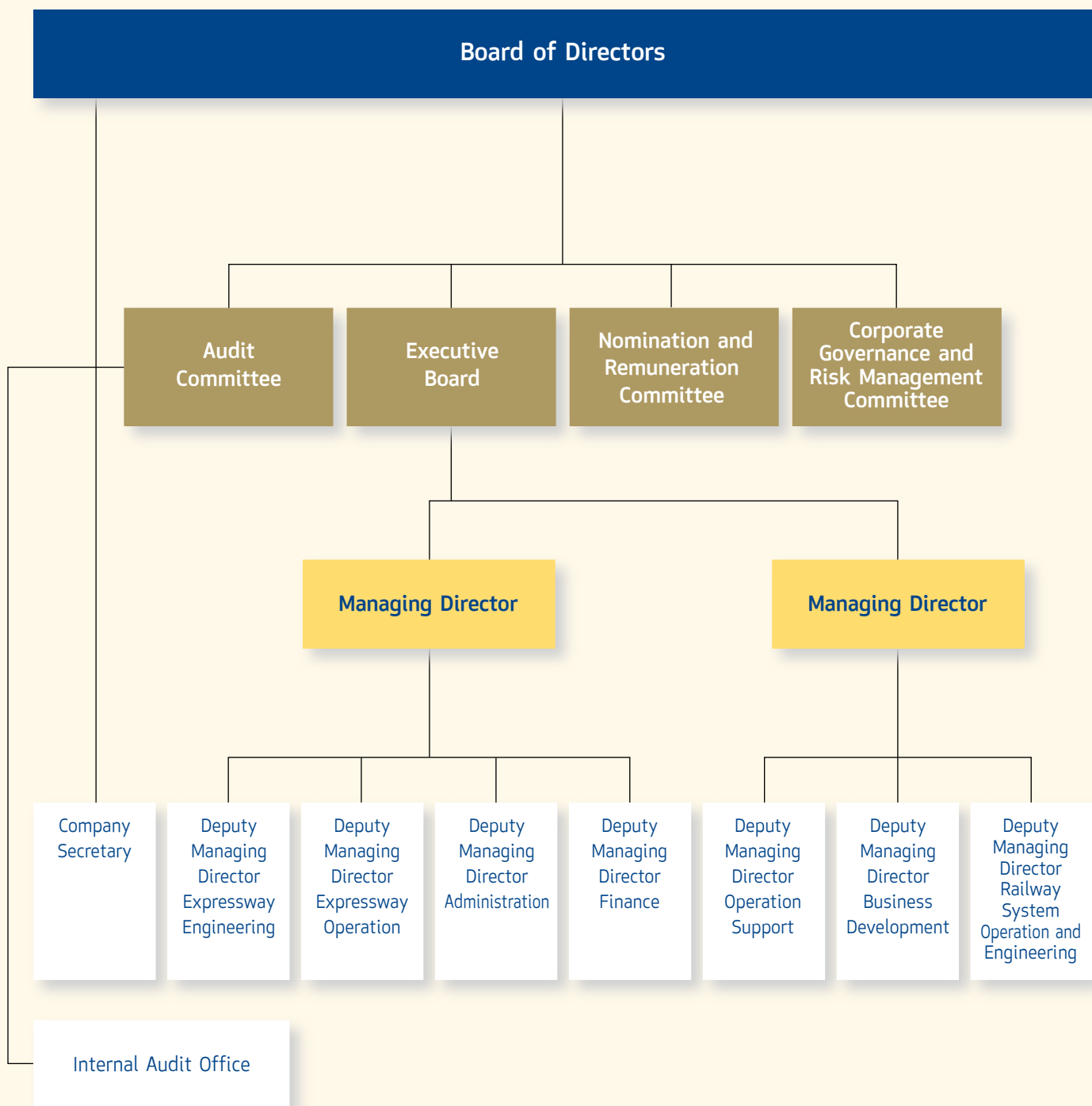


**Mr. Phakpoom Thaweewittayarut**  
Deputy Managing Director  
Administration and  
Company Secretary

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# ORGANIZATION STRUCTURE



## THE MRT CHALONG RATCHADHAM LINE PROJECT (MRT PURPLE LINE)



The MRT Chalong Ratchadham Line Project (MRT Purple Line), Bang Yai - Tao Poon Section, was graciously given its name by His Majesty King Bhumibol Adulyadej, King Rama IX, on the occasion of the 70<sup>th</sup> Anniversary Celebrations of His Majesty King Bhumibol Adulyadej's Accession to the Throne. The name "Chalong Ratchadham" has signified that "To Celebrate the Great King's Reign with Righteousness". On August 6, 2016, Her Royal Highness the Princess Maha Chakri Sirindhorn graciously presided over the official opening ceremony of the project.

BEM has been granted concession for investment and operation of the M&E Systems and O&M Services by the Mass Rapid Transit Authority of Thailand (MRTA) for a total period of 30 years from the date of execution of the Agreement on September 4, 2013.

The MRT Chalong Ratchadham Line Project (MRT Purple Line), Bang Yai - Tao Poon Section, is an elevated railway system throughout the route, for a distance of approximately 23 kilometers, totaling 16 stations, starting from Khlong Bang Phai Station, where depot is located, to Tao Poon Station serving as the interchange station between the MRT Purple Line and the MRT Blue Line.



On June 5, 2016, people were allowed to register for common tickets to take a trial of the MRT Purple Line (Bang Yai - Tao Poon Section), in which those interested could make such registration on every Sunday in June and July at three stations, namely, Khlong Bang Phai Station, Yaek Nonthaburi 1 Station, and Tao Poon Station.



Such trial service was opened for the first time on June 13, 2016 and lasted until June and July, on every Monday, Wednesday and Friday; only during 7.00 - 9.00 hrs. in June and two periods, during 7.00 - 9.00 hrs. and 16.00 - 18.00 hrs in July. There were a number of interested people using such trial service.

On August 6, 2016, the MRT Chalong Ratchadham Line was officially opened for service.





# THE MRT SAFETY CAMPAIGN ACTIVITY



BEM gives the highest priority to the safety of our service users, because safety is the key of the mass transit rail way service. In 2016, BEM organized the **“Safety Share Safety All On Tour”** campaign activity, comprising two phases, as follows:



## Phase 1

### Pre-Operation Service

We, in association with the Mass Rapid Transit Authority of Thailand, implemented public relations to educational institutions along the MRT Purple Line route on safety in the metro service to ensure teachers’ and students’ learning and understanding of the proper and safe use of equipment in the metro system. The educational institutions where we organized the campaign were as follows:

1. Janthongaeim School;
2. Wat Liab Rat Bamrung School;
3. Wat Bang Rak Yai School; and
4. Bhadungsit Pittaya School.

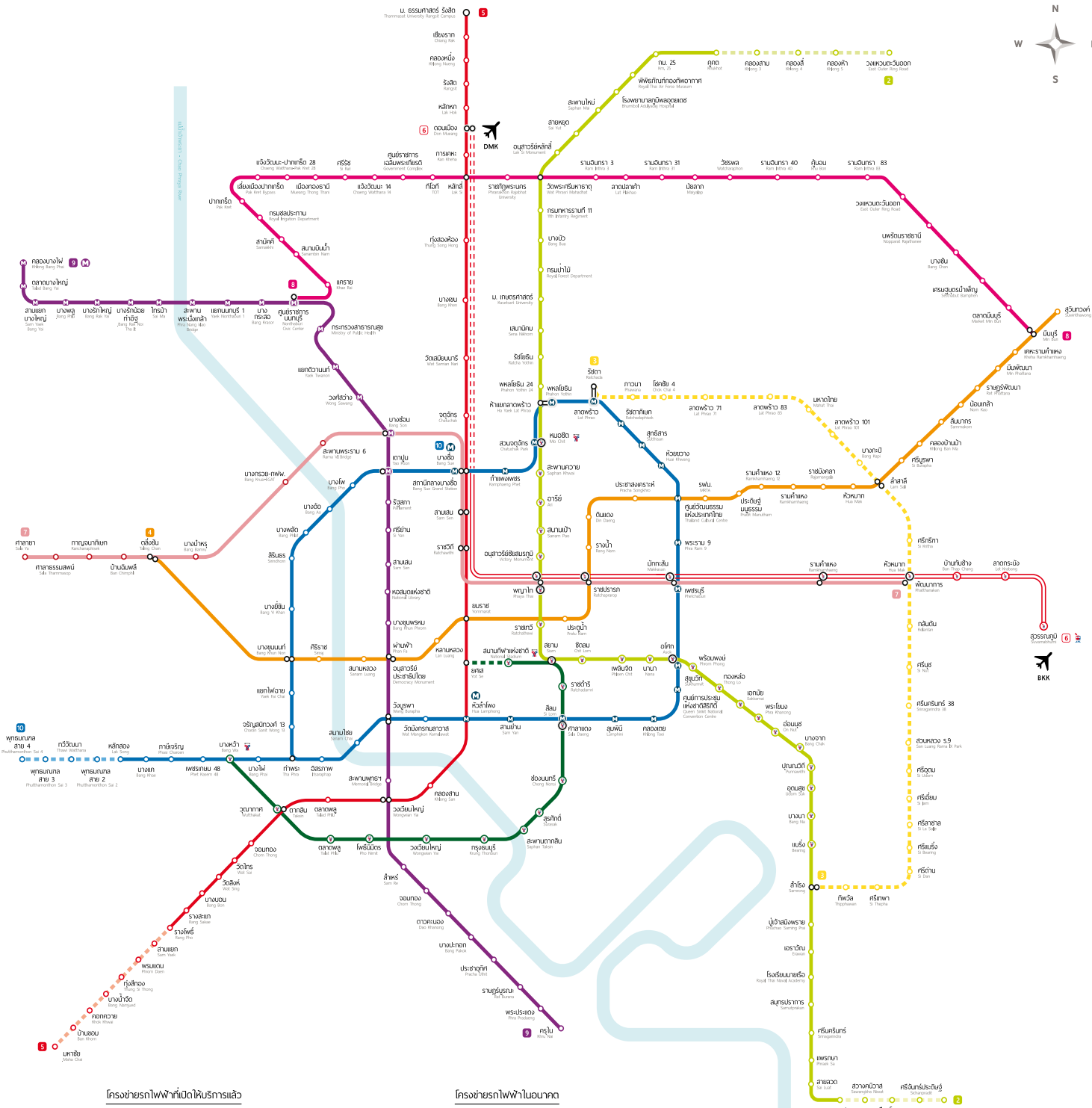
## Phase 2

### Post-Operation Service

The safety campaign activity provides passengers with suggestions on how to properly and safely use the metro system within the following six stations of the MRT Purple Line:

- PP01 Khlong Bang Phai Station;
- PP02 Talad Bang Yai Station;
- PP11 Nonthaburi Civic Center Station;
- PP12 Ministry of Public Health Station;
- PP14 Wong Sawang Station; and
- PP16 Tao Poon Station.

# MASS RAPID TRANSIT MASTER PLAN IN BANGKOK METROPOLITAN REGION



## โครงการรถไฟฟ้าที่ให้บริการแล้ว

- 1** รถไฟฟ้า MRT สายเฉลิมรัชมงคล (สายสีน้ำเงิน) ช่วงหัวลำโพง - บางซื่อ  
MRT Chulalongkorn Rajavidyalaya Line (Blue Line) Hua Lamphong - Bang Sue Section
- 2** รถไฟฟ้า MRT สายฉลองรัชธรรม (สายสีม่วง) ช่วงบางใหญ่ - เตาปูน  
MRT Chalong Rajachadham Line (Purple Line) Bang Yai - Tao Poon Section
- 3** รถไฟฟ้า BTS สายตะวันออก สายสุขุมวิท  
BTS Sukhumvit Line
- 4** รถไฟฟ้า BTS สายตะวันออก สายสีลม  
BTS Silom Line
- 5** รถไฟฟ้า ARL พญาไท - ท่าอากาศยานสุวรรณภูมิ  
Airport Rail Link Phaya Thai - Suvarnabhumi Airport

## โครงการรถไฟฟ้าในอนาคต

- 1** สายสีเขียวเข้ม  
MRTA Green Line
- 2** สายสีเขียวอ่อน  
MRTA Light Green Line
- 3** สายสีเหลือง  
MRTA Yellow Line
- 4** สายสีส้ม  
MRTA Orange Line
- 5** สายสีแดง  
SRT Red Line
- 6** สายแอมเวย์ เรล สิงค์  
Don Mueang Airport - Suvarnabhumi Airport
- 7** สายสีแดงอ่อน  
SRT Light Red Line
- 8** สายสีชมพู  
MRTA Pink Line
- 9** สายสีม่วง  
MRTA Purple Line
- 10** สายสีน้ำเงิน  
MRTA Blue Line

ยาเซ - บางหว้า  
Yas - Bang Wa

ลำลูกกา - ศูนย์ราชการ  
Lam Luk Ka - Saraburi Rajabhat

ลาดพร้าว - สำโรง  
Lat Phrao - Samrong

ตลิ่งชัน - มีนบุรี  
Taling Chan - Min Buri

ธรรมศาสตร์ - มหาชัย  
Thammasat - Maha Chai

ท่าอากาศยานดอนเมือง - ท่าอากาศยานสุวรรณภูมิ  
Don Mueang Airport - Suvarnabhumi Airport

ศิริราช - ศาลา - ตลิ่งชัน - หัวหมาก  
Siriraj - Sala - Taling Chan - Hua Mak

แคราย - มีนบุรี  
Kraai - Min Buri

เตาปูน - รามัญบูรณะ  
Tao Poon - Ramabun

บางซื่อ - หัวลำโพง - ท่าพระ - พญาไท - สาย 4  
Bang Sue - Hua Lamphong - Tha Phra - Phayathai - Sam 4

บางซื่อ - หัวลำโพง - ท่าพระ - พญาไท - สาย 4  
Bang Sue - Hua Lamphong - Tha Phra - Phayathai - Sam 4

บางซื่อ - หัวลำโพง - ท่าพระ - พญาไท - สาย 4  
Bang Sue - Hua Lamphong - Tha Phra - Phayathai - Sam 4

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Bang Sue - Hua Lamphong - Tha Phra - Phayathai - Sam 4

## FACILITATION FOR MRT PASSENGERS



In addition to the train operation service provision, BEM also takes care of passengers using other services, such as, the **“Zoning and Queuing in front of MRT Ticket Office and Ticket Vending Machine”** scheme, as well as taking into account the safety of passengers using the MRT service, BEM thus concurrently organizes the **“Drill in Trailing Criminal Suspects in Metro Stations and Trains”** scheme.



### Zoning and Queuing in front of MRT Ticket Office and Ticket Vending Machine

To provide facilitation for passengers using services at MRT ticket offices and ticket vending machine, as well as to accommodate the continued increasing number of passengers, management of MRT's zoning and queuing patterns in the metro stations have thus been improved to ensure the greater convenience and efficiency.



### Drill in Trailing Criminal Suspects in Metro Stations and Trains

To ensure safety for the service users and enhance security skills for staff, MRT's drill in trailing criminal suspects in metro stations and trains has been conducted in association with the MRTA's security officers.



# FACILITIES FOR PERSONS WITH DISABILITIES IN THE MRT SYSTEM

Facilities provided to persons with disabilities in the MRT system include:

## 1. Facilities inside elevators:

- The elevator button level is at the same height as wheelchair.



## 2. Ramps for persons with disabilities:

- Ramps are provided at the entrance-exit with elevators.



## 3. Restrooms for persons with disabilities:

- Restrooms are provided at the concourse level.
- Inside such restrooms, sanitary ware is provided for passengers, such as, emergency button, etc.



## 4. Ticket booths for persons with disabilities:

- The booth level is at the same height as wheelchair.
- The booths are provided at every MRT Ticket Office at each station.



## 6. Special gates for persons with disabilities:

- The special gates are fixed next to the MRT Ticket Office, and the automatic gates are available in the area of the concourse level.
- The special gates are large enough for passengers in wheelchairs to easily pass through.



## 5. Elevators for persons with disabilities:

- The elevators are connected between at-grade road and the concourse level.
- The elevators are provided at Bang Phlu Station, Yaek Nonthaburi 1 Station, and Bang Son Station.



# THE SI RAT - OUTER RING ROAD EXPRESSWAY



General Prayuth Chan-o-cha, the Prime Minister, presided over the official opening ceremony of the Si Rat - Outer Ring Road Expressway Project, accompanied by the Minister of Transport, the Chairman of the Board of Directors of the Expressway Authority of Thailand (EXAT), the EXAT Governor, the Chairman of the Executive Board of Bangkok Expressway and Metro Public Company Limited (BEM), together with directors, on August 22, 2016.



Bangkok Expressway and Metro Public Company Limited has been granted a great opportunity from the government sector by entering into the Agreement with the Expressway Authority of Thailand (EXAT) on a Build Transfer Operate (BTO) basis of the Si Rat - Outer Ring Road Expressway Project, which expands the expressway network to the West of Bangkok so as to alleviate traffic problems and enhance the quality of life of people who live in Bangkok and vicinity.







With respect to its description, the Project is an elevated six-traffic lane expressway, for a distance of approximately 16.7 kilometers, with a total of 10 toll plazas, starting from the Outer Bangkok Ring Road (Kanjapisek Road around Mahasawat Water Treatment Plant), heading along the right of way of the existing Southern railway, crossing the Chao Phraya River at the Rama VII Bridge and ending at Bang Sue Station area (Chatuchak) connecting to the Si Rat Expressway around the Northern Bus Terminal (Mo Chit 2), with exit to at-grade roads around Kamphaeng Phet 2 Road.



## Site Visit

On July 22, 2016, Mr. Arkhom Termpittayapaisith, Minister of Transport, paid a visit at the Si Rat - Outer Ring Road Expressway Project to ensure its readiness before its opening for service. On this occasion, General Viwat Suchart, Chairman of the Board of Directors of the Expressway Authority of Thailand (EXAT), Mr. Narong Gieddech, EXAT Governor, and Mr. Plew Trivisvavet, BEM's Chairman of the Executive Board, together with directors and executives of both agencies, jointly welcomed the Minister for this site visit to ensure its readiness in respect of both the route and the toll collection system before opening for service.

## Free Trial Run

BEM, in association with the Expressway Authority of Thailand (EXAT), opened the Si Rat - Outer Ring Road Expressway Project for free trial run along the route, from 05:30 hours of August 15, 2016 until 23:59 hours of August 17, 2016, before official opening for service on August 22, 2016 at 12:00 hours.







## Chillax Bike with the Si Rat - Outer Ring Road Expressway Activity

Bangkok Expressway and Metro Public Company Limited (BEM), in association with the Expressway Authority of Thailand (EXAT), organized a “Chillax Bike with Si Rat - Outer Ring Road Expressway” activity on Saturday, August 13, 2016. Mr. Arkom Termpittayapaisith, the Minister of Transport, presided over the opening ceremony of the activity and joined a bike ride with management of EXAT, management of BEM and over 4,500 people, at Rama VII Bridge Toll Plaza, the Si Rat - Outer Ring Road Expressway.

Prior to this event, the Company took Press to visit the Si Rat - Outer Ring Road Expressway Control Center (CCB7) and further invited them to mutually participate the Chillax Bike for Press to appreciate beautiful scenery on the expressway across the Chao Phraya river, the united joyful connection between Bangkok and Thonburi, on June 22, 2016.







## Happy Running Marathon with the Si Rat-Outer Ring Road Expressway

Bangkok Expressway and Metro Public Company Limited (BEM), in association with the Expressway Authority of Thailand (EXAT), organized a “Happy Running Marathon with Si Rat - Outer Ring Road Expressway, Bangkok to Krungthong” activity for a chronicle of the marathon on the new expressway on Saturday, August 20, 2016, presided by Mr. Teerapong Rodprasert, Vice Minister of Transport; there were 3,000 participants. All proceeds from such activity without deducting any expense, went to the Queen Sirikit National Institute of Child Health.

## Jointly Granting Proceeds

from Happy Running Marathon Activity to the Queen Sirikit National Institute of Child Health (the Children Hospital)

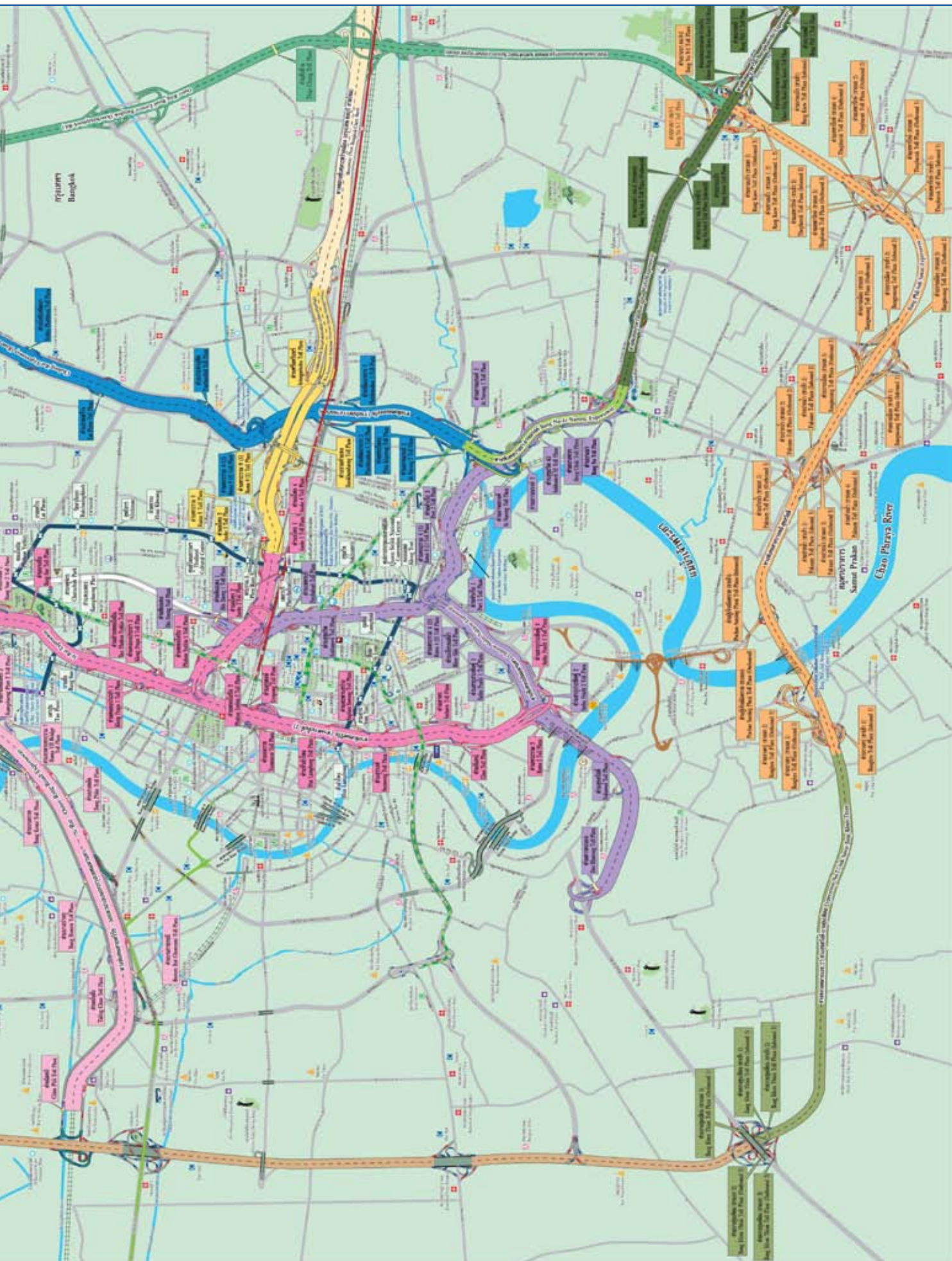
The Company, in association with the Expressway Authority of Thailand (EXAT), granted proceeds without deducting any expense from the Happy Running Marathon with the Si Rat - Outer Ring Road Expressway in the amount of Baht 890,000 to the Queen Sirikit National Institute of Child Health (the Children Hospital) on the occasion of “Her Majesty the Queen’s 84<sup>th</sup> Birthday Anniversary” in order to develop the Queen Sirikit National Institute of Child Health to be our country’s key institute in full-service provision of care of and medical treatment to infants and babies with birth defects, including premature labor.





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# 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:

## 1. Communications and Facilities



## 2. Traffic Management



## 3. Rescue and Trailer Services



### Communications and Facilities

The Company established the expressway system control centers by having communications 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 1 kilometer on the Expressway so as to enable motorists to contact communications staff at the control centers by pressing the metal shaft or green button to call the center, then the communications

staff pans the closed-circuit television which is nearest to such SOS telephone to the location of such telephone. This enables the communications staff to monitor the calling site and simultaneously, sound and video recorders record the conversation between the motorist and the communications 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.

### 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.

## **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 / 66 (0) 2248 7574-6 / 66 (0) 2641 4611 ext. 7007
	Fax.	66 (0) 2247 1994
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 / 66 (0) 2567 5680
	Fax.	66 (0) 2567 5700 ext. 7155
Buraphawithi Expressway Control Center	Tel.	66 (0) 2746 9800-4 ext. 5501
	Fax.	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 / 66 (0) 2558 9800
	Fax.	66 (0) 2561 2984 / 66 (0) 2579 8737

## CORPORATE SOCIAL AND ENVIRONMENTAL ACTIVITIES

The Company, as the expressway and metro service provider, is committed to helping alleviate traffic problems in Bangkok and its surrounding provinces, through the fully-integrated mass rapid transit and transportation systems in order to upgrade the quality of life and shape the future of Thailand's transportation system. Furthermore, the Company operates its businesses based on **the good corporate governance, and is socially responsible** in both expressway and metro businesses.

### The Social Activities of Expressway Business

#### Good Family Relationships ►



#### "Moms & Kids Strengthen Relationships with BEM at CORO Field in Ratchaburi"

The activity was held on the occasion of the National Mother's Day, as a special family day, in which the Company played a part in strengthening family relationships by inviting the expressway users and their 14 families, totaling 42 persons, to travel on the Si Rat - Outer Ring Road Expressway heading to Ratchaburi Province to learn new theory agriculture as well as participating in activities to strengthen family relationships in such special time when moms and kids jointly decorated trees in loving and warm atmosphere for all families.





## “Dads & Kids to Strengthen Relationships with BEM at the Palace in Nakhon Pathom”

The activity was held on the occasion of the National Father’s Day as the Company continued to realize the significance of activities to strengthen family relationships and then organized the “BEM Invites Dads & Kids to Visit the Palace in Nakhon Pathom” activity by inviting the expressway users and their 13 families, totaling 39 persons, to visit the Control Center Building of the Si Rat - Outer Ring Road Expressway (CCB7) and to travel on the Si Rat - Outer Ring Road Expressway connecting with Krungthep - Krungthong heading to Nakhon Pathom Province to appreciate the picturesque of the Sanam Chandra Palace; learn the history in King Rama VI reign; pay homage to the Phra Pathom Chedi; visit the Little Tree Market; and participate in the painting with natural color activity to strengthen family relationships.

## Awareness of Environmental Preservation ►

Environmental preservation is of great importance to everyone and requires active participation. The Company then organized the program titled “**Let’s Love Environment with BEM**” to campaign for the awareness of environmental and natural preservation by taking management and staff to participate in the Siam Weed Elimination activity to ensure more plant and food areas for wild animals at Khao Yai National Park in Nakhon Ratchasima Province.





## Promotion of Youth Learning ►

Education represents a key foundation for youths' sustainable development of knowledge, thoughts and values in order to become decent and quality citizens of society. The Company continues to encourage and support youth education every year through various activities as follows:



### “Scholarships to Adjacent Schools”

The Company organized the “BEM Grants Scholarships to Adjacent Schools” activity, by granting scholarships to underprivileged students with good academic records, including funds for school development for educational purposes to 15 schools adjacent to the Si Rat Expressway, the Si Rat - Outer Ring Road Expressway and the Udon Raththaya Expressway.



### “Audio Library for Young Blinds”

The Company acknowledges that reading will bring about sustainable knowledge. The Company supported and took part in the Audio Library for Young Blinds project, as organized by Nation Broadcasting Corporation Public Company Limited and the Foundation for the Blind in Thailand under the Royal Patronage of H.M. the Queen, in order to assist and share knowledge to youths with visual disabilities, by means of audio book recording, which will be organized as an audio library for children.



## Support for Outdoor Learning Experience ►



### “Let’s Inspire Children’s Talents”

An activity on the occasion of National Children’s Day for 2016 was held for children to explore their own talents through fun activities, with participation by a number of children of the Company’s staff and children of the Expressway Police Station 2’s police officers, students from adjacent schools, including neighbors.

## Good Relationships with Related Authorities ►

The cooperation for 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:



### “Watch Movie with Expressway”

It is an event where families of staff of EXAT and police officers of the Expressway Police Station 2 as well as families of the Company’s staff were invited to watch the movie “Batman v Superman : Dawn of Justice” at Esplanade Cineplex. All family members had a good time and enjoyed games and the 3D movie.



## Support for Other Social Activities ►



### “Support for “Lankilaphat” Project under H.M. the King’s Initiative”

As His Majesty King Bhumibol Adulyadej and Her Majesty Queen Sirikit have always expressed a concern for the well-being of their people in all aspects, by giving priority to development of personnel and communities to ensure their people are in better physical and mental health, the Office of H.M. Principal Private Secretary, in its capacity as secretary to His Majesty King and the royal family members, one of whose missions is to be committed to performing works under the royal initiative in respect of improvement of the quality of people’s life, and in response to this royal initiative, initiated a project for construction of people’s playgrounds named “Lankilaphat”, literally meaning a “Sport Field

for Growth”, to promote a variety of recreational activities, sports, community development, and other social and public activities, focusing on sustainable quality of life of people and communities, to carry on such royal initiative.

The Company took part in fulfilling such royal initiative by sponsoring and serving as member of the administration committee and subcommittee of the “Lankilaphat” project, starting with two pilot projects, namely, Lankilaphat 1 in Khlong Chan Housing Community, Bang Kapi District, which is currently completed and open for service, and Lankilaphat 2 under the Urupong Expressway, Ratchathewi District, which is under construction.

## ISSUER OF THE YEAR 2016 ►



### The Issuer of the Year Award as the Outstanding Private-Sector Debenture Issuer in 2016

BEM was granted the Issuer of the Year 2016 Award by the Thai Bond Market Association as the outstanding private-sector debenture issuer in the bond market fund raising in 2016, which met the demands of BEM and investors in an appropriate time, with operations pursuant to the good corporate governance principles, ensuring confidence of both shareholders and debenture holders.



### “Return the Metro Cards for Environmental Protection and Sustainable Social Development project” ►

The Company has maintained its commitment to environmental protection, together with social development with sustainability, to fully satisfy communities’ economic, social and environmental requirements through a variety of social contribution activities, with a focus on environmental protection. To this end, the Company organized the **“Return the Metro Cards for Environmental Protection and Sustainable Social Development”** project to invite MRT passengers to return their expired cards. The Company would donate Baht 10 per card for development of the quality of life in communities through activities in response to needs and livelihood of communities. These included the Share 2 Child activity for youths to learn the use of the MRT service for sightseeing at various places; and the M Care activity, in association with the Company’s alliances, in order to provide information on public health for passengers and the general public, including corporate social responsibility activities in other special occasions.

This project signifies the concerted efforts of all MRT users. The Company is committed to creating and pushing forward with the promotion of quality of life in society, together with environmental protection, to ensure a better quality of life for everyone in society with a bright future for future generations through sustainable development and growth.

In 2016, the Company spent monies from this project to organize activities for development of the quality in various terms of the communities surrounding the MRT routes, i.e., the MRT Chaloem Ratchamongkhon Line (MRT Blue Line) and the MRT Chalong Ratchadham Line (MRT Purple Line), classified into three parts as follows:

### Activities for Development of Quality of Life on Education ►



#### “Share 2 Child Activity”

The Company, in association with the Nonthaburi Civic Center, organized an exhibition booth on the occasion of National Children’s Day for 2016 by holding activities to develop outdoor learning skills on how to use service of the MRT Chalong Ratchadham Line (MRT Purple Line, Bang Yai - Tao Poon Section) to the participating children, youths and people, namely, Fun Quizzes and Speak Out activity / Painting M Dolls activity / Playing Toss with MRT activity, all of which would help them enhance outdoor experience; have more creative thinking and have fun with MRT, as well as granting shoes to youths in need, organizing an exhibition booth to give ice cream, and drinking water for free throughout the event.

The Company organized an activity in association with groups of students and teachers from Wat Pracha Sattha Tham School, Bangkok, located in the alignment of the MRT Chalong Ratchadham Line (Wongsawang Station), which were targeted for being allowed to take a free trial of the MRT Chaloem Ratchamongkhon Line (MRT Blue Line, Hua Lamphong - Bang Sue Section) to travel, to learn, and to experience Buddhism; to join activities enhancing meditation and wisdom at Wat Traimitr Withayaram Voraviharn and Lord Buddha Museum at Wat Debsirindrawas.



The Company organized an activity in association with groups of students and teachers from Wat Madua School, Nonthaburi Province, located in the alignment of the MRT Chalong Ratchadham Line (Sam Yaek Bang Yai Station and Bang Phlu Station), which were targeted for being allowed to take a free trial of the MRT Chalong Ratchadham Line and the MRT Chaloem Ratchamongkhon Line to travel to broaden their experience by visiting the Chan-Based Buddhism; appreciating the picturesque of Chinese temple architecture at Wat Boromracha Kanchanaphisek Anusorn (Wat Leng Nei Yi 2) in Nonthaburi Province and Children's Discovery Museum (in Bangkok) to expand and inspire youths' imaginations.

The Company, in association with the Mass Rapid Transit Authority of Thailand (MRTA) and Bangkok Metro Networks Limited (BMN), organized the "Getting Fit Beat GAT by MRT Year 8.1" activity on the occasion of the service opening of the MRT Chalong Ratchadham Line by providing an opportunity for senior high school students to gain more knowledge from such activity for use in preparing themselves for General Aptitude Test (GAT) to further study at university level, in order to support education of Thai youths, let alone that this activity helped carry on the Company's commitment to social assistance, particularly in educational development of youths as target group which would be the key power of the national development in the future.







The Company organized an activity in association with groups of students and teachers from Wat Bang Rak Yai School, Nonthaburi Province, located in the alignment of the MRT Chalong Ratchadham Line (Bang Rak Yai Station), which were targeted for being allowed to take a free trial of the MRT Chalong Ratchadham Line and the MRT Chaloem Ratchamongkhon Line to travel to broaden their experience by visiting Thai civilization learning places to enhance knowledge under the educational course of history, language and literature subjects, at Thai Nithat Exhibition Hall in the Thailand Cultural Center, and ending with fun activities through realistic paintings at the Art in Paradise in Bangkok to enhance learning and practice observation by touching real paintings.

The Company organized an activity in association with groups of students and teachers from Chum Chon Wat Samorakoat School in Nonthaburi Province, located in the alignment of the MRT Chalong Ratchadham Line (Yaek Nonthaburi 1 Station), which were targeted for being allowing to take a free trial of the MRT Chalong Ratchadham Line to broaden their experience by visiting scientific learning places at Children's Discovery Museum (in Bangkok) to expand and inspire youths' imaginations.



The Company organized an activity in association with groups of students and teachers from Dhammasiri Suksa School (Wat Noi Nok) in Nonthaburi Province, located in the alignment of the MRT Chalong Ratchadham Line (Phra Nang Klao Bridge Station), which were targeted for being allowed to take a free trial of the MRT Chalong Ratchadham Line and the MRT Chaloem Ratchamongkhon Line to travel to broaden their experience by visiting historic learning places in the eras of Krungsri Ayutthaya to Rattanakosin at Rattanakosin Exhibition Hall, Ratcha Damnoen Avenue.





## Activity for Development of Quality of Life on Public Health ►



### “M Care Activity”

The Company, in association with its partners, organized an exhibition booth to provide information on health, safety, and free health checkups for MRT passengers and residents surrounding the MRT routes and nearby communities, as follows:

#### Exhibitions on health care and checkup

Private hospitals provided knowledge relating to proper and safe use of the MRT service (by Safety & Quality Division), such as, warning of pickpockets, safety in using escalators, etc., together with CSR bulletin board of Bangkok Expressway and Metro Public Company Limited.

#### Passengers' registration for getting coupons

Passengers joined activities at various exhibition booths and brought such coupons to make prize drawing within such event, namely, MRT tickets for 50 prizes worth Baht 50 each, totaling Baht 2,500, M Dolls / flash drives, fans, key rings, cotton bags, notebooks, etc.

#### Free Thai massage

The service was taken care by Thailand Caulfield Foundation for the Blind under the Royal Patronage of Her Royal Highness Princess Maha Chakri Sirindhorn.

#### Health checkup service (Pulse diagnosis)

Health checkup service and health care were provided by traditional Chinese doctors, Alternative Medicine College, Chandrakasem Rajabhat University.

#### Health checkup service (Electrical pulse diagnosis)

It was done according to elements, hand grip test, basic eye test by Kluaynamthai Hospital.

#### Fasting blood sugar, blood pressure checkup service, health risk assessment,

The checkups and health consult with professional nurses from Bangpo Hospital.

#### Educating and demonstrating how to make initial breast cancer checkup

By Chulalongkorn Hospital.

#### “Adventure in No Belly Land”

With Thai Health Promotion Foundation (THPF).

#### Healthy food cooking demonstration

The demonstration and educating on nutrition by Intermedical Care and Lab Hospital.

#### Initial oral and teeth health checkup service

By Mahidol University Faculty of Dentistry.

#### Health checkup service, health care suggestions

With Thai tradition medicine and Chinese tradition medicine by College of Oriental Medicine, Rangsit University.



## Activity for Promotion of Other Public Benefits ►



### “Return the Metro Cards for MRT Lucky Draw”

The campaign was promoted for passengers’ greater recognition of the “Return the Metro Cards for Environmental Protection and Sustainable Social Development” project by distributing metro card envelopes to passengers who purchased or showed their 1-Day Pass, 3-Day Pass or 30-Day Pass, filling in their names-addresses on the envelopes, inserting used-up 1-Day Pass, 3-Day Pass or 30-Day Pass in the envelopes, and then dropping them into the metro card boxes for lucky draw.



### “MRT’s Free Drinking Water Service for People to Mourn for His Majesty the King’s Passing”

Bangkok Expressway and Metro Public Company Limited (BEM) expressed our deepest and sincere condolences to remembrance of His Majesty the late Phra Bat Somdet Phra Poramintharamaha Bhumibol Adulyadej Mahitalathibet Ramathibodi Chakkinaruebodin Sayamminthrathirat Borommanatbophit by installing free drinking water service counter for people who went to pay respect to the corpse of the late King during October 29 - 30, 2016 at Exit No. 2 of Hua Lamphong MRT station.

# THE PROMOTION AND CAMPAIGN ACTIVITIES FOR USING THE MRT SYSTEM IN 2016



## 1. National Children's Day

The **"Free MRT Ride for Children"** activity was held on the occasion of the National Children's Day 2016 for children not taller than 140 centimeters on January 9, 2016 throughout the service hours.



## 2. Songkran Day

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

- The **"Celebrate for Happy Songkran Day with MRT"** activity was held to provide MRT passengers an opportunity to make merit under the Thai tradition during April 10-15, 2016 for blessing by performing a bathing rite for Buddha images, nine MRT 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, and Bang Sue Station.
- The **"3-Day Free MRT Ride for Elders"** activity was held on April 13-15, 2016 by providing free MRT rides for elders aged 60 or over throughout the service hours.



## 3. National Mother's Day

The **"Happy Mother's Day with Free MRT Ride"** activity was held on the occasion of the National Mother's Day 2016 by providing mothers with free MRT journeys on August 12, 2016 throughout the service hours.



## 4. National Father's Day

The **"Happy Father's Day with Free MRT Ride"** activity was held to provide fathers with free MRT journeys on December 5, 2016.



## 5. Service Hours Extended to 2 AM on 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, totaling two nights, from 24:00 hours on December 31, 2016 until 02:00 hours on January 1, 2017.



## 6. New Year's Day

**"MRT Gives Free Ride as New Year Gift"** activity, passengers were given free ride to use the MRT Blue Line and Purple Line services, from 12:00 hours of December 31, 2016 until 12:00 hours of January 1, 2017.



# 1. 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 at December 31, 2016, 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 businesses comprise 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 network routes, 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. In addition, 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 Business Overview of the Company

### 1.1.1 Expressway Business

The Company and one of its subsidiaries have been granted concessions for construction and operation of a total of four expressways, namely, (1) 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; (2) the Si Rat Expressway, Sector D, under the Agreement for the Extension of the Second Stage Expressway System, Sector D, with EXAT for a period of 30 years from April 22, 1997; (3) 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; and (4) the Udon Rattaya Expressway (Bang Pa-in - Pak Kret Expressway), operated by a subsidiary, namely, Northern Bangkok Expressway Company Limited (“NECL”) under the Bang Pa-in - Pak Kret Expressway Agreement with EXAT for a period of 30 years from September 27, 1996.

#### 1) The Si Rat Expressway

The Company and EXAT jointly invested in the expressway system in Bangkok and its vicinity. The Company was responsible for investment in the construction and operation of the Si Rat Expressway, comprising 4 Sectors, namely, Sector A (Rama 9 - Ratchadapisek), Sector B (Phayathai - Bangkoklo), Sector C (Ratchadapisek - Chaeng Watthana) and Sector D (Rama 9 - Srinagarindra), covering a total distance of 38.5 kilometers. EXAT invested in the construction and operation of the Chalmern Mahanakorn Expressway (First Stage Expressway), covering a total distance of 27.1 kilometers.

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 Chalmern 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 the 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, Sector C and Sector D of the Si Rat Expressway, all toll revenue shall belong to the Company throughout the period of the Agreement.

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

The Company shall have the duty in design and construction, supply and installation of various equipment and systems, including the operation, service and maintenance of the expressway, together with toll collection, whereby the Company shall be responsible for investment and all operating expenses throughout the concession period, and share consideration with or provide benefits to the State to be agreed upon in the Concession Agreement.

The Company shall have the right to receive toll revenue and other revenues (if any) throughout the concession period, whereby the toll rates and revisions shall be agreed upon in the Agreement.

The Concession Agreement shall have a term of 30 years from December 15, 2012, whereby the operations shall be divided into two phases, as follows:

Phase 1: Design and construction of the expressway, supply and installation of electrical and mechanical system equipment, toll collection system, communications system and traffic controlling system, and other systems related to the expressway, for the construction period of not exceeding 48 months from December 15, 2012 as the date specified by EXAT in the Notice to Proceed (NTP);

Phase 2: Operation and provision of service, such as, toll collection, rescue operation and maintenance of the expressway, starting from the opening of the project until the end of the concession period.

The Company commenced construction on December 15, 2012, with the construction completion and opening for service on August 22, 2016.

### Routes and Characteristics

The project is an elevated expressway with six traffic lanes, for a distance of 16.7 kilometers, with 10 toll plazas. The 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 around the Bus Terminal (Mo Chit 2), and running down to at-grade level around Kamphaeng Phet 2 Road.

## 3) The Udon Ratthaya Expressway

NECL constructs and operates the Udon Ratthaya Expressway, 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. 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. EXAT is responsible to collect and deliver all tolls to the subsidiary. All toll revenue in respect of the Udon Ratthaya Expressway shall belong to the subsidiary.

### 1.1.2 Rail Business

The Company has been granted concessions for two mass rapid transit rail system projects from the Mass Rapid Transit Authority of Thailand ("MRTA"), namely, (1) the MRT Chaloem Ratchamongkhon Line Project (Hua Lamphong Station - Bang Sue Station) (MRT Blue Line Project), whereby the Company is entitled to fare box revenue and undertake activities and commercial development, including advertising, leasing space and telecommunications services in the metro stations and in the trains for a period of 25 years from July 2, 2004; and (2) the MRT Chalong Ratchadham Line Project, Bang Yai - Rat Burana, Bang Yai - Bang Sue Section (Khlong Bang Phai Station - Tao Poon Station) (MRT Purple Line Project), Contract 4: Concession for Supply of M&E Systems and O&M Services, 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 fare box 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.

#### **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 for 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; and 3) provision of service and maintenance of telecommunications system equipment inside the metro stations. In addition, as for the expressways, the Company and NECL 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.

#### **1.1.4 Investment in Other Companies**

The Company invests in the companies operating the public utility businesses, as follows: (1) CK Power Public Company Limited (“CKP”) operates its core business by holding shares in other companies (Holding Company) operating the business of production and distribution of energy of various types; (2) TTW Public Company Limited (“TTW”) operates the business of production and distribution of tap water to the Provincial Waterworks Authority and invests in companies which operate the business of other public utilities; and (3) Xayaburi Power Company Limited (“XPCL”) carries out construction and operation of the Xayaburi Hydroelectric Power Project.

## **1.2 Vision, Mission and Goals of Operations**

#### **1.2.1 Vision**

The Company’s vision is:

“To become a leading, fully-integrated transportation service provider in Thailand and ASEAN.”

#### **1.2.2 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 life;
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.

#### **1.2.3 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 provision of quality services of the expressway and metro systems;
5. To build social recognition of the corporate good image.

## 1.3 Significant Changes and Developments

The Company was incorporated from the amalgamation, under the Public Limited Company Act, between BECL and BMCL on December 30, 2015. It operates the businesses of construction and operation of the expressways and operation of the metro system, including commercial development relating to the expressway and metro systems, whereby such businesses were transferred from BECL and BMCL by operation of law.

### Significant Changes and Developments prior to the Amalgamation

- BECL registered its incorporation on December 23, 1987 and listed on the Stock Exchange of Thailand (“Stock Exchange”) since August 31, 1995. Prior to the amalgamation, BECL’s registered and paid-up capital amounted to Baht 7,700,000,000, divided into 770,000,000 ordinary shares, at the par value of Baht 10 per share.
- On December 22, 1988, BECL entered into the Second Stage Expressway Agreement with the Expressway Authority of Thailand (EXAT) for construction and operation of the Si Rat Expressway for a concession period of 30 years from the commencing date of construction which was March 1, 1990.
- On September 25, 1996, BECL established Northern Bangkok Expressway Company Limited (NECL), whereby NECL entered into the agreement with EXAT for construction and operation of the Udon Rattaya Expressway (Bang Pa-in - Pak Kret Expressway) for a period of 30 years from the date of the Agreement which was September 27, 1996.
- On April 17, 1997, BECL entered into the Agreement for the Extension of the Second Stage Expressway System, Sector D, for construction and operation of the Si Rat Expressway, Sector D, with EXAT for a period of 30 years from the commencing date of construction which was April 22, 1997.
- On September 14, 2012, BECL entered into 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 the date specified in the Notice to Proceed which was December 15, 2012.
- BMCL registered its incorporation on February 18, 1998, and was listed on the Stock Exchange since September 21, 2006. Prior to the amalgamation, BMCL’s registered and paid-up capital amounted to Baht 7,585,000,000, divided into 20,500,000,000 ordinary shares, at the par value of Baht 0.37 per share.
- BMCL entered into the Agreement for the MRT Blue Line Project with MRTA on a PPP Net Cost basis with AOT (Acquire Operate Transfer) method, and BMCL was entitled to fare box revenue and undertaking activities and commercial development, including advertising, leasing space and telecommunications services in the metro stations and in the trains for a period of 25 years, from July 2, 2004 to July 1, 2029. Under such Agreement, BMCL was obliged to make payment of remuneration from fares and commercial development to MRTA at the rates as mentioned in the Agreement.
- On February 25, 2009, BMCL established Bangkok Metro Networks Limited (BMN) by the amalgamation of three companies, namely, BMCL Network Limited, Metro Mall Development Limited, and Triads Networks Co., Ltd. BMN accepted the transfer of all three companies’ businesses, as well as all rights, duties, assets, liabilities and staff.
- On September 4, 2013, BMCL entered into the Agreement for the MRT Purple Line Project with MRTA for a period of 30 years on a PPP Gross Cost basis with ATO (Acquire Transfer Operate) method, namely, MRTA invested in all civil works and BMCL invested in the M&E Systems and the rolling stocks, provided that MRTA shall make a gradual repayment of the M&E Equipment to BMCL, and BMCL shall provide the O&M services in accordance with the service provision standards as specified in the Agreement. In this regard, 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 payment to BMCL in the form of service fee for the O&M Services from the date of BMCL’s operation service until the end of the Concession Agreement.

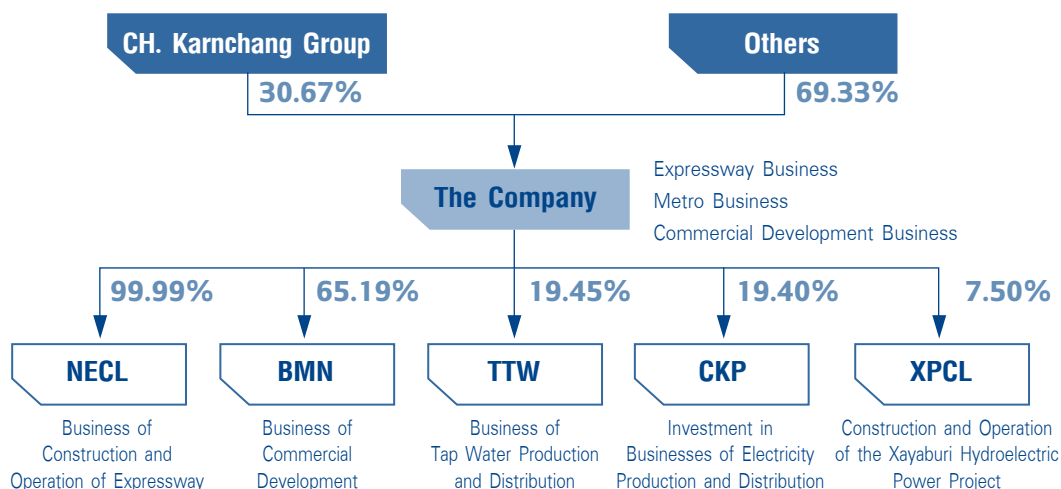


## Significant Changes and Developments of the Company in 2016

January 5, 2016	BEM securities were traded on the Stock Exchange of Thailand for the first day and were rated in SET100 Index, as well as selected for calculation in MSCI Global Index, a highly popular standard in measuring returns in international investment portfolios.
April 4, 2016	The Company received a credit rating at “A”, with “Stable” outlook from TRIS Rating Co., Ltd.
June 24, 2016	The Company issued and offered the debentures No. 1/2016, with a maturity of 3-12 years, in the amount of Baht 15,000 Million, at the fixed interest rates of 2.22 percent to 3.61 percent per annum, for use in replacement of loans from financial institutions under the financial restructuring plan and for use in investment in the Si Rat - Outer Ring Road Expressway Project.
July 1, 2016	BEM securities were rated in SET50 Index.
July 21, 2016	By virtue of Section 44 of the interim Constitution of the Kingdom of Thailand, the Head of the National Council for Peace and Order issued orders regarding the operations of the MRT Blue Line Project (Chaloem Ratchamongkhon Line), Hua Lamphong - Bang Sue Section, and the MRT Blue Line Extension Project, Hua Lamphong - Bang Khae Section and Bang Sue - Tha Phra Section, to ensure through operation of both systems as one network. The Selection Committee and the Monitoring Committee were required to jointly enter into negotiation with the concessionaire for the MRT Chaloem Ratchamongkhon Line Project to operate the Extension Project and amend the Agreement for Joint Investment of the MRT Chaloem Ratchamongkhon Line Project to ensure through operation as one network. At present, it is pending proposal to the Council of Ministers for further consideration.
August 6, 2016	The MRT Chalong Ratchadham Line Project (MRT Purple Line), Bang Yai - Tao Poon Section (Khlong Bang Phai Station - Tao Poon Station) was opened for service.
August 22, 2016	The Si Rat - Outer Ring Road Expressway was opened for service.
August 22, 2016	NECL opened for service the Electronic Toll Collection System for the Udon Rattaya Expressway for the entire route.
October 21, 2016	The Company issued and offered the debentures No. 3/2016, with a maturity of 4-11 years, in the amount of Baht 8,000 Million, at the fixed interest rates of 2.62 percent to 3.95 percent per annum, for debt repayment upon due and for use as the Company's working capital.
November 1, 2016	The Electronic Toll Collection Systems of EXAT and the Department of Highways were integrated, whereby the Easy Pass users and M-Pass users may pay tolls at toll booths in the Electronic Toll Collection lanes by using a single pass.
December 28, 2016	By virtue of Section 44 of the interim Constitution of the Kingdom of Thailand, the Head of the National Council for Peace and Order issued an order regarding the measures for solution to connection between the MRT Blue Line Project (the MRT Chaloem Ratchamongkhon Line), Hua Lamphong - Bang Sue Section, and the MRT Purple Line Project (the MRT Chalong Ratchadham Line), Bang Yai - Tao Poon Section, whereby MRTA was required to engage a private business operator for installation of M&E Systems and provision of O&M Services to the MRT Blue Line, Tao Poon - Bang Sue Section, and was also required to use the negotiation results of the Committee for Selection of Private Entity to Participate in State Undertaking (Contract 5) of the MRT Purple Line Project, Tao Poon - Bang Sue Section, with BEM, including the relevant resolutions of the Council of Ministers, for consideration.

## 1.4 Shareholding Structure of Company Group

Chart of Shareholding Structure and the Company's Shareholding Percentage as at December 31, 2016



**Remark :** CH. Karnchang Group comprises 1) CH. Karnchang Public Company Limited 2) CH. Karnchang-Tokyu Construction Company Limited, 3) Mahasiri Siam Co., Ltd., and 4) CH. Karnchang Holding Co., Ltd.

### 1.4.1 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. The Company's investment as at December 31, 2016 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 Rattaya Expressway	6,000	5,250	99.99%	2,604
Bangkok Metro Networks Limited	Operation of the commercial development business	254	254	65.19%	166
<b>Other Companies</b>					
CK Power Public Company Limited	Investment by holding shares in other companies (Holding Company) operating a business of electricity production and distribution	9,240	7,370	19.40%	3,223
TTW Public Company Limited	Tap water production and distribution	3,990	3,990	19.45%	4,277
Xayaburi Power Company Limited	Construction and operation of the Xayaburi Hydroelectric Power Project	26,861	16,505	7.50%	1,238



## (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 at December 31, 2016, 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 at December 31, 2016, the Company’s shareholding in BMN was 65.19 percent of its registered capital.

BMN was established by the amalgamation of three companies, namely, BMCL Network Limited, Metro Mall Development Limited, and Triads Networks Co., Ltd. BMN accepted the transfer of all three companies’ businesses, as well as all rights, duties, assets, liabilities and staff.

BMN currently operates the business of procurement and production of advertising media of various forms in the metro stations and trains, lease of retail spaces in stations of the MRT Blue 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 9,240 million ordinary shares, at the par value of Baht 1 per share, with the paid-up capital of Baht 7,370 Million. As at December 31, 2016, the Company’s shareholding was 19.40 percent of its registered 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 at December 31, 2016, the Company’s shareholding was 19.45 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 25 percent of its registered capital.

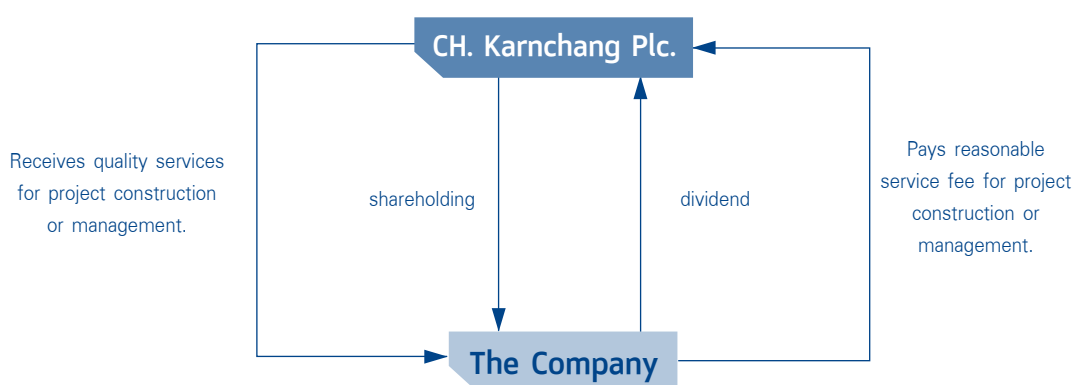
### 3. Xayaburi Power Company Limited (“XPCL”)

XPCL’s total registered capital is Baht 26,861 Million (at the exchange rate of USD 1 to Baht 34), with the paid-up capital of Baht 16,505 Million. As at December 31, 2016, the Company’s shareholding was 7.50 percent of its registered capital. XPCL’s main business is to operate the Xayaburi Hydroelectric Power Project, located on the Mekong River. The Xayaburi Hydroelectric Power Project is a run-of-river hydroelectric project, without water diversion from the Mekong River and without water impounding like other reservoir dams.

#### 1.4.2 Relationship with Business Alliance of Major Shareholder

CH. Karnchang Plc. is the Company’s major shareholder. As at December 31, 2016, CH. Karnchang Plc. was holding 4,544,912,129 shares in the Company, representing 29.73 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 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 operation 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 interests, the Company will comply with its policy on 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, the Si Rat - Outer Ring Road Expressway and the Udon Rattaya Expressway; 2) concessionaires for operation of the MRT Blue Line Project and the MRT Purple Line Project. 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 (pro forma amalgamation)	Operated by	Shareholding Percentage of the Company	Consolidated Financial Information					
			For Year Ended December 31, 2016		For Year Ended December 31, 2015 <sup>(1)</sup>		For Year Ended December 31, 2014 <sup>(1)</sup>	
			Million Baht	%	Million Baht	%	Million Baht	%
<b>Revenue from expressway business</b>			<b>9,301</b>	<b>70.3%</b>	<b>8,815</b>	<b>67.3%</b>	<b>8,485</b>	<b>71.4%</b>
Toll revenue	Company		7,978	60.3%	7,606	58.0%	7,352	61.9%
Toll revenue	Subsidiary (NECL)	99.99 <sup>(2)</sup>	1,323	10.0%	1,209	9.2%	1,133	9.5%
<b>Revenue from rail business</b>			<b>3,230</b>	<b>24.4%</b>	<b>2,374</b>	<b>18.1%</b>	<b>2,248</b>	<b>18.9%</b>
Fare box revenue and metro operation service charges	Company		3,230	24.4%	2,374	18.1%	2,248	18.9%
<b>Commercial development revenue</b>			<b>573</b>	<b>4.3%</b>	<b>549</b>	<b>4.2%</b>	<b>501</b>	<b>4.2%</b>
Commercial development revenue	Company		78	0.6%	81	0.6%	285	2.4%
Commercial development revenue	Subsidiary (BMN)	65.19	495	3.7%	468	3.6%	216	1.8%
<b>Gain on investments <sup>(3)</sup></b>			<b>31</b>	<b>0.2%</b>	<b>1,298</b>	<b>9.9%</b>	<b>537</b>	<b>4.5%</b>
<b>Other income <sup>(4)</sup></b>			<b>98</b>	<b>0.8%</b>	<b>69</b>	<b>0.5%</b>	<b>113</b>	<b>1.0%</b>
<b>Total revenues</b>			<b>13,233</b>	<b>100%</b>	<b>13,105</b>	<b>100%</b>	<b>11,884</b>	<b>100%</b>

**Remarks :** (1) Pro forma consolidated financial information.

(2) The Company (formerly BECL) acquired additional shares in NECL in November 2015, as a result, the Company's shareholding in NECL increased from 53.33 percent to 99.99 percent of its registered capital.

(3) Gain on investments includes gain on sales of investment in BMCL, TTW and CKP.

(4) Other income comprises interest income, gain on fair value adjustment of investment, and flood compensation.

### 2.1 Expressway Business

#### 2.1.1 Nature of Services

The Company and one of its subsidiaries, i.e., NECL, construct and operate the expressways, namely, the Si Rat Expressway, the Si Rat - Outer Ring Road Expressway, and the Udon Rattaya Expressway, as per the following details:

##### 1) The Si Rat Expressway

The Si Rat Expressway is the first large-scale construction project in Thailand on the basis of public private partnership to help alleviate the traffic congestion problems in Bangkok and its vicinity. 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, comprising 4 Sectors, namely, Sector A

(Rama 9 - Ratchadapisek), Sector B (Phayathai - Bangkhlo), Sector C (Ratchadapisek - Chaeng Watthana), and Sector D (Rama 9 - Srinagarindra), covering a total distance of 38.5 kilometers. In this regard, the title to various permanent constructions pertaining to or useful for the Si Rat Expressway shall be vested in EXAT. EXAT invested in the construction and operation of the Chalm Mahanakorn Expressway (First Stage Expressway), covering a total distance of 27.1 kilometers. The Company has assumed the right to operate the Si Rat Expressway and the right to receive toll revenue sharing in respect of the Chalm Mahanakorn Expressway and the Si Rat Expressway in such proportions as specified in the Second Stage Expressway Agreement for the concession period of 30 years from March 1, 1990, and the Agreement for Extension of the Second Stage Expressway (Sector D) for the concession period of 30 years from April 22, 1997.

## 2) The Si Rat - Outer Ring Road Expressway Project

The Company has assumed the Concession Agreement for Investment, Design, Construction, Operation, Service and Maintenance of the Si Rat - Outer Ring Road Expressway Project, with 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 starts from Kanjanapisek Road and connects to the Si Rat Expressway at the North of the Mo Chit 2 Bus Terminal, for a total distance of 16.7 kilometers. In this regard, the Company is responsible for investment and all operating expenses, and share returns with or provides benefits to EXAT as specified in the Agreement, for the concession period of 30 years from December 15, 2012. The project was opened for service on August 22, 2016.

## 3) The Udon Ratthaya Expressway

The Company holds shares in NECL, which engages in the business of construction and operation of the Udon Ratthaya Expressway, connecting to the Si Rat Expressway at Chaeng Watthana Road and ending at Amphoe Bang Pa-in, Phra Nakhon Si Ayutthaya Province, covering a total distance of approximately 32 kilometers. This project 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 Ratthaya Expressway, whereby the title to various permanent constructions pertaining to or useful for the expressway shall be vested in EXAT, and EXAT is responsible to collect and deliver all tolls to NECL as specified in the Agreement, for the concession period of 30 years from September 27, 1996.

The details of the expressway network connections are as follows:

Expressway Systems	Length (kilometers)	Constructed and Operated by
1. Chalm 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 (Prachachuen - Phayathai - Bangkhlo - Asoke) 2.2 Suburban Network (Prachachuen - Chaeng Watthana and Asoke - Srinagarindra)	38.5	Company
3. Udon Ratthaya Expressway (Bang Pa-in - Pak Kret)	32.0	NECL
4. Uttaraphimuk Elevated Way (Don Muang Tollway)	28.0	Don Muang Tollway Public Company Limited
5. Chalong Rat Expressway including its Extension (Ramindra - At Narong and Ramindra - Outer Ring Road)	42.4	EXAT
6. Si Rat - Outer Ring Road Expressway	56.7	EXAT



Expressway Systems	Length (kilometers)	Constructed and Operated by
7. Kanjanapisek Expressway (Bang Pli - Suksawad) and Highway No. 37 (Suksawad - Bang Khun Thien Section) including a connecting road to the Industrial Ring Road	42.3	EXAT
8. Si Rat - Outer Ring Road Expressway	16.7	Company
<b>Total length</b>	<b>283.7</b>	

### 2.1.2 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 Bang Na - Port Port - Dao Khanong	Urban Urban Urban	8.9 7.9 10.3	January 4, 1981 January 17, 1983 August 8, 1987	Company and EXAT	- 60:40 for the first nine years - 50:50 for the period between the first nine years and the last nine years - 40:60 for the last nine years
<b>Si Rat</b> Sector A: Rama 9 - Ratchadapisek Sector B: Phayathai - Bangkhlo	Urban Urban	12.4 9.4	September 2, 1993 October 6, 1996	Company and EXAT	- 60:40 for the first nine years - 50:50 for the period between the first nine years and the last nine years - 40:60 for the last nine years
Sector C: Ratchadapisek - Chaeng Watthana Sector D: Rama 9 - Srinagarindra	Suburban Suburban	8.0 8.7	September 2, 1993 Section 1 December 2, 1998 Section 2 March 1, 2000	Company	- 100 : 0
<b>Si Rat - Outer Ring Road</b>	Suburban	16.7	August 22, 2016	Company	- 100 : 0
<b>Udon Ratthaya</b> Chaeng Watthana - Chiang Rak Chiang Rak - Bang Sai	Suburban Suburban	22 10	December 2, 1998 November 1, 1999	Subsidiary (NECL)	- 100 : 0

### 2.1.3 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 (Second Stage Expressway)</b>	50	75	110
Except: Srinagarindra / Ramkhamhaeng Toll Plazas Rama 9 / Asoke 3 Toll Plazas Rama 9-1 Toll Plaza (Si Rat)	25	55	75
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 - Outer Ring Road Expressway</b>	50 **	80 **	115 **
<b>Udon Raththaya Expressway</b>	45	100	150
Except: Muang Thong Thani Toll Plaza	35 ***	90 ***	140 ***
Bang Pa-in Toll Plaza	55	120	180

**Remarks :**

- \* This is the rate after Baht 10 discount for all types of vehicles until December 31, 2017.
- \*\* This rate is effective from the opening date for service of the project for five years.
- \*\*\* This is the rate after Baht 10 discount for all types of vehicles until December 31, 2017.

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 toll revision was made on September 1, 2013 and the next toll revision is scheduled to be made on September 1, 2018.

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 Raththaya 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 latest toll revision was made on November 1, 2013. The next toll revision is scheduled to be made on November 1, 2018.

Despite EXAT's issuance of the Notifications of the Ministry of Transport for toll revisions 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 revised on September 1, 2013 and the toll rates for the Udon Rattaya Expressway were revised on November 1, 2013, 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.

## 2.1.4 Marketing and Competition

### 2.1.4.1 Customer Characteristics and Target Customers of the 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 on December 31, 2016, accounted for 98.02 percent, 1.74 percent and 0.24 percent, respectively. The traffic volume during January 1 to October 31, 2016 using the expressways may be described by areas as follows:

Expressway Systems	Average Traffic Volume (trips/day)	%
1. Chalem Mahanakorn Expressway (First Stage Expressway) <sup>(1)</sup> (Bang Na - Din Daeng - Dao Khanong)	367,756	20.72
2. Si Rat Expressway (Second Stage Expressway)		
2.1 Urban Network (Prachachuen - Phayathai - Bangkhlo - Asoke)	324,177	18.26
2.2 Suburban Network (Prachachuen - Chaeng Watthana and Asoke - Srinagarindra)	368,534	20.76
3. Udon Rattaya Expressway (Bang Pa-in - Pak Kret)	81,350	4.58
4. Chalong Rat Expressway (Ramindra - At Narong and Ramindra - Outer Ring Road) <sup>(1)</sup>	209,128	11.78
5. Burapha Withi Expressway (Bang Na - Chonburi) <sup>(1)</sup>	139,939	7.88
6. Kanjanapisek Expressway (Bang Pli - Suksawad) <sup>(1)</sup> and Highway No. 37 (Suksawad - Bang Khun Thien Section)	245,910	13.85
7. Si Rat - Outer Ring Road Expressway (opened for service on August 22, 2016)	38,128	2.15
<b>Total Traffic Volume</b>	<b>1,774,922</b>	<b>100</b>

Remark : <sup>(1)</sup> Source: EXAT. as at October 31, 2016



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.

#### **2.1.4.2 Marketing Policy and Strategies**

##### **Marketing Strategies**

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.

On August 22, 2016, the Company opened for service the Si Rat - Outer Ring Road Expressway, a route connecting between Bangkok - Thonburi sides, starting at the off-ramp from the Second Stage Expressway at Mo Chit (Chatuchak) and across the Chao Phraya River at the Rama VII Bridge, and 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). As such, such route enables motorists to conveniently and rapidly commute from and to Bangkok-Thonburi sides.

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 price factor.

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

##### **1) Expressway Route and Network for Service (Products)**

1. 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.
2. 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.
3. 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.

4. 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.
5. 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.
6. 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 and various public relations media to ensure that customers, as the expressway users, would travel more conveniently and rapidly.

## 2) Toll Rates (Price)

1. 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 investment of each project. Under the Second Stage Expressway Agreement, the Agreement for the Extension of Second Stage Expressway System (Sector D) and the Bang Pa-in - Pak Kret Expressway 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.
2. 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 Chalerms Mahanakorn Expressway around Bang Na), and Muang Thong Thani Toll Plaza of the Udon Rattaya Expressway, which the Company, together with EXAT, continued to provide discount which was extended until December 31, 2017.

## 3) Distribution Channels (Place)

1. Payment of Tolls
  - 1.1 Users of the Chalerms 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 Chalerms 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 the Electronic Toll Collection system (ETCS) or Easy Pass.
  - 1.2 Users of the Udon Rattaya 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

- 1.3 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.

## 2. 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 hour, as well as accommodating the increasing traffic volume in the future. Currently, there are Easy Pass users representing approximately 40 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 - Outer Ring Road Expressway Control Center, Pracharat Sai 1 Road, during the office hours from 9:00 - 17:00 hours (from April 2017 onwards).

To ensure more benefits of the Easy Pass users, the Company, in association with EXAT and the Department of Highways, improved the efficiency of the toll collection via the Electronic Toll Collection System by way of 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 Motorway Projects (Motorways) of the Department of Highways from November 1, 2016.

## 4) Sales Promotion and Public Relations (Promotion)

The Company provides 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 2016, the Company provided discount at the connection from the Chalong Rat Expressway to the Chalem Mahanakorn Expressway at At Narong 1 Toll Plaza only on the route to Bang Na, including the Udon Rattaya Expressway of one of its subsidiaries (NECL), which continued to provide discount 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, which demonstrated our positive image and relationship with motorists under the theme that we provide the best services to customers throughout the routes.

The Company, as a private company that provides the expressway services, responds to the government policy to promote the "No Phone While Driving", "No Drowsing Driving" and "No Drunk Driving" campaigns through the "Drive Safety" activities, as well as raising an awareness of energy concerns in traveling. The Company also implemented public relations to convince target customers of the convenient, rapid, economical and safe usage of the expressways; various quality services on the expressways; and various sales promotion of the Company, such as, special activities for lucky motorists, discount on tolls, connections between the expressways and various routes to facilitate motorists.

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 ([www.facebook.com/bangkokexpresswayandmetro](https://www.facebook.com/bangkokexpresswayandmetro)), including Si Rat 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.

#### **2.1.4.3 Industrial Outlook and Competition**

In 2016, despite the fact that Thailand's economic growth was slightly higher than that in the previous year, the automobile industry remained on a slowdown path, with the overall car sales for the first 11 months of 2016 at approximately 680,000 cars, a decrease representing 2.3 percent as compared with that in 2015 when there was an increase in car sales (*Komchadluek Newspaper, January 10, 2016 Issue*). This was due to the excise tax restructure in 2016, car prices were high. In spite of the decline in car sales, the total number of new vehicles registered in Bangkok increased from 1,000 vehicles to 1,200 vehicles per day, thereby bringing the cumulative number of registered vehicles to a total of approximately 10 million vehicles. As a result, traffic congestion problems in Bangkok become worse (*Komchadluek Newspaper, January 10, 2017 Issue*).

In 2016 and 2017, the traffic problems would be likely to intensify due to construction of new projects, not to mention the fact that no any new road and bridge crossing the Chao Phraya River which would help mitigate the traffic congestion. As such, in early 2017, the average car speed in Bangkok reduced to 12 kilometers per hour (*Prachachat Newspaper, January 9, 2017 Issue*), thereby resulting in cumulative traffic volume on the expressways as a whole.

According to the information of the Department of Land Transport, the total number of new vehicles registered in Bangkok at the end of 2016 was 399,479 vehicles, which increased from that of the previous year by 2.87 percent, thereby bringing the cumulative number of vehicles registered in Bangkok in 2016 to a total of 5,774,530 vehicles, higher than that of the previous year by 4.46 percent. When compared with the road space in Bangkok for a total distance of only 5,400 - 5,500 kilometers, the available capacity to accommodate the volume of vehicles in Bangkok is lower.

### **2.1.5 Procurement of Products and Services**

#### **2.1.5.1 Nature of Procurement of Products**

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 feasibility study and submitted its proposals for investment in projects with appropriate return 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 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.

#### **2.1.5.2 Environmental Impact**

The Company and its subsidiaries have been environmentally responsible in operating its expressway business, and will continue to adhere to the practices of the Company and its subsidiaries for the expressway business with the environmental responsibility 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 current operation of the expressway systems, the Company remained concerned about the quality of life of staff, motorists and communities surrounding the expressways. In addition, since 2008, the Company improved its internal procedures to conform to the environmental requirements to apply for the Certificate of ISO 14001 : 2004 Environmental Management System, and the Company eventually obtained such certification from SGS (Thailand) Limited on November 14, 2008, and continued to review for renewal of the certificate of such Environmental Management System, with the commitment to ensuring the environmental management in line with the following guidelines:

1. 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;
2. To instill and encourage our staff with an awareness of efficient use of energy and natural resources;
3. To comply with the environment-related laws and regulations;

4. To review the purposes and goals for continued improvement of the environmental management system;
5. To communicate our environmental policy to the public and all parties concerned.

In 2016, the Company continued to maintain the ISO 14001 : 2004 Environmental Management System, by following up possible environmental issues, as well as optimizing the use of natural resources through its continued energy management measures. In so doing, the Company did change to use more efficient lamps on the expressways and around toll plazas, as follows:

1. The existing high pressure sodium lamps were replaced by more efficient high pressure sodium lamps on the main road of the Si Rat Expressway, Sector D, and on- and off-ramps of the Si Rat Expressway and on- and off-ramps of the Udon Rattaya Expressway in the areas of Pak Kret and Srisaman, in addition to such replacement carried out on the Si Rat Expressway, Sectors A, B, and C, to ensure greater brightness and energy-saving up to 35 percent.
2. The existing high pressure floodlight lamps were replaced by LED lamps at the front and back areas of toll plazas, resulting in greater brightness than the existing lamps, which could help reduce energy up to 60 percent and minimize the dispersed light. In 2017, the Company will expand the lamp replacement to toll plazas in the Si Rat - Outer Ring Road Expressway.
3. The pilot project to replace the existing high pressure sodium lamps on the Udon Rattaya Expressway with LED lamps in the bridge areas of Chiang Rak to Bang Pa-in could help reduce energy up to 50 percent.
4. The pilot project to replace the existing high pressure sodium lamps on the on- and off- ramps of the Udon Rattaya Expressway in the areas of Bang Phun, Chiang Rak and Bang Pa-in could help energy up to 60 percent.

With respect to the 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 applied such study results as follows:

- (a) 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.
- (b) More Easy Pass lanes were added in response to the increased traffic volume in the Easy Pass lanes. After EXAT's policy on cancellation of the Easy Pass card deposit, the use of Easy Pass service has increased, which necessitates more Easy Pass lanes to accommodate the increased traffic volume, and as a result, motorists can save their commute time and fuels.
- (c) Easy Pass lanes at Asoke Toll Plaza 4, Prachachuen Toll Plazas (inbound) and (outbound), were relocated to the farthest right lane for motorists to more efficiently and rapidly access the Easy Pass lanes.
- (d) Traffic report and Easy Pass signboards were improved to provide suggestions to expressway motorists for convenient and rapid passage through the Easy Pass lanes.
- (e) 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.
- (f) As for the pilot project to enhance the efficiency of Easy Pass lanes, the Company installed the second antennas in Easy Pass lanes at Asoke Toll Plazas 3 and 4, Srinagarindra Toll Plaza, Prachachuen Toll Plaza (inbound), Prachachuen (outbound) and Rama 9-1 Toll Plaza.



In addition, the Company continued to provide training for staff and executives on know-how and techniques for environmental management in accordance with the ISO 14001 : 2004 Environmental Management System, as well as various activities to raise an awareness of environmental protection in the organization and social contributions in association with the communities nearby.

### 2.1.5.3 Insurance

Insurance Policy	Coverage Value	Coverage
Property Damage, Machinery Breakdown, Business Interruption	USD 500,000,000	Insured property : Assets used in business operations of the Si Rat Expressway Coverage period : January 1, 2016 - December 31, 2016
	USD 500,000,000	the Udon Ratthaya Expressway Coverage period : January 1, 2016 - December 31, 2016
	USD 500,000,000	the Si Rat - Outer Ring Road Expressway Coverage period : August 22, 2016 - August 21, 2017
Public Liability Insurance	Baht 500,000,000	Insured property : Assets used in business operations of the Si Rat Expressway Coverage period : January 1, 2016 - December 31, 2016
	Baht 500,000,000	the Udon Ratthaya Expressway Coverage period : January 1, 2016 - December 31, 2016
	Baht 500,000,000	the Si Rat - Outer Ring Road Expressway Coverage period : August 13, 2016 - August 21, 2017

### 2.1.6 Works Pending Delivery

- None -

## 2.2 Rail Business

### 2.2.1 Nature of Services

The Company has been granted concessions for two mass rapid transit rail system projects by MRTA, as per the following details:

#### 1) The MRT Chaloem Ratchamongkhon Line (Blue Line) (Hua Lamphong - Bang Sue) ("MRT Blue Line Project")

The Company has operated the MRT Blue Line Project from Hua Lamphong Station - Bang Sue Station, with the total distance of 20 kilometers, totaling 18 stations, in the nature of AOT (Acquire Operate Transfer) on a PPP Net Cost basis. 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 for a period of 25 years from July 2, 2004 to July 1, 2029. Under such Agreement, the Company is obliged to make payment of remuneration from fares and commercial development to MRTA

at the rates as mentioned in the Agreement. Currently, there are a total of 19 trains in service every day without holiday from 6.00 hours - 24.00 hours.

**2) The MRT Chalong Ratchadham Line (MRT Purple Line), Bang Yai-Rat Burana, Bang Yai-Bang Sue Section (Klong Bang Phai Station-Tao Poon Station) (“MRT Purple Line Project”), Contract 4**

The Company has operated the MRT Purple Line Project from Klong Bang Phai Station - Tao Poon Station, with the total distance of 22 kilometers, totaling 16 stations, in the nature of ATO (Acquire Transfer Operate) on a PPP Gross Cost basis. 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 repayment to the Company in the form of service fee for the O&M Services and the M&E Systems throughout the concession period of 30 years from September 4, 2013, the date of execution of the Agreement. Currently, the project was opened for service on August 6, 2016.

Projects	MRT Blue Line Project (Hua Lamphong Station - Bang Sue Station)	MRT Purple Line Project (Klong Bang Phai Station - Tao Poon Station)
<b>Concession Type</b>	PPP Net Cost	PPP Gross Cost
<b>Concession Period</b>	25 years (2004-2029)	30 years (2013-2043)
<b>Number of Stations</b>	18 stations (underground metro project throughout the route)	16 stations (elevated railway system throughout the route)
<b>Distance</b>	20 kilometers	22 kilometers
<b>Parking Buildings</b>	11 parking buildings and areas	4 parking buildings

## 2.2.2 Revenue

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

### 2.2.2.1 Fare box revenue

Pursuant to the Agreement for the MRT Blue Line Project between the Company and MRTA, the Company has the right to operate the train and collect fare box revenue and undertake commercial development for a period of 25 years from July 2, 2004. 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, 2016, which will remain in force until July 2, 2018.

### 2.2.2.2 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.

## 2.2.3 Marketing and Competition

### 2.2.3.1 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.

### 2.2.3.2 Marketing Policy and Strategies

#### (1) Service and Product Strategies

##### (1.1) Creativity and Development of Convenient Services for MRT Passengers

At present, the MRT route starts from Hua Lamphong Station and ends at Bang Sue Station, covering a total distance of 20 kilometers, passing through central business districts (CBD), residential areas and connecting with other mass rapid transit systems which may increase the number of passengers, e.g., connection with the Green Line (BTS) at Chatuchak Park Station, connection with Airport Rail Link at Phetchaburi Station heading for Suvarnabhumi Airport, new connection with the MRT Purple Line Project at Tao Poon Station in 2017, and connections with Hua Lamphong and Bang Sue Railway Stations. Other connections between the metro stations and four buildings currently include 1) Chamchuri Square (residential, office and edutainment complex) at Sam Yan Station; 2) Union Mall at Phahon Yothin Station; 3) Interchange 21 Tower (office building) and Terminal 21 Tower (shopping center, hotel, office and residential building) at Sukhumvit Station; and 4) Central Plaza Grand Rama 9 at Phra Rama 9 Station, with a new connection with G Tower which is under construction.

Traveling behavior of service users mostly accounts for work, followed by schools, and they usually travel during rush hour, while other purposes account for off-peak journeys with potential higher number of trips. The Company thus strategically increases the number of off-peak journeys, which can be handled by the currently available capacity, and promotes more journeys by passengers using the metro cards in order to increase revenues and the number of passengers. This strategy has been continuously implemented since 2013 in alliance with its partners along the routes by way of discounts or special benefits for metro card issuance or top-up, and information services by partners on highlighted events and destinations for the MRT passengers, e.g., Central Plaza Grand Rama 9, Queen Sirikit National Convention Center, Terminal 21, Esplanade, etc.



## (1.2) 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 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:

- (1.2.1) 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.
- (1.2.2) 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.
- (1.2.3) Fast : The Company keeps the average train speed aligned with the timetable in response to passengers’ needs during different periods.
- (1.2.4) Reliability : The Company maintains the trains and signaling systems in good conditions without any impact on its services.
- (1.2.5) Punctuality : The Company keeps the timetable and stop time at every station punctual with the least possible deviations.

## (1.3) 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 service. These arrangements comprise keeping styles of metro cards modern to ensure conformity with technology and increase in efficiency of metro cards, including common utilization of metro cards with the MRT Purple Line; cooperation with financial institutions in issuing co-branded cards for financial transactions and MRT services, namely, in alliance with KASIKORNBANK Public Company Limited and Siam Commercial Bank Public Company Limited, including Chulalongkorn University, Chulalongkorn Hospital, and other institutions or agencies.

## (2) Price Strategy

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.

## (3) Marketing Promotion Strategies

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:

- (3.1) 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.

- (3.2) To accept credit card payments for passengers' convenience, collaborate with leading companies and banks, e.g., AIS, KTC, KBANK, Muang Thai Smile Club, FWD, for providing discounts and cash back, including 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.
- (3.3) 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.
- (3.4) To create the Customer Relations Management (CRM) and build a network compatible with the CRM process, which will serve as a central mechanism for loyalty marketing, focusing on efficient and effective response to ensure customers' satisfaction and creation of the MRT Club community for relationship building using social network and communication channels in the MRT stations to offer special benefits, organize marketing activities and co-promotion in alliance with partners on the win-win strategy through MRT Club memberships.
- (3.5) 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:
  - Collaboration with AIS to provide discounts for the MRT service in the "Safe Journey with MRT" campaign.
  - Collaboration with K-Mobile Banking to provide Baht 30 discount to any MRT customers using K-Mobile Banking Application or K-Cyber Banking to purchase or top up metro cards with a minimum value of Baht 300.
  - Collaboration with KTC to use KTC reward points for metro card value top-up or issuance.
  - Collaboration with Major Cineplex Group, SF Cinema and GTH for special movie tickets or movie ticket discounts, and collaboration with Scenario for theatre tickets to MRT Club members or metro card purchasers.

#### (4) Marketing Communication Strategies

- (4.1) 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., posters, J-flags, standees, digital media, social network media to provide service users with journey information in the MRT system. In 2016, the Company emphasized development of mobile application titled Bangkok MRT Application to accommodate travelling plans of the passengers.
- (4.2) To publicize news and information to new customers at exhibition booths, organize activities to introduce customers as to how to use metro cards, replacement of old-style metro cards with new ones, and various privileges by focusing on punctuality, convenience, fast journey, family time-saving, and definite timetable, in order to attract new customer groups to try the service.
- (4.3) To create destinations via regular communication, public relations and journey information along the MRT routes, and post on the Company's website route maps with attractive destinations, e.g., office buildings, schools, hotels, shopping centers, tourist attractions

and other landmarks, as well as convenient and rapid links to other mass rapid transit systems, in the form of MRT Directory, which includes suggestions from partners or organizers for using the MRT services.

- (4.4) To assure people of the safety of the MRT system through television, radio and other media, and organize safety-related activities at various venues, e.g., schools, office buildings, to present the safety of the MRT system to people for their understanding and confidence in the services.

**(5) Development Strategy**

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.

**(6) Distribution Strategies and Channels**

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.

**2.2.3.3 Industrial Outlook and Competition**

**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, a major problem which is not different from the problem in other highly populated capital cities around the world. According to the traffic index report for 2016 prepared by a Netherlands-based map service company, Bangkok was ranked second among the world's top cities having worse traffic, behind Mexico. Thus, the government has a policy focusing on 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.

**(1) Personal Transport System**

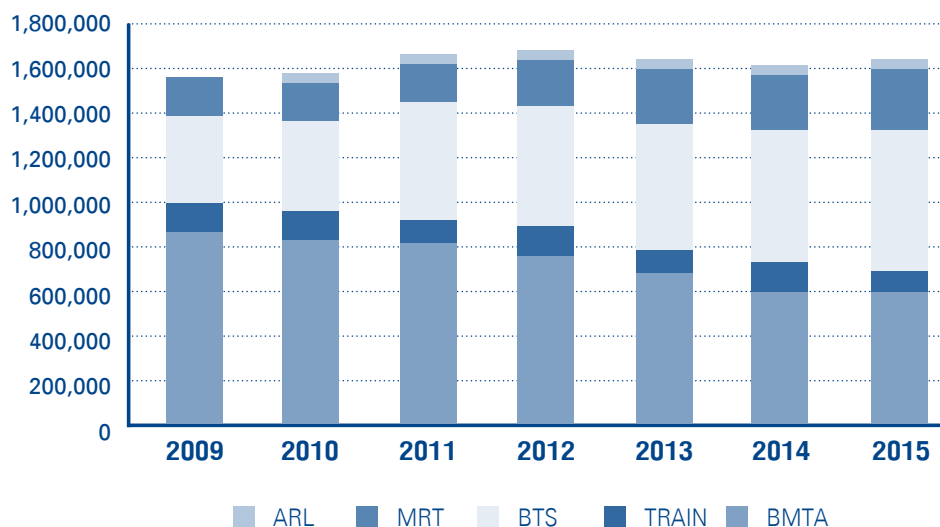
People's residences in Bangkok and its vicinity are spread all over, traveling by personal cars thus is popular. The growing number of highly-paid or middle-class people and the inadequacy of the existing transport systems, and travelling expenses as compared with that of travelling by personal cars,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

**(2) Public Transport System**

Based on the daily average passenger volume traveling by a variety of land transport systems, public bus service is the most popular choice, although the number of public bus service users is likely to continuously decrease; while the volume of passengers in the mass rapid transit rail system has substantially increased, resulting from traffic congestion, particularly in rush hour, and increased population in Bangkok and its vicinity, including the growth of real estate projects surrounding the metro routes, and as such, there is a growing demand for using the metro system accordingly.



Daily Average Passenger Volume



## 2.1 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, not to mention BMTA's increase in fare rates for public buses of all types at the price of Baht One each according to an increase in NGV cost, and let alone the fact that there are more than 5,000 passenger vans, as another popular alternative for commuters because of the convenience and rapidity in travelling. As a result of ongoing traffic congestion on roads, especially rush hours in the morning from 6:30 to 8:30 hours, and in the evening from 16:30 to 18:30 hours, traveling has become inefficient and time-consuming. In addition, passengers are also affected by safety issues and by pollution caused by the vehicle exhaust system. Owing to these negative factors, the volume of public bus users, i.e., BMTA passengers, in 2015 in Bangkok amounted to 614,695 persons per day, which declined from that of the previous year by 2.0 percent, with a tendency to steadily decline due to the increase in electric train service users.

## 2.2 Trains

In the past, the State Railway of Thailand (SRT) provided train service in Bangkok at a special low rate in order to serve low-paid people to travel from the outskirts of Bangkok to downtown. However, such system is rather inconvenient and unsafe in terms of train condition, non-air conditioning, limited routes which do not cover the entire city, and as a result, the growth rate of train service is considerably declining. Therefore, the SRT allocated budget for investment in dual track rail system development, totaling seven routes, two of which have been constructed, namely, Kaeng Koi - Khlong 19 - Chachoengsao Section; Jira Junction - Khon Kaen Section; and a project for supply of 115 new model passenger buses for service 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 as the Company's direct competitor due to different service routes, as the SRT aims to provide service to suburban areas.

## 2.3 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, has a total distance of 36.3 kilometers, with 34 stations. In December 2016, BTS Skytrain had the number of daily average passengers amounting to approximately 641,382 trips per day, an increase from that of the previous year by 2 percent. As such, traveling by BTS Skytrain was the convenient alternative for commuters. Moreover, BTS Skytrain is intended to provide service to the heart of the city so it is enormously popular. The extension of Silom Line, the growth of population, real estate development around the routes, and connection with the MRT system, all of which also caused an increase in service user volume.

## 2.4 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 systems, 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. In November 2016, the daily average passengers were 62,292 passengers per day, which increased from 2015 by 18.7 percent.

The transport systems which are considered the direct competitors are personal cars, public buses, micro buses, passenger vans and taxis. In the past, fare rates of the public transport services, especially normal or air-conditioned public buses and passenger vans, did not change much, due to the government's policy to freeze the fare prices by providing additional subsidies and the government's projects on train and public bus service for free, which have been operated since August 1, 2008 and renewed on many occasions. 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 usage of the national resources.

### Industrial Outlook and Government Policy

Thailand's economic outlook in 2016 grew at approximately 3.2 percent, which was improved from 2.9 percent in the previous year. In 2017, it is expected to grow in the range between 3.0 - 4.0 percent, significantly resulting from acceleration of disbursements and investments by the government sector, and the economic stimulus measures (*Source: Office of the National Economic and Social Development Board*).

The government prioritizes its strategic plans for transportation development, particularly investment projects in the metro system, to resolve traffic problems in Bangkok and its vicinity, and as such, speeds up the bidding process for these projects by establishing the Public Private Partnership (PPP) Policy Committee and setting up a PPP Fast Track team by focusing on infrastructure investments in accordance with Thailand's PPP Strategic Plan 2015-2019, which

covers five megaprojects for transportation infrastructure in the initial phase, worth Baht 3.4 Billion. The first three metro projects under the PPP Fast Track are the MRT Blue Line Extension, the MRT Pink Line and the MRT Yellow Line Projects (by resolutions of the Public Private Partnership (PPP) Policy Committee's meeting No. 6/2015). The Council of Ministers, on March 29, 2016, approved the implementation of the MRT Pink Line and the MRT Yellow Line Projects as the monorail system on a PPP Net Cost basis in the amounts of Baht 53,490 Million and Baht 51,810 Million, respectively, for the operation period of 30 years, in which the Mass Rapid Transit Authority of Thailand opened for the bidding process and had the selected bidding winner. Moreover, on July 21, 2016, the National Council for Peace and Order (NCPO) rendered the Order No. 42/2016 by virtue of the Power of the Head of NCPO under Section 44 (the Interim Constitution of the Kingdom of Thailand) expediting negotiation on selection of the private entity to manage the MRT Blue Line operation, Hua Lamphong - Bang Khae Section and Bang Sue - Tha Phra Section, together with train operation connection of one station between Bang Sue Station and Tao Poon Station, the results of which have been prepared for further submission to the Council of Ministers.

PPP Fast Track Projects (Phase 1)	Amount (Million Baht)
MRT Pink Line Project (Khae Rai – Min Buri)	53,490
MRT Blue Line Project (Extension) (Hua Lamphong – Bang Khae and Bang Sue – Tha Phra)	82,600
MRT Yellow Line (Lat Phrao – Samrong)	51,810
Intercity Motorway Project (Bang Pa-in – Nakhon Ratchasima)	84,600
Intercity Motorway Project (Bang Yai – Kanchanaburi)	55,620



With respect to the urgent transportation action plan for 2017 to mobilize Thailand's infrastructure investment, the total amount is worth more than Baht 895,757 Million, comprising many mega projects which are essential for the economic system, such as:

	Projects	Investment Amount (Million Baht)
Air Transport	Regional Airport Development, First Phase	7,686
Dual Track	Hua Hin - Prachuab Kirikan	10,240
	Pak Nam Pho - Den Chai	56,066
	Jira Junction - Ubon Ratchathani	35,840
	Khon Kaen - Nong Khai	26,066
	Chumpon - Surat Thani	23,385
	Surat Thani - Hat Yai - Songkhla	51,823
	Hat Yai - Padang Besar	7,942
	Den Chai - Chiang Mai	59,924
Railway Construction	Den Chai - Chiang Rai - Chiang Khong	76,979
	Ban Phai - Nakhon Phanom	60,352
Mass Rapid Transit	MRT Blue Line: Bang Khae - Phutthamonthon Sai 4	21,197
	MRT Green Line: Samutprakan - Bang Pu	12,146
	MRT Green Line: Khu Kot - Lam Lukka	9,803
	MRT Orange Line: Taling Chan - Thailand Cultural Centre	123,354
	Airport Rail Link: Don Mueang - Bang Sue - Phaya Thai	31,149
	SRT Dark Red Line: Rangsit - Thammasat University	7,597
	SRT Light Red Line: Taling Chan - Siriraj and Taling Chan - Salaya	19,042
	MRT Purple Line (South): Tao Poon - Rat Burana (Action Plan 2016)	131,004
Motorway	Nakhon Pathom - Cha-am	80,600
Maritime Transport	Laem Chabang Port Development, Phase 3	35,040

In respect of the government sector's policy, despite the government's policy to maintain such measures relating to free public bus and train services of the State Railway of Thailand and due to the growing traffic congestion, a greater number of people choose the metro service because it can help lower the costs of feeder systems to the metro service and open up more opportunity to use the metro service.

Sources : - Ministry of Transport

- <http://www.efinancethai.com/LastestNews/index.aspx?ref=A&id=YMjirWNguWE=&year=2015&month=11&lang=T>
- Office of the National Economic and Social Development Board

### Real estate development around the metro routes

In approaching 2016, the economic situation showed the steadily improved growth. That is, 2015 marked the year with a flourish for the real estate market after the government did implement the stimulus measures to support housing loans for low-income earners and reduce fees for housing transfer and mortgage. The commuting behaviors of residents in Bangkok did change to more use the metro system on a continuous basis. For that reason, their selection of residences in Bangkok becomes a factor in accelerating the real estate development to ensure the rapid growth, particularly real estate projects surrounding the metro routes. This is evidenced by opening of new real estate projects around the metro routes, with the unique selling point of convenient location next to the routes, and as a result, such projects will be popular among people and create value added to such land accordingly.

The fast growing real estate projects around the metro routes are due to many factors, including expansion of new large-scale office buildings, shopping centers, markets, most-visited tourist attractions, hotels, residential apartments, food shops or supermarkets. All these factors have supported the continued growth of the real estate, including the metro system with convenient, rapid and safe transport service.

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

Project	Current Status of Project
<b>SRT Dark Red Line (North - South)</b> Suburban railway system, divided into 4 phases, covering a total distance of 80.5 kilometers: <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	<b>Bang Sue - Rang Sit, with a distance of 26 kilometers</b> <ul style="list-style-type: none"><li>- SRT is proceeding with the following: <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. The construction was approximately 54.62% completed in December 2016; <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. The construction was approximately 80.05% completed in December 2016; <u>Contract 3:</u> M&amp;E System, including supply of carriages</li><li>- On January 18, 2016, SRT proposed to the Meeting of the State Enterprise Policy Office (SEPO) that it will operate this project by itself for the first five years.</li></ul>
<b>SRT Light Red Line (West - East)</b> SRT's suburban railway system, Bang Sue - Taling Chan, Bang Sue - Rangsit, Taling Chan - Salaya, and Bang Sue - Makkasan - Hua Mak, covering a total distance of approximately 48 kilometers	<b>Bang Sue - Taling Chan, with a distance of 15 kilometers</b> <ul style="list-style-type: none"><li>- SRT engaged Unique - Chun Wo Joint Venture to carry out the construction. The construction is 100% completed.</li><li>- The project was opened for trial run during September 8 to November 30, 2012 for four trips per day (round trip) by diesel railcars in order to inspect the rail condition and systems relating to train operation.</li><li>- It was opened for temporary service from December 5, 2012.</li></ul>

Project	Current Status of Project
	<p><b>Bang Sue - Phaya Thai - Makkasan - Hua Mak, with a distance of 19 kilometers</b></p> <ul style="list-style-type: none"> <li>- On October 21, 2014, the Council of Ministers resolved to approve the project, and it is expected that the bidding process for contractor will start in 2017.</li> </ul>
MRT Blue Line Extension	<p><b>Bang Sue - Tha Phra and Hua Lamphong - Bang Khae, with a distance of 27 kilometers</b></p> <ul style="list-style-type: none"> <li>- The construction of the civil work by the contractor progressed approximately 87.97%, (in December 2016).</li> <li>- On December 2, 2014, the Committee under Section 13 requested BMCL to propose its technical plan to ensure connected transport for the greatest convenience of passengers.</li> <li>- On November 11, 2015, the Public Private Partnership (PPP) Policy Committee resolved to grant approval for the project to be incorporated in the PPP Fast Track measures, the first phase, so as to expedite the process.</li> <li>- On July 21, 2016, the National Council for Peace and Order (NCPO) rendered the Order No. 42/2016 by virtue of the Power of the Head of NCPO under Section 44 (the Interim Constitution of the Kingdom of Thailand) expediting negotiation on selection of the private entity to manage the train operation.</li> </ul> <p><b>Bang Khae - Phutthamonthon Sai 4 (with a distance of 8 kilometers)</b></p> <ul style="list-style-type: none"> <li>- It has been prepared for submission to the Council of Ministers for consideration. It is expected to commence construction by 2017.</li> </ul>
MRT Green Line	<p><b>Mo Chit - Saphan Mai - Khu Kot, with a distance of 18.4 kilometers</b></p> <ul style="list-style-type: none"> <li>- The construction of the civil works by the contractor progressed approximately 17.38% (in December 2016).</li> <li>- MRTA executed the civil work contracts, Contracts 1-4, on April 3, 2015, as follows:  <u>Contract 1:</u> (Civil Works), Mo Chit - Saphan Mai, with a distance of 12 kilometers, operated by Italian-Thai Development Public Company Limited;  <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);  <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> </ul>



Project	Current Status of Project
	<p><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.).</p> <p><b>Bearing - Samut Prakan, with a distance of 12.8 kilometers</b></p> <ul style="list-style-type: none"> <li>- The construction of the civil works by the contractor progressed approximately 99.68% (in December 2016).</li> <li>- Contract 1: Elevated Structure and Contract 2: Trackwork operated by CH. Karnchang Public Company Limited.</li> <li>- It is pending the negotiation with BTSC as train operation contractor to ensure the uninterrupted commute. It is expected to open for service in 2017.</li> </ul>
MRT Orange Line	<p><b>Thailand Cultural Centre - Min Buri, with a distance of 20 kilometers</b></p> <ul style="list-style-type: none"> <li>- On July 15, 2016, MRTA commenced sale of bidding envelopes for the MRT Orange Line in respect of civil works for all six contracts, with the scheduled bid submission on October 31, 2016.</li> <li>- On December 9, 2016, the MRTA's meeting considered the results of the tender evaluation in Contracts 1, 2, 3, 4 and 6, and the winning bidders were as follows: <ul style="list-style-type: none"> <li><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);</li> <li><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);</li> <li><u>Contract 3:</u> (Civil Work), Hua Mak - Khlong Banma, operated by Italian-Thai Development Public Company Limited;</li> <li><u>Contract 4:</u> (Civil Work), Si Yaek Banma - Suwinthawong, operated by Unique Engineering and Construction Public Company Limited;</li> <li><u>Contract 6:</u> Design and Construction of Trackwork, operated by Unique Engineering and Construction Public Company Limited.</li> </ul> </li> <li>- On December 16, 2016, the MRTA's meeting considered the results of the tender evaluation in Contract 5: Depot and Park &amp; Ride Facilities, the winning bidder of which was CKST Joint Venture (CH. Karnchang Public Company Limited and Sino-Thai Engineering &amp; Construction Public Company Limited).</li> </ul>

Project	Current Status of Project
	<p><b>Taling Chan - Thailand Cultural Centre, with a distance of 17.5 kilometers</b></p> <ul style="list-style-type: none"> <li>- The Meeting of the Office of the Commission for Management of Land Traffic (OCMLT) resolved to use the existing route in construction of Thailand Cultural Centre - Taling Chan Section, which has passed the environmental impact analysis (EIA) study.</li> </ul>
MRT Yellow Line	<p><b>Ladprao - Samrong, with a distance of 30.4 kilometers</b></p> <ul style="list-style-type: none"> <li>- On November 11, 2015, the Public Private Partnership (PPP) Policy Committee resolved to grant approval for the project to be incorporated in the PPP Fast Track measures, the first phase, so as to expedite the Council of Ministers' consideration, and the bidding process started in 2016.</li> <li>- On July 6, 2016, MRTA commenced sale of bidding envelopes for the MRT Yellow Line, with the scheduled bid submission on November 7, 2016 and opening on November 17, 2016.</li> <li>- On December 6, 2016, the Selection Committee under Section 35 assessed the tender documents in respect of investment and returns, the results of which could be summarized that 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, offered the lowest price and passed the assessment, and then reached the negotiation process.</li> </ul>
MRT Pink Line	<p><b>Khae Rai - Min Buri, with a distance of 34.5 kilometers</b></p> <ul style="list-style-type: none"> <li>- On November 11, 2015, the Public Private Partnership (PPP) Policy Committee resolved to grant approval for the project to be incorporated in the PPP Fast Track measures, the first phase, so as to expedite the Council of Ministers' consideration, and the bidding process started in 2016.</li> <li>- On July 6, 2016, MRTA commenced sale of bidding envelopes for the MRT Pink Line, with the scheduled bid submission on November 7, 2016 and opening on November 17, 2016.</li> <li>- On December 6, 2016, the Selection Committee under Section 35 assessed the tender documents in respect of investment and returns, the results of which could be summarized that 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, offered the lowest price and passed the assessment, and then reached the negotiation process.</li> </ul>

Project	Current Status of Project
Red Line (Airport Link)	<p>The Suvarnabhumi Airport Rail Link Extension, Don Mueang - Bang Sue - Phaya Thai with a distance of 21.8 kilometers.</p> <ul style="list-style-type: none"> <li>- On December 25, 2015, the Council of Ministers resolved to approve the royal decree on land expropriation in Ratchathewi District, Thung Phaya Thai Subdistrict, and Sam Sen Nai Subdistrict, for implementation of the Suvarnabhumi Airport Rail Link Extension, Don Mueang - Bang Sue - Phaya Thai, which has passed the environmental impact analysis (EIA) study.</li> <li>- SRT is pending modification of detailed design to ensure train operation and management to enable it to enter Hua Lamphong Station. It is expected that the bidding process will start in 2017.</li> </ul>

Sources : [www.railway.co.th](http://www.railway.co.th), [www.mrta-purpleline.com](http://www.mrta-purpleline.com), [www.bts.co.th](http://www.bts.co.th), [www.bkkmrt.com](http://www.bkkmrt.com), and other sources collected.

## 2.2.4 Procurement of Products or Services

### 2.2.4.1 Nature of Procurement of Products

The mass rapid transit system projects are awarded to the Company by 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 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 MRT Chaloem Ratchamongkhon Line (Blue Line) (Hua Lamphong Station - Bang Sue Station)

The Company engaged Joint Venture CKET as the project manager for the MRT project (Project Manager) (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 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 contractor for maintaining the M&E Equipment for a period of 10 years (July 2004 to July 2014), which was extended for another 10 years (to end in July 2024).



### **The MRT Chalong Ratchadham Line (MRT Purple Line), Bang Yai - Rat Burana, Bang Yai - Bang Sue Section, (Khlong 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, (Khlong 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 supply of rolling stocks, power supply equipment, signaling system, control and communications systems, as well as maintenance service for a period of 10 years.

#### **2.2.4.2 Environmental Impact**

In respect of the metro business, the Company is committed to continuing its environment-related activities in accordance with ISO 14000 standards, by implementing pollution prevention and control measures, mitigation 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 energy conservation and environmental preservation in the metro business, the Company has strictly complied with the relevant laws governing energy conservation and the environment, and also adopted the Energy Management Systems - Requirements with guidance for use or ISO 50001. It has complied with the International Environmental Management System ISO 14001 since the opening of its MRT service, and organized activities for participation by and listening to stakeholders' opinions, to ensure proper understanding which will lead to sustainable development. It was for this reason that the Company received the standard management certifications as follows:

- 1) ISO 9001:2008 Quality Management System;
- 2) ISO 14001:2004 Environmental Management System;
- 3) OHSAS 18001:2007 and TIS 18001:2001 Occupational Health and Safety Management Systems;
- 4) Safety Management System from Lloyd's Register Rail.

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 that may arise during the implementation of both MRT Projects (Environmental Impact Mitigation Measures and Monitoring Program - EMP) in service, namely, the MRT Chaloem Ratchamongkhon Line and the MRT Chalong Ratchadham Line, as well as submitting reports on its compliance with such measures to the

Office of Natural Resources and Environmental Policy and Planning (ONEP) for consideration twice a year. The environmental quality measurements were conducted in key environmental issues as follows:

**(1) Air Quality**

The results of air quality measurement in atmosphere around the projects showed that the total suspended particulate (TSP), particulate matter (PM<sub>10</sub>) and carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), 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 dBA, with the maximum level not exceeding 115 dBA, 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.

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.

#### 2.2.4.3 Insurance

The Company took out insurance with local insurance companies against potential damage as appropriate to the Company's metro business, as follows:

Insurance Policy	Coverage Value	Coverage
Industrial All Risks Insurance (Administration Building)	Sum insured: Baht 366,700,000	Insured property: Administration building and canteen as well as the fenced location  Coverage period: June 1, 2016 - June 1, 2017
Public Liability Insurance (Administration Building)	Limited liability: Baht 10,000,000 per accident and throughout the coverage period	Insured property: Administration building and canteen as well as the fenced location  Coverage period: June 1, 2016 - June 1, 2017

Insurance Policy	Coverage Value	Coverage
Property All Risks Insurance (BL - Depot & Stations)	Sum insured: USD 350,000,000 for total damages per occurrence	Insured property: Depot and stations along the routes Coverage period: July 3, 2016 - July 3, 2017
Public Liability Insurance (BL - Depot & Stations)	Limited liability: USD 30,000,000	Insured property: Depot and stations along the routes Coverage period: July 3, 2016 - July 3, 2017
Terrorism Insurance (BL)	Limited liability: USD 10,000,000	Insured property: Administrative building, depot, stations, tunnel and assets within buildings and tunnels, trackwork, rolling stocks and other assets of the underground metro system, including business interruption Coverage period: July 3, 2016 - July 3, 2017
Property All Risks Insurance (PPL - Depot & Stations)	Sum insured: USD 350,000,000 for total damages per occurrence	Insured property: Depot and stations along the routes Coverage period: May 1, 2016 - May 1, 2017
Public Liability Insurance (PPL - Depot & Stations)	Limited liability: USD 30,000,000	Insured property: Depot and stations along the routes Coverage period: May 1, 2016 - May 1, 2017
Terrorism Insurance (PPL)	Limited liability: USD 10,000,000	Insured property: Administrative building, depot, stations, tunnel and assets within buildings and tunnels, trackwork, rolling stocks and other assets of the underground metro system, including business interruption Coverage period: May 1, 2016 - May 1, 2017

## 2.2.5 Works Pending Delivery

- None -



## 2.3 Commercial Development Business

### 2.3.1 Nature of Services

#### Commercial Development Relating to Expressway Systems

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 lease of spaces for commercial operation, as follows:

1. 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.

2. Retail Spaces around Toll Plazas

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

3. Other Business Operations

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

#### Commercial Development Relating to Metro System

In regard to commercial development revenue from the MRT Blue Line Project, the Company has operated and granted the following rights to its subsidiary, namely, BMN:

1. Procurement and/or Production of Advertising Boards

Procurement and/or production of advertising boards or media in all 18 stations and for all 19 trains (MRT metro), comprising advertising media of various forms and sizes, e.g., light boxes, sticker media, platform billboard, advertising media via the Passenger Information Display Systems (PIDs), and digital media. Moreover, a wide range of media has been developed and creative thinking, innovation and new technology have been employed to ensure conformity with change in passengers' commuting behaviors as well as creating lively travelling and beautiful environment within the MRT stations.

2. Lease of Retail Spaces in MRT Stations

Lease of retail spaces in 11 MRT stations, comprising Khlong Toei Station, Queen Sirikit National Convention Centre Station, Sukhumvit Station, Phetchaburi Station, Phra Ram 9 Station, Thailand Cultural Centre Station, Ratchadaphisek Station, Lat Phrao Station, Phahon Yothin Station, Chatuchak Park Station and Kamphaeng Phet Station, and spaces in the basement level of the Lat Phrao park and ride facility, covering the total commercial lease spaces of approximately 19,490 square meters (spaces for retail shops and sale promotions). To date, the retail shops are opened in six stations, namely, Sukhumvit Station, Phahon Yothin Station, Chatuchak Park Station, Kamphaeng Phet Station, Phra Ram 9 Station and Khlong Toei Station, as a passport office for providing passport service to the public, through cooperation with the Department of Consular Affairs, Ministry of Foreign Affairs, which was opened for service on December 9, 2016. Furthermore, in quarters 1/2017 and 4/2017, another two stations, namely, Thailand Cultural Centre Station and Phetchaburi Station, will be opened for such passport service, respectively, as planned.

3. Provision of Service and Maintenance of Telecommunications System Equipment

Provision of service and maintenance of telecommunications system equipment, particularly mobile phone network, inside the metro stations and tunnels, as well as Hi-speed Internet, the Wi-Fi services, and the telecommunications signal systems in the metro stations and tunnels. Currently, the telecommunications network service is also available covering the 850, 900, 1800 and 2100 MHz frequency bands.

## 2.3.2 Marketing and Competition

### 2.3.2.1 Customer Characteristics and Target Customers

As the commercial development in the MRT Blue Line Project comprises procurement and/or production of advertising media of various forms in the metro stations and trains, lease of retail spaces, as well as providing service and maintenance of telecommunications system equipment, with different customer characteristics and target customers varying on service types, therefore, such commercial development can separate customer characteristics and target customers, as follows:

#### 1. Procurement and/or Production of Advertising Media of Various Forms

Procurement and/or production of advertising media of various forms serve to communicate information from owners of goods and services to the public, among whom the MRT service users, mainly comprise school and college students as well as office staff. In the public relations and advertising via various forms of media of the MRT system, the business sector that mostly spend budgets for public relations in the advertising industry business include not only consumer goods and commodities, telecommunications, financial institutions, etc., but also those businesses along the MRT routes, such as, real estate, insurance and life insurance, construction industry, etc., including other goods relying on the prominent locations of the metro stations near shopping malls, universities, to publicize goods and services to such specific target groups as movies, clothing and jewelry, tourism, etc.

#### 2. Lease of Retail Spaces in MRT Stations

Target customers are different in each station which is opened for service to match with the services users' behaviors. Therefore, the current customers who take on lease of areas diversify, including SME entrepreneurs, up to major brand products with branch expansion in parallel to opening for service of new shop areas in the stations. Moreover, the Company jointly supported and promoted provision of the government sector's services to the public, by opening a passport office center in response to metro service users' lifestyle.

#### 3. Provision of Service and Maintenance of Telecommunications System Equipment

The customer characteristics in this group are mobile phone network operators, therefore, target customers are those licensed mobile phone network operators comprising AIS, DTAC, TRUE MOVE, TOT, CAT, etc., all of which are currently the Company's customers.

As for the commercial development in the expressway systems, private entities and individuals are allowed to take on lease of spaces for various business operations, therefore, target customers are operators of such businesses, such as, advertising media producers, telecommunications system service providers, and individual customers' retail shops.

### 2.3.2.2 Marketing Policy and Strategies

#### (1) Service and Product Strategies

##### Commercial Development Relating to Expressway Systems

- 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, totaling 292 signboards.
- Shops and public restrooms are provided to expressway users in 4 toll plazas of the Si Rat Expressway and the Udon Raththaya 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

The commercial development service is provided for facilitating and ensuring pleasant journeys for MRT service users, including people living in the areas adjacent to the MRT stations, and such commercial development service generates more revenue, as follows:

- Retail areas covering more than 25,000 square meters (including common areas), with retail shops and activity areas for almost 500 shops in 11 MRT stations, and at present, there are six MRT stations with retail areas in service, comprising Sukhumvit Station, Phahon Yothin Station, Chatuchak Park Station, Kamphaeng Phet Station, Phra Ram 9 Station, and Khlong Toei Station, and Thailand Cultural Centre Station with trial (partial) service.
- Static media in various forms, light boxes and stickers, installed on walls of MRT stations from exit- and entrance-areas of stations up to platform floors and other areas, such as, columns, floors, ceilings, passenger elevators, etc., and in trains. Moreover, development of creative thinking has been made with owners of goods and services or media buying agents to design public relations advertising of customers to ensure dimensions and be more attractive by using 3D-4D, Big Campaign (Integrated Media), innovations and state-of-the-art technology, etc., the advertising media in the MRT system can then respond to the customers' requirements and ensure their good memories.
- Advertising media on hand grips in trains, benches on platform floors, escalator handrails.
- Dynamic media in form of digital display comprises Passenger Information Displays (PID) installed from exit- and entrance-areas of the stations up to platform floors and in trains, totaling 607 displays, and MRT-Digital media in different sizes depending on area of each station, and installed in tunnels, totaling 112 positions.
- Communication service, especially mobile phone network in both MRT stations and tunnels, to accommodate 3G-4G signals as currently available covering the 850, 900, 1800 and 2100 MHz frequency bands.
- Automatic Teller Machine (ATM) service, Cash Deposit Machine of banks, and other automatic machines, such as, mobile top-up vending machines of AIS Kiosk, True Kiosk, and mobile top-up vending machine of Boon-term Kiosk, etc.
- Currency exchange booth of Siam Commercial Bank at Phra Ram 9 Station, connection with Central Plaza Grand Rama 9.

### **(2) Marketing Promotion Strategies**

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, for example, collaborations with alliances and the commercial development licensee (BMN) in organizing GAT Guideline Program by Khun Kru Somsri, under the "Getting Fit Beat GAT by MRT" Project since 2009, promoting the use of spaces and retail shops in Metro Nine at Phra Ram 9 Station, and "Cheewajit" Magazine in promoting various exercises, such as yoga, long-stick danced exercise, etc. In addition, the "M Care" activity was organized for free health checkups for passengers by leading hospitals and institutes, as well as the "Share 2 Child" activity for youths and schools surrounding the Company's MRT routes on a continuous basis. Furthermore, the Company, together with BMN, organized a variety of activities, e.g., educational support activities at the MRT Purple Line depot, etc.



### (3) Distribution Strategies and Channels

Distribution channels vary by the forms of commercial development services, mainly by mixed presentation via the Company's strategic partners together with direct presentation to owners of goods and services.

#### 2.3.2.3 Industrial Outlook and Competition

##### Advertising Media

Spending budget for buying the advertising media in the first nine months of 2016 was lower than that of the previous year by five percent due to the reduction of budget in main media in forms of Analog TV, Cable & Satellite TV, and newspapers, including magazines, resulting from changes in consumers' behaviors and technology at present time. In this regard, the top three highest growing media as compared with that in the same period of the previous year comprised Internet, outdoor media and mobile media at the growth rates of 73.64 percent, 34.17 percent and 17.76 percent, respectively<sup>1</sup>. This was due to the fact that they were advertising media easily accessible by consumers and in line with urban people's lifestyle.

In 2016, mobile media had the higher growth rate as compared with the previous year. Even if such higher growth was partially due to an increase in change in database of mobile media, such media was considered popular, which was likely to continuously grow because such media could be easily accessible by consumers. The mobile media group had difference in target group, route and number of service users, for example, MRT media, BTS media, airport media and public bus media, etc., therefore, the budget for purchase of media in each category varied according to objectives of owners of goods and services. Currently, passengers of the mass rapid transit system in form of electric train system continued to grow, including MRT passengers. Furthermore, the government sector set out policy to promote and support travelling by the electric train system, which the project opened for service was the MRT Purple Line, let alone the MRT Blue Line Extension which will connect with the current routes in the future, thereby resulting in growing volume of MRT passengers, which would have a positive impact on the advertising media service in the future.

Source : <sup>1</sup> Advertising Association of Thailand (AAT)

##### Space for Lease and Service

An increase in new retail space was mostly due to community mall projects; opening for service of large shopping centers which gave rise to higher competition in the business of space for lease and service, particularly in the central retail district and in huge department stores, at the rental rate higher than Baht 3,500 per square meter per month, and the space leasing rate of approximately 97 percent. In this regard, the rental rate would be likely to continue to high. Currently, consumers give importance to food and beverage services, entertainment and new experiences; therefore, the lessee group which has an interest in prominent landmarks is food and beverage (F&B) group, in which the shopping center developers have renovated space to ensure mixture between retail space and entertain activities. Furthermore, given change in consumers' behaviors to on-line shopping, available goods and services of certain kinds were affected and the space rental rate would be reduced accordingly. However, the retail space in MRT stations adjacent to the central retail district, department stores and connected points of the mass rapid transit system, remained attractive to both SME and Brand entrepreneurs, at the space leasing rate more than 90 percent, such as, retail space at Sukhumvit Station, Phra Ram 9 Station, Chatuchak Park Station, etc.

## 2.3.3 Procurement of Products and Services

### 2.3.3.1 Nature of Procurement of Products

The Company and one of its subsidiaries (BMN) operate the commercial development business of the MRT Blue Line Project for 1) procurement and/or production of advertising media of various forms; 2) lease of retail spaces in the MRT stations; and 3) provision of service and maintenance of telecommunications system equipment.

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 spaces around toll plazas, and other business activities, such as, the use of the expressway areas for installation of 3G signal boosters, etc.

### 2.3.3.2 Environmental Impact

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 2.2.4.2.

### 2.3.3.3 Insurance

Insurance Policy	Coverage Value	Coverage
Property All Risks Insurance (Retail Areas)	<u>First portion</u> of sum insured: Baht 393,339,259; <u>Second portion</u> of sum insured: Baht 552,703,593	<u>First portion</u> : All risks property; <u>Second portion</u> : Business interruption <u>Insured property</u> : Commercial development areas in MRT stations  Coverage period: 1 year July 3, 2016 - July 3, 2017
Public Liability (Retail Areas)	Limited liability: Baht 40,000,000	Insured property: Commercial development areas in MRT stations  Coverage period: 1 year July 3, 2016 - July 3, 2017

### 2.3.3.4 Works 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 and a risk management handbook as guidelines in the operations, and regularly monitor, evaluate and review risks 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 planning to achieve the specified objectives, goals, missions and vision of the Company.
3. To carry out a proactive risk management to manage risks which may result in the Company's loss of interests and opportunities.
4. To delegate a risk management as staff's responsibility at all levels and manage risks within their work units and the organization to contain risks at 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 to at 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 the 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**

Given that the Company operates its businesses under the relevant Concession Agreements subject to the supervision of the government agencies, namely, MRTA and EXAT, differences in the contractual parties' interpretations on terms and conditions of the Concession Agreement may arise in various matters, such as, revisions of toll or 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.

In addition, 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 tolls under the Second Stage Expressway Agreement, which its term of 30 years will end 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 political uncertainty or changes in government policies may affect the consideration to renew the Agreement. In such case, if the Company is not granted approval for renewal of the Agreement, the Company will lose such toll revenue. To minimize such risk, the Company has already submitted an application for renewal of the Second Stage Expressway Agreement, which is currently pending the consideration of EXAT.

In addition, the Company will establish a joint operation system with the government agencies both at 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. The Company will review the strategies and operation plans to be reasonably suitable to the situations and for their mutual interest in the long run.

#### **3.1.2 Risk Relating to Revenues less than Projections**

As 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. In addition, the Company generates commercial development revenue, which may vary depending upon 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 financial obligations, such as, interest expenses, scheduled repayment of loans, operating expenses under the Agreements, as well as compensation for expressway site acquisition cost or remuneration payable to MRTA, etc.

To minimize such risk, the Company will establish a unit to closely monitor any impact which may affect the initial factors, and formulate appropriate strategies. In addition, the Company can limit potential impacts from risk factors, such as, oil prices, road traffic congestion, 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 billboards, and digital media, including its plans to develop more retail space.

### **3.1.3 Risks from Interest Rate and Foreign Exchange Rate Fluctuations**

Given that the Company remains obliged to service interest-bearing liabilities to lenders, and plans for future investment in several 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 fact that the interest cost in respect of the certain credit facility was at the floating interest rate, thereby exposing the Company to a risk from interest rate fluctuation or increase in the money market. However, the Company will manage 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 2016, the Company issued the debentures in the total amount of Baht 23,200 Million, with a maturity of 3-12 years, at the fixed interest rate, in order to arrange for the loan structure to ensure appropriate proportion of loans at fixed interest rate and loans at floating interest rates, and to minimize risk from interest rate fluctuation.

In addition, the Company will incur expenses in foreign currencies for purchase of metro equipment from overseas, maintenance cost of the M&E Equipment, and insurance premiums. Thus, should the Baht value depreciate, the Company's expenses will increase accordingly. However, the proportion of the expenses in foreign currencies is low. Moreover, the Company will set up a policy to minimize risk from 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, namely, peril, serious accident, earthquake and such events which may be caused by terrorism or sabotage as bombing and riot, including gathering of activities for inciting public unrest, which may cause the Company to suspend its services and lose its revenues. For this reason, the Company has set forth emergency plans in response to any events which may suddenly occur, for example, removal of various significant and essential M&E equipment in the management of the expressways for storage at the safe place, and arranges for staff training to ensure that the staff in charge will be able to immediately take actions to resolve such emergency, for instance, emergency drills of all relevant units inside and outside the Company by 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.

The Company has taken out insurance against property all risks, business interruption, public liability, and terrorism in respect of 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 is thus expedited to expand the metro network and the connecting system to other transportation systems. Therefore, it is highly possible that there will be governmental organizations or private agencies operating the mass rapid transit system business which requires an increase in personnel having knowledge, expertise and skills in the rail business. As a result, it is likely that the Company's main personnel will be enticed away from the Company.

The risk from shortage of competent personnel is considered one of the Company's main risks, as they are 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 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; review and revisions of the operation process and work system to ensure readiness at all times, as well as preparation of succession plan and establishment 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 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 from Delayed Construction and Operation of the Projects**

The Company has accepted the transfer of the Concession Agreements of BECL and BMCL, namely, the Concession Agreement for Investment, Design, Construction, Operation, Service and Maintenance of the Si Rat - Outer Ring Road Expressway Project, and the MRT Purple Line Project, Bang Yai - Tao Poon Section (Khlong Bang Phai Station - Tao Poon Station), Contract 4: Concession for Supply of M&E Systems and O&M Services.

As the Company is obliged to comply with the provisions of the Concession Agreements, which will specify the construction period and value, therefore, in case the construction is delayed and not completed according to schedule, or should in the future the actual value of the M&E equipment, metro system, or other construction costs be different from that specified in the relevant Agreements, the Company is exposed to a risk from cost overrun.

In this regard, the risks relating to the MRT Purple Line Project, Bang Yai - Tao Poon Section (Khlong Bang Phai Station - Tao Poon Station) and the Si Rat - Outer Ring Road Expressway Project no longer exist, because the Company completed the construction and opened for service such projects on August 6, 2016 and August 22, 2016, respectively.

## **3.2 Corporate Specific Risk**

### **3.2.1 Risk from Legal Disputes**

The Company and NECL have a total of 11 disputes with EXAT on 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, divided into the disputes that the Company and NECL referred to the dispute settlement proceedings under the Agreements and demanded for damages with the total amount until the date of submission of the disputes of approximately Baht 28,179.8 Million; and the disputes that EXAT submitted claims for damages with the total amount until the date of submission of the disputes of approximately Baht 1,589.2 Million.

Most of the major claims for high value damages are made by the Company from EXAT. Therefore, the decision should not materially have any negative risk towards the Company's operational results.

### **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 should the operational results of such companies whose shares were held by the Company 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, which would enable the Company to participate in setting out policies and monitor the operations of the invested companies.

### **3.2.3 Risks Relating to Fluctuation of Cost of Rail Business**

Costs of rail business comprise cost of fare and cost of train service, which are deemed the main expenditure of the Company's business operations, comprising repair 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 cost of fare box vary according to the aforesaid costs. However, in the past, the Company was able to effectively control its cost of fare box. Besides, the cost of fare box 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 MRT Purple Line Concession Agreement, 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 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 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 staff 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 both the Si Rat Expressway and the Udon Raththaya 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. With respect 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 standby power system and the management of purchase of spare materials.

Moreover, the Company may be exposed to the risk from non-functional toll collection system equipment which may arise by various causes, such as, non-functional electrical system due to power outage from the Metropolitan Electricity Authority, error processing by the operating system or computer virus infection in the system which destroys data in the operating system, including data and information hacks, thereby causing damage to the system, etc. In this regard, the Company gives high priority to such risk management by arranging for power backup system, security system for access to significant systems by third parties, determination of authorization levels of access to information and equipment, and installation of virus scan software and data backup system in the operating system to ensure instant substitution.



### 3.2.5 Risks 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 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.

According to a study of information from members in the international federations of public transport operators, e.g., UITP, APTA, NOVA Group of Metros, as well as advice from Lloyd's Register Rail, the Company's highly experienced consultant, it is possible to select and procure M&E Equipment from other manufacturers which will be compatible with its existing system. In this regard, the Company has a policy to develop the quality of its personnel to have sufficient capabilities in working with local and overseas equipment manufacturers and contractors in the maintenance and repair of the M&E Equipment and the rail system to improve its efficiency without reliance on the sole existing manufacturer.

## 4. Property Used in Business Operations

### 4.1 Main Assets

As at December 31, 2016, the Company and its subsidiaries had main assets used in business operations, per the following details:

(Unit: Million Baht)

Class of Assets	Net Book Value as at December 31, 2016
1. Building and equipment	341
2. Rights to operate completed expressway sectors	41,552
3. Rights to use sites for expressway construction	1,021
4. Intangible assets under the Concession Agreement for the MRT Chaloem Ratchamongkhon Line	16,960
<b>Main Assets</b>	<b>59,874</b>

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

#### 4.1.1 Building and Equipment

As at December 31, 2016, the book value of the building and equipment as per the consolidated financial statements of the Company and its subsidiaries were as follows:

(Unit: Million Baht)

Company	Net Book Value as at December 31, 2016	Ownership	Encumbrance
The Company	284	Owner*	None
NECL	40	Owner**	None
BMN	17	Owner	None
<b>Total</b>	<b>341</b>		

- Remarks:
- \* This refers to 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 lease of a building for use as its head office located at No. 587 Sutthisarnvinitchai Road, Dindaeng Subdistrict, Dindaeng District, Bangkok 10400. The lease is on a year by year basis at the rental rate of Baht 10,000 per month.
  - \*\* NECL does not own any property, plant and equipment, but takes on lease of a building for use as its head office located at No. 587 Sutthisarnvinitchai Road, Dindaeng Subdistrict, Dindaeng District, Bangkok 10400. The lease is on a year by year basis 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 at December 31, 2016, the book value of the rights to operate completed expressway sectors as per the consolidated financial statements of the Company and its subsidiary were as follows:

(Unit: Million Baht)

Company	Net Book Value as at December 31, 2016
The Company	34,809
NECL	6,743
<b>Total</b>	<b>41,552</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 Rattaya Expressway, with the details as at December 31, 2016 comprising:

(Unit: Million Baht)

Class of Assets	Net Book Value as at December 31, 2016	Ownership	Encumbrance
Si Rat Expressway, Sectors A, B and C	6,633	EXAT	Loan Security
Si Rat Expressway, Sector D	4,118	EXAT	Loan Security
Si Rat - Outer Ring Road Expressway	24,058	EXAT	Loan Security
Udon Rattaya Expressway	6,743	EXAT	*
<b>Total Net Book Value</b>	<b>41,552</b>		

Remark: \* NECL provided the rights to operate completed expressway sectors under the Concession Agreement for the Udon Rattaya Expressway as security to the Company to secure the loan repayment.

Given that the Expressway Agreements above are on a BTO (Build Transfer 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 with the duty to keep such property maintained throughout the term 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, 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, 2016. 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 term of the Agreements.

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

As at December 31, 2016, the book value of the rights to use sites for expressway construction as per the consolidated financial statements of the Company and its subsidiaries were as follows:

(Unit: Million Baht)

Company	Net Book Value as at December 31, 2016
The Company	
Rights to use sites for expressway construction	6,645
<u>Less:</u> Accumulated amortization	(5,624)
<b>Total Net Book Value</b>	<b>1,021</b>

The rights to use sites for expressway construction are considered 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 Chaloem Ratchamongkhon Line

As at December 31, 2016, the book value of intangible assets under the Concession Agreement for the MRT Chaloem Ratchamongkhon Line as per the consolidated financial statements of the Company and its subsidiary were as follows:

(Unit: Million Baht)

Company	Net Book Value as at December 31, 2016
The Company	16,635
BMN	325
<b>Total</b>	<b>16,960</b>

The intangible assets under the Concession Agreement for the MRT Chaloem Ratchamongkhon Line are considered the costs of construction of the MRT Chaloem Ratchamongkhon Line, with the details as at December 31, 2016 comprising:

(Unit: Million Baht)

Class of Assets	Book Value as at December 31, 2016	Ownership	Encumbrance
M&E Equipment	19,111	Owner	None
M&E Equipment and leasehold improvements in metro stations	537	Owner	None
Telecommunications system equipment	412	Owner	None
Advertising system equipment	185	Owner	None
Project costs during construction	448	Owner	None
<b>Total project costs</b>	<b>20,693</b>		
<b>Less:</b> Accumulated amortization of project costs	(3,733)		
<b>Total Net Book Value</b>	<b>16,960</b>		

## 4.2 Investments in Other Companies

### 4.2.1 Summary of Investments as per the Consolidated Financial Statements of the Company and its Subsidiaries

(Unit: Million Baht)

Company	Book Value under Cost Method as at December 31, 2016	Portion of Investment in each Company (percent)	Paid-up Capital as at December 31, 2016	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
<u>Less:</u> Provision for impairment of investments	(2,450)				
Net investments	154				
2. Bangkok Metro Networks Limited	166	65.19	254	Subsidiary	- Development of lease retail spaces in the metro stations and the basement level of the park and ride facility - Procurement of advertising boards or media in the metro stations and inside the trains - Provision of service and maintenance of telecommunications system equipment in the metro stations
3. TTW Public Company Limited	6,976	19.45	3,990	Associated Company	- Production and distribution of tap water
4. CK Power Public Company Limited	3,223	19.40	7,370	Associated Company	- Investment in other companies (Holding Company) operating the energy business
5. Xayaburi Power Company Limited	1,238	7.50	16,505	Other Company	- Construction and operation of the Xayaburi Hydroelectric Power Project



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

The Company has a 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 at December 31, 2016, the Company invested in subsidiaries and other company, as follows:

##### **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 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 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. This was because the Company provided a large amount of loans for NECL and also is the only creditor of NECL, the Company has therefore 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 at December 31, 2016, 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.

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

The Company established BMN on February 25, 2009 to operate the businesses of procurement and production of advertising media of various forms in the metro stations and inside the trains, lease of retail spaces in the MRT Blue Line stations and spaces in the basement level of the Lat Phrao park and ride facility. To date, the retail shops are opened in five stations, namely, Sukhumvit Station, Phahon Yothin Station, Chatuchak Park Station, Kamphaeng Phet Station, and Phra Ram 9 Station. In addition, BMN also provides service and maintains telecommunications system equipment inside the metro stations. As at December 31, 2016, BMN's registered and paid-up capital was Baht 254 Million, whereby the Company holds shares in BMN representing 65.19 percent of all BMN's shares sold, together with 34.81 percent of shares held by other investors having experience and expertise in the businesses of advertising media, marketing, real estate, and telecommunications technology.

As for the policy on future investment in BMN, the Company continues to maintain its shareholding in BMN of not less than 50 percent of all shares in BMN. The Company will receive the return on investment in the form of revenue sharing and dividend income from investment in BMN. The Company has a control policy or participates in setting out the significant policies on the business operations by assigning its three representatives to be members of BMN's board of directors, from a total of six directors of BMN.

##### **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 provision, whereby TTW holds shares representing 68.50 percent of its registered capital. In addition, TTW invested in the energy business by holding 25.31 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.

At present, the Company, as a shareholder, assigned its representative to be a member of the board of directors of TTW. As at December 31, 2016, the Company held shares in TTW representing 19.45 percent of its registered capital.

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

The Company jointly invested in the establishment of 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 at December 31, 2016, CKP invested by holding shares representing 56 percent in SouthEast Asia Energy Limited; 30 percent in Nakhon Ratchasima Solar Limited; 30 percent in Chiangrai Solar Limited; 100 percent in Bangkhengchai Company Limited; 65 percent in Bangpa-in Cogeneration Limited; and 30 percent in Xayaburi Power Company Limited. The benefits to be derived by the Company shall be in the form of dividend from investment. At present, the Company, as a shareholder, assigned its representative to be a member of the board of directors of CKP. As at December 31, 2016, the Company held shares in CKP representing 19.40 percent of its registered capital.

#### **Xayaburi Power Company Limited (“XPCL”)**

The Company invested in XPCL, a company which was awarded the concession from the Government of the Lao People’s Democratic Republic for design, development, construction and operation of the Xayaburi Hydroelectric Power Project, with a 29-year concession period from the Commercial Operation Date. The benefits to be derived by the Company shall be in the form of dividend from investment. As at December 31, 2016, the Company held shares in XPCL representing 7.50 percent of its registered capital. All ordinary shares in XPCL held by the Company have been pledged as security of long-term loan of XPCL. The Company, as a shareholder, assigned its representative to be a member of the board of directors of XPCL.

## **5. Legal Disputes**

### **5.1 The disputes with Expressway Authority of Thailand (EXAT)**

The Company and the subsidiary had a total of 11 disputes with EXAT, which were referred to 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:

#### **5.1.1 Disputes submitted by the Company and the subsidiary claiming for damages in 8 disputes, with the total amount until the date of submission of the disputes of approximately Baht 28,179.8 million**

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

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.

The Arbitral Tribunal 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 subsequently issued a letter refusing to comply with the arbitral award.

And, on 20 April 2009, EXAT submitted a petition to the Central Administrative Court requesting the Court to revoke the arbitral award or order refusing to enforce compliance with the arbitral award, and on 19 October 2011, the Company submitted a petition to the Central Administrative Court requesting a judgment to enforce compliance with the arbitral award. The interest was calculated 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 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.

The Supreme Administrative Court has determined the end of fact inquisitorial date on 5 January 2017.

At present, it is among processes of appointing of the judges for issuance of the opinion, determining of the first trial date and determining the adjudication date of the case.

## 2. Competing road with the Udon Rattaya Expressway

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.

The Arbitral Tribunal rendered its arbitral award on the dispute requiring EXAT to compensate for the deficient revenue with interest under the Agreement as required by the subsidiary. EXAT then issued a letter to the subsidiary refusing to comply with such arbitral award. And, on 3 March 2009, EXAT submitted a petition to the Central Administrative Court requesting the Court to revoke the arbitral award.

On 1 September 2011, 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 3,296.7 million.

On 3 May 2013, the Central Administrative Court adjudged to dismiss EXAT's petition requesting the Court to revoke the arbitral award and the Central Administrative Court also 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. At present, it is pending the Supreme Administrative Court's consideration.

## 3. Issuance of variation orders by EXAT

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.

On 4 February 2014, EXAT issued a letter refusing to comply with the arbitral award. And, on 26 March 2014, EXAT submitted a petition to the Central Administrative Court requesting the Court to revoke the arbitral award.

The Central Administrative Court has determined the end of fact inquisitorial date on 23 September 2016.

On 21 October 2016, the Company submitted a petition to the Central Administrative Court requesting a judgment to enforce compliance with the arbitral award. At present, it is pending EXAT to submit its statement.

4. Revision of toll rates of the Chalem Mahanakorn Expressway and the Si Rat Expressway for the year 2003

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 the year 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 in the amount of Baht 4,368 million, including interest under the Agreement.

EXAT then issued a letter refusing to comply with such arbitral award. And, on 30 May 2016, EXAT submitted a petition to the Central Administrative Court requesting the Court to revoke the arbitral award.

On 4 November 2016, the Company submitted its answer to the petition to the Central Administrative Court.

At present, it is pending EXAT to submit its opposition.

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

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.

The Thai Arbitration Institute scheduled the Parties to submit their closing statements within 16 January 2017.

6. Revision of toll rates of the Chalem Mahanakorn Expressway and the Si Rat Expressway for the year 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 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.

At present, it is pending the required arbitration proceedings of the Thai Arbitration Institute.

7. Revision of toll rates of Sector D of the Si Rat Expressway for the year 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 2008, which was not in accordance with the Agreement, together with interest calculated up to 31 May 2013, in the total amount of Baht 4,062.8 million, including interest under the Agreement.

At present, it is pending the required arbitration proceedings of the Thai Arbitration Institute.

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

The subsidiary submitted a statement of claim 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, it is pending the required arbitration proceedings of the Thai Arbitration Institute.



### 5.1.2 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

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

EXAT submitted a statement of claim requiring the subsidiary to complete the construction of the Udon Raththaya Expressway, Phase 2, in accordance with Clause 8.5 a. of 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 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. Therefore, the subsidiary acquired its rights to not commence the construction and EXAT is not entitled to claim for indemnity.

At present, it is pending the required arbitration proceedings of the Thai Arbitration Institute.

#### 2. Cost of utilization of the Control Center Building (Bang Phun)

EXAT submitted a statement of claim 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, it is pending the required arbitration proceedings of the Thai Arbitration Institute.

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

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.

On 7 May 2014, EXAT submitted a petition for revocation of the arbitral award.

At present, it is pending the Central Administrative Court's consideration.

Since the disputes are pending consideration, the Company and the subsidiary therefore did not record such entries in the financial statements.

## 6. General Information and Other Significant Information

### 6.1 General Information

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

**Company Issuing Securities** : Bangkok Expressway and Metro Public Company Limited ("BEM")

**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 Sutthisarnvinitchai Road, Dindaeng Subdistrict, Dindaeng District, Bangkok 10400

**Telephone** : 0 2641 4611 and 0 2354 2000

**Fax** : 0 2641 4610 and 0 2354 2040

**Website** : [www.bemplc.co.th](http://www.bemplc.co.th)

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 Ratthaya Expressway
Head Office	: 587 Sutthisarnvinitchai Road, Dindaeng 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	: 1. Lease of retail spaces in the metro stations and the basement level of the Lat Phrao park and ride facility 2. Procurement and/or production of advertising media in the metro stations and inside the trains 3. Provision of service and maintenance of telecommunications system equipment in the metro stations
Head Office	: 832 Sutthisarn Road, Dindaeng Subdistrict, Dindaeng District, Bangkok 10400
Registered Capital	: Baht 254 Million, which is fully paid up.
Shareholding Percentage	: 65.19 percent
Telephone	: 0 2690 8200
Fax	: 0 2690 8212
Website	: <a href="http://www.bmn-mrt.com">www.bmn-mrt.com</a>
<b>Company Issuing Securities</b>	: <b>TTW Public Company Limited (“TTW”)</b>
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	: 19.45 percent
Telephone	: 0 2811 7526
Fax	: 0 2420 6064
Website	: <a href="http://www.ttwplc.com">www.ttwplc.com</a>

**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, 19 <sup>th</sup> Floor, Sutthisarnvinitchai Road, Dindaeng Subdistrict, Dindaeng District, Bangkok 10400
Registered Capital	: Baht 9,240 Million, Baht 7,370 Million of which is paid up.
Shareholding Percentage	: 19.40 percent
Telephone	: 0 2691 9720
Fax	: 0 2691 9723
Website	: www.ckpower.co.th

**(3) Reference**

<b>Securities Registrar</b>	<b>: Thailand Securities Depository Company Limited</b> The Stock Exchange of Thailand 93 Rachadapisek Road, Dindaeng Subdistrict, Dindaeng District, Bangkok 10400 Telephone : 0 2009 9382 Fax : 0 2009 9476
<b>Auditor</b>	<b>: EY Office Limited</b> 193/136-137 Lake Rajada Office Complex, 33 <sup>rd</sup> Floor, New Rajadapisek Road Klongtoey District, Bangkok 10110 Telephone : 0 2264 0777 Fax : 0 2264 0789

**6.2 Other Significant Information****Key Summary of Agreements****6.2.1 The Second Stage Expressway Agreement**

<b>Execution Date</b>	December 22, 1988
<b>Party</b>	The Expressway Authority of Thailand (“EXAT”)
<b>Key Summary</b>	The Company is obliged to carry out construction and operation of the Si Rat Expressway (Second Stage Expressway), as well as related businesses under the Second Stage Expressway Agreement, for a concession period of 30 years from March 1, 1990 until February 29, 2020. The Second Stage Expressway System comprises Sector A (Rama IX-Rachadapisek), Sector B (Phayathai - Bangkhlo), and Sector C (Rachadapisek - Chaeng Watthana), covering a total distance of 29.8 kilometers. The Company shall be entitled to receive the toll revenue sharing in respect of both the Si Rat Expressway and the Chalerms Mahanakorn Expressway (First Stage Expressway), as constructed and operated by EXAT, throughout the concession period.

### 6.2.2 The Agreement for the Extension of the Second Stage Expressway System (Sector D)

<b>Execution Date</b>	April 17, 1997
<b>Party</b>	The Expressway Authority of Thailand (“EXAT”)
<b>Key Summary</b>	The Company is obliged to carry out construction and operation of the Si Rat Expressway (Second Stage Expressway) for the extension of the Second Stage Expressway System, Sector D (Rama IX - Srinagarindra), covering a distance of 8.7 kilometers, for a concession period of 30 years from April 22, 1997 until April 21, 2027. The Company shall be entitled to receive all toll revenues throughout the concession period.

### 6.2.3 The Concession Agreement for Investment, Design, Construction, Operation, Provision of Service and Maintenance of the Si Rat - Outer Ring Road Expressway Project

<b>Execution Date</b>	September 15, 2012
<b>Party</b>	The Expressway Authority of Thailand (“EXAT”)
<b>Key Summary</b>	<p>The Company is obliged to carry out design, construction and operation of the Si Rat - Outer Ring Road Expressway, with the route starting from Kanjanapisek Road and connecting to the Si Rat Expressway around the North of the Mo Chit 2 Bus Terminal, covering a total distance of 16.7 kilometers, for a concession period of 30 years from December 15, 2012 until December 14, 2042. The Company shall be entitled to receive all toll revenues throughout the concession period.</p> <p>The concession period is divided into two phases:</p> <ul style="list-style-type: none"> <li>• <u>Phase 1</u>: Design, construction, supply and installation of electrical and mechanical system equipment, toll collection system, communications system and traffic controlling system, and other systems relating to the Expressway, for the period of not exceeding 48 months from December 15, 2012;</li> <li>• <u>Phase 2</u>: Operation and provision of service, such as, toll collection, rescue operation and maintenance of the Expressway.</li> </ul>

### 6.2.4 The Bang Pa-in - Pak Kret Expressway Agreement

<b>Execution Date</b>	September 27, 1996
<b>Parties</b>	Northern Bangkok Expressway Company Limited (“NECL”) and the Expressway Authority of Thailand (“EXAT”)
<b>Key Summary</b>	NECL is obliged to carry out construction and operation of the Udon Rattthaya Expressway (Bang Pa-in - Pak Kret Expressway), connecting to the Si Rat Expressway around Chaeng Watthana Road and ending at Amphoe Bang Pa-in, Phra Nakhon Si Ayutthaya Province, covering a total distance of 32 kilometers, for a concession period of 30 years from September 27, 1996 until September 26, 2026.



## 6.2.5 The Project Management Agreement for Construction of the Si Rat - Outer Ring Road Expressway Project

<b>Execution Date</b>	September 15, 2012
<b>Party</b>	CH. Karnchang Public Company Limited (“CH. Karnchang Plc.”)
<b>Key Summary</b>	The Company engaged CH. Karnchang Plc. on a Lump Sum Turnkey basis as project manager for the design and construction of the Si Rat - Outer Ring Road Expressway, supply and installation of electrical and mechanical system equipment, toll collection system, communications system and traffic controlling system, rescue operation system and other systems, including administration of the construction until completion, for the construction period of 48 months from December 15, 2012 or until December 14, 2016, with the project value of Baht 22,500 Million.

## 6.2.6 The Concession Agreement for the MRTA Initial System Project - Chaloem Ratchamongkhon Line

<b>Execution Date</b>	August 1, 2000
<b>Party</b>	The Mass Rapid Transit Authority of Thailand (“MRTA”)
<b>Key Summary</b>	<p>The Company has been granted the exclusive right by MRTA for:</p> <ul style="list-style-type: none"> <li>• Design, manufacture, supply, installation, testing of the M&amp;E Equipment, including trial running to ensure its readiness for general public services;</li> <li>• Operation and maintenance of M&amp;E Systems for commercial operation with the purpose of the public mass rapid transit service;</li> <li>• Financing for support of the Company’s operation under this Agreement.</li> </ul> <p>The Company executed the Concession Agreement for the MRTA Initial System Project - Chaloem Ratchamongkhon Line (Hua Lamphong Station - Bang Sue Station) with MRTA. The official commencement of operations was on July 3, 2004. The Company has the exclusive right to collect fare box revenue and undertake any and/or all activities and commercial development as specified in the Agreement, including advertising, retail space leasing in the project and telecommunications services in the metro stations and in the trains, for a period of 25 years from July 2, 2004 until July 1, 2029.</p>

## 6.2.7 The Maintenance Contract for the Maintenance of the M&E Equipment and Trackwork, including its Amendments

<b>Execution Date</b>	December 19, 2001 (and amendments)
<b>Party</b>	Siemens (Thailand) Limited (“Siemens”)
<b>Key Summary</b>	Siemens is obliged to carry out repair and maintenance of the M&E Equipment and Trackwork, supply and installation of necessary spare parts for the systems, planning for inspection for safety, storage and procurement of spare parts, recruitment of necessary personnel for the Company’s maintenance unit, and storage and delivery of adequate spare parts for one-year operation to the Company after expiration of the Maintenance Contract, which will expire in July 2024.

#### 6.2.8 The Spare Supply Contract for the Delivery of Spares and Rendering of Engineering Support Services for the M&E Equipment and Trackwork, including its Amendments

<b>Execution Date</b>	January 30, 2002 (and amendments)
<b>Party</b>	Siemens AG, Germany (the party has been changed from Lincas Electro Vertriebs - Gesellschaft m.b.H to Siemens AG, Germany, a company in the same group)
<b>Key Summary</b>	Siemens AG is obliged to carry out repair and maintenance of the M&E Equipment and Trackwork, supply and installation of necessary spare parts for the systems, planning for inspection for safety, storage and procurement of spare parts, recruitment of necessary personnel for the Company's maintenance unit, and storage and delivery of adequate spare parts for one-year operation to the Company after expiration of the Maintenance Contract, which will expire in July 2024.

#### 6.2.9 The Agreement for Granting of Right for Commercial Development to Bangkok Metro Networks Limited

<b>Execution Date</b>	March 11, 2005 (and amendments)
<b>Party</b>	Bangkok Metro Networks Limited ("BMN")
<b>Key Summary</b>	<p>BMN has the right for commercial development, as follows:</p> <ul style="list-style-type: none"> <li>• Right for development of spaces in 11 metro stations and the basement level of Lat Phrao park and ride facility;</li> <li>• Right for commercial development for procurement and/or production of advertising media in various forms, such as stickers, light boxes of various sizes, platform billboards, in the metro stations and trains;</li> <li>• Right for provision of telecommunications service in the metro stations and trains, as well as IRDN (Integrated Radiating Distributed Network) service, to accommodate the communication service of all mobile phone systems, including other telecommunications service of all types in the future;</li> <li>• Right for management of the Passenger Information Display installed in the metro stations and trains.</li> </ul>

**6.2.10 The Concession Agreement for 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 Investment, Supply of M&E Systems and O&M Services**

<b>Execution Date</b>	September 4, 2013
<b>Party</b>	The Mass Rapid Transit Authority of Thailand (“MRTA”)
<b>Key Summary</b>	<p>This Agreement is a concession agreement for investment, supply of M&amp;E Systems, and O&amp;M services, for a concession period of 30 years from September 4, 2013 to September 3, 2043, on a PPP Gross Cost basis, or a joint investment between the government sector and the private sector, whereby the government sector invests in all civil works and the private sector invests in the M&amp;E Systems and the rolling stocks, including the O&amp;M Services according to standards as specified in the Agreement.</p> <p>The main duties of the Company under this Concession Agreement are as follows:</p> <ul style="list-style-type: none"> <li>• <u>Phase 1: Design and Construction</u></li> </ul> <p>To invest in the design, supply, installation, commissioning of the M&amp;E Equipment, including 21 rolling stocks with three cars each, signaling, communications, power supply, automatic fare collection, repair and maintenance equipment, platform screen doors, and other related equipment in all 16 metro stations, for a total distance of 22 kilometers, and in the depot at Klong Bang Phai, construction of dormitory and training building, and other public utilities in the depot at Klong Bang Phai, as well as management of the construction and personnel for train operation and trial run, until completion and handover of the ownership to MRTA and opening of the train operation service under the terms and conditions as specified in the Agreement;</p> <ul style="list-style-type: none"> <li>• <u>Phase 2: Train Operation Service</u></li> </ul> <p>To provide the operation and maintenance services for the MRT Purple Line Project, Klong Bang Phai Station - Tao Poon Station, throughout the concession period, in accordance with the quality standards and requirements as specified by MRTA in the Concession Agreement, as well as to arrange for maintenance and improvement of related equipment and tools, in respect of both civil infrastructure and M&amp;E Equipment, including personnel with knowledge and expertise as necessary and sufficient for operation under the Agreement throughout the concession period. The Works in Phase 2 are exclusive of management and maintenance of all four park and ride facilities.</p>

**6.2.11 The Project Management Agreement for Supply and Installation of the M&E Systems for the MRT Purple Line Project, Bang Yai - Rat Burana, Bang Yai - Bang Sue Section (Khlomg Bang Phai Station - Tao Poon Station), Contract 4: Concession for Supply of M&E Systems and O&M Services**

<b>Execution Date</b>	September 4, 2013 (and amendment)
<b>Party</b>	CH. Karnchang Public Company Limited ("CH. Karnchang Plc.")
<b>Key Summary</b>	<p>CH. Karnchang Plc. has main duties under this Project Management Agreement as follows:</p> <ul style="list-style-type: none"> <li>• To complete the Works in Phase 1 of the Concession Agreement for opening of the train operation service. The Works in Phase 1 of the Concession Agreement comprise the design, supply, installation, commissioning of the M&amp;E Equipment, including 21 rolling stocks with three cars each, management of the construction and personnel for train operation and trial run. CH. Karnchang Plc. must complete such arrangements within 1,200 days from the date the Company executed the Concession Agreement or until December 17, 2016 for the contract value not exceeding Baht 20,011 Million;</li> <li>• CH. Karnchang Plc. will arrange for financing for the Works in Phase 1 of the Concession Agreement and accept the payment of the M&amp;E Equipment from the Company in accordance with the repayment schedule to be received by the Company from MRTA under the Concession Agreement (Contract 4);</li> <li>• To maintain the civil infrastructure, including stations, elevated structures, and depot; to maintain the M&amp;E Equipment inside stations, elevated structures, and depot; to maintain elevators and escalators inside stations and depot; to supply equipment, tools, spare parts and personnel for maintenance work. Such maintenance service shall be provided for eight years from November 17, 2015 to November 16, 2023 for the contract value not exceeding Baht 1,520 Million;</li> <li>• To maintain the civil infrastructure and M&amp;E Systems for the MRT Purple Line Project for the contract value of Baht 155 Million for a period of seven years from January 1, 2017 to December 31, 2023.</li> </ul>

**6.2.12 The Contract for Engineering Services and Commissioning for Operation Service in the MRT Purple Line Project, Bang Yai - Rat Burana, Bang Yai - Bang Sue Section (Khlomg Bang Phai Station - Tao Poon Station), Contract 4: Concession for Supply of M&E Systems and O&M Services**

<b>Execution Date</b>	May 2, 2014
<b>Party</b>	CH. Karnchang Public Company Limited ("CH. Karnchang Plc.")
<b>Key Summary</b>	<p>The Company has main duties under this Contract as follows:</p> <ul style="list-style-type: none"> <li>• To provide support in terms of information, documents and skilled personnel in the selection of subcontractor/manufacture of the Railway Systems, including preparation of the tender documents for submission of proposals, evaluation of proposals, and negotiations on details and conditions thereof;</li> <li>• To arrange for skilled personnel to participate in the carrying out of the design, supply, installation and commissioning of the Railway Systems to CH. Karnchang Plc. in support of the operation under the Contract;</li> <li>• To prepare manuals, operating procedures, regulations and the O&amp;M Services plans as well as personnel training for the O&amp;M Services, so as to be ready for service within the timeframe specified in the Contract.</li> </ul> <p>The Company shall complete such arrangements within a period of not exceeding 32 months from the date of execution of the Contract or until January 1, 2017 for the contract value not exceeding Baht 450 Million.</p>



**6.2.13 The Project Management Agreement for Supply and Installation of M&E Equipment, and Maintenance Services on Civil Infrastructure and M&E Systems for the MRT Purple Line Project, Bang Yai - Rat Burana, Bang Yai - Bang Sue Section (Bang Sue Station - Tao Poon Station, excluding the stations), Contract 5: Concession for Investment, Supply of M&E Systems and O&M Services, as well as for Supply and Installation of Equipment to Upgrade Communication Systems of the MRT Blue Line Project**

<b>Execution Date</b>	November 5, 2015
<b>Party</b>	CH. Karnchang Public Company Limited (“CH. Karnchang Plc.”)
<b>Key Summary</b>	<p>CH. Karnchang Plc. has main duties under this Agreement as follows:</p> <ul style="list-style-type: none"> <li>• To carry out the works under the scope of the Works in Phase 1 of the Concession Agreement, whereby CH. Karnchang Plc. shall supply the M&amp;E Equipment, e.g., signaling systems, power supply systems, communication systems, SCADA system, automatic fare collection system (AFC), and other systems as per the details in the Concession Agreement, including preparations and financing for the Works in Phase 1;</li> <li>• To upgrade the communication systems of the MRT Chaloem Ratchamongkhon Line Project (MRT Blue Line) to be compatible with the MRT Purple Line Project;</li> <li>• To maintain civil infrastructure and M&amp;E Systems, to ensure that the performance of such systems meets the requirements of the Works in Phase 2 of the Concession Agreement.</li> </ul> <p>The contract value shall not exceed Baht 1,056 Million.</p>

**6.2.14 The Project Management Agreement for Maintenance Service on Civil Infrastructure and M&E Systems for the MRT Chaloem Ratchamongkhon Line Project (Hua Lamphong Station - Bang Sue Station)**

<b>Execution Date</b>	November 17, 2015
<b>Party</b>	CH. Karnchang Public Company Limited (“CH. Karnchang Plc.”)
<b>Key Summary</b>	<p>CH. Karnchang Plc. has main duties under this Agreement as follows:</p> <ul style="list-style-type: none"> <li>• To maintain the civil infrastructure, including stations, tunnels and depot;</li> <li>• To maintain the M&amp;E Systems inside stations, tunnels and depot;</li> <li>• To maintain elevators and escalators inside stations;</li> <li>• To supply equipment, tools, spare parts, and personnel for maintenance work.</li> </ul> <p>CH. Karnchang Plc. shall provide such maintenance service for eight years from November 17, 2015 to November 16, 2023 for the contract value not exceeding Baht 1,270 Million.</p>

## 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 at December 30, 2016, the Company's 692,743,721 ordinary shares were used as underlying securities for issuance of Non-Voting Depository Receipt or NVDR, representing 4.53 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 at September 15, 2016, which is the latest closing date of the share register book, the major shareholders were as follows:

No.	Shareholders	Number of Shares	%
1	CH. Karnchang Public Company Limited	4,544,912,129	29.73
2	Mass Rapid Transit Authority of Thailand	1,256,259,584	8.22
3	Krung Thai Bank Public Company Limited	1,047,025,175	6.85
4	Thai NVDR Company Limited	790,751,929	5.17
5	Bangkok Bank Public Company Limited	432,872,909	2.83
6	Mr. Wichai Wachiraphong	348,793,348	2.28
7	UOB KAY HIAN (HONG KONG) LIMITED - Client Account	287,897,900	1.88
8	STATE STREET BANK EUROPE LIMITED	221,526,347	1.45
9	Mr. Min Tieworn	201,000,000	1.32
10	Mrs. Walaiporn Sompakdee	146,742,138	0.96
11	CHASE NOMINEES LIMITED	139,147,406	0.91
12	CH. Karnchang-Tokyu Construction Company Limited	136,659,952	0.89
13	GIC PRIVATE LIMITED	118,437,964	0.78
14	SCB Open-end Long Term Fund Dividend 70/30	102,225,923	0.67
15	HSBC (SINGAPORE) NOMINEES PTE LTD.	101,247,380	0.66
	Total	9,875,500,084	64.60
	Others	5,409,499,916	35.40
	<b>Grand Total</b>	<b>15,285,000,000</b>	<b>100.00</b>

**Remarks :** The Stock Exchange of Thailand's disclosure on [www.set.or.th](http://www.set.or.th) for shareholders with more than 0.5 percent shareholding.

- (1) CH. Karnchang Group's shareholding in the Company represented 30.67 percent of the registered capital, with the details as follows:

<u>CH. Karnchang Group</u>	<u>Number of Shares</u>	<u>% of Paid-up Capital</u>
1. CH. Karnchang Public Company Limited <sup>(2)</sup>	4,544,912,129	29.73
2. CH. Karnchang-Tokyu Construction Company Limited <sup>(3)</sup>	136,659,952	0.89
3. Mahasiri Siam Co., Ltd. <sup>(4)</sup>	4,327,949	0.03
4. CH. Karnchang Holding Co., Ltd. <sup>(5)</sup>	2,077,291	0.01

- (2) CH. Karnchang Public Company Limited ("CH. Karnchang Plc.") operates the general construction business, with Trivisvavet Group holding shares of 36.88 percent of the paid-up capital (information as at November 9, 2016), with the details as follows:

<u>Trivisvavet Group</u>	<u>Number of Shares</u>	<u>% of Paid-up Capital</u>
1. Mahasiri Siam Co., Ltd.	316,412,365	18.68
2. CH. Karnchang Holding Co., Ltd.	175,496,530	10.36
3. CK. Office Tower Co., Ltd. <sup>(6)</sup>	93,348,212	5.51
4. Mr. Plew Trivisvavet	13,631,497	0.80
5. Bang Pa-in Land Development Co., Ltd. <sup>(7)</sup>	8,134,812	0.48
6. Mrs. Saikasem Trivisvavet	4,561,142	0.27
7. Mrs. Pranee Tongkittikul	4,508,417	0.27
8. Mr. Nattavut Trivisvavet	2,455,785	0.14
9. Miss Supamas Trivisvavet	1,700,000	0.10
10. Mr. Sittidej Trivisvavet	1,550,000	0.09
11. Mr. Puwanet Trivisvavet	993,255	0.06
12. Miss Sawanya Trivisvavet	958,025	0.06
13. Mrs. Korakot Trivisvavet	700,250	0.04
14. Mr. Prasert Trivisvavet	154,285	0.01
15. Miss Sunan Trivisvavet	90,000	0.01

Shareholders may refer to additional information of CH. Karnchang Public Company Limited in the Annual Registration Statement (Form 56-1) on the website of the SEC ([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 549,996 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 8,378,787 shares representing 93.10 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 62.5 percent held by Trivisvavet Group.
- (6) CK. Office Tower Co., Ltd. operates the business of office building lease and service, 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) Bang Pa-in Land Development Co., Ltd. operates the business of an industrial estate at Bang Pa-in, having a total of 2,400,000 shares, with 1,000,000 shares representing 41.67 percent held by Trivisvavet Group, 600,000 shares representing 25 percent held by Mahasiri Siam Co., Ltd., and 600,000 shares representing 25 percent held by CK. Office Tower Co., Ltd.

### 7.2.2 The Company's Free Float Percentage

According to the report on shareholding distribution of strategic shareholders as at March 11, 2016, as submitted to the Stock Exchange by the Company, the percentage of the non-strategic shareholders was 55.55 percent of all issued and paid-up shares.

## 7.3 Issuance of Other Securities

### 7.3.1 Long-Term Loans

In 2016, the Company executed the long-term loan agreement and made a drawdown of the credit facility of Baht 8,000 Million in full with a financial institution, at the fixed interest rate of 3.18 percent per annum, and made a drawdown of the long-term loans for the Si Rat - Outer Ring Road Expressway Project in the amount of Baht 3,850 Million, and as a result, as at December 31, 2016, the Company's long-term loans amounted to Baht 19,084 Million.

### 7.3.2 Debentures

In 2016, the Company issued debentures on a total of three occasions, at the net total value of Baht 23,200 Million, for use in the investment in the Si Rat - Outer Ring Road Expressway Project; for use as the Company's working capital; and in replacement of loans from financial institutions as per the financial restructuring plan. As at December 31, 2016, the Company's outstanding debentures were as per the following details:

Details of Debentures	Debentures No. 1/2016 Series 1	Debentures No. 1/2016 Series 2	Debentures No. 1/2016 Series 3
Debenture Symbol	BEM196A	BEM216A	BEM236A
Total Value of Debentures	Baht 5,000 Million	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	Unsubordinated and unsecured debentures bearing names of the holders without a debenture holder representative
Number of Debentures	5,000,000 units	1,615,000 units	2,000,000 units
Par Value per Unit	Baht 1,000	Baht 1,000	Baht 1,000
Interest Rate per annum	2.22%	2.52%	3.00%
Maturity	3 years	5 years	7 years
Issue Date of Debentures	June 24, 2016	June 24, 2016	June 24, 2016
Maturity Date	June 24, 2019	June 24, 2021	June 24, 2023
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. 1/2016 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

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

## 7.4 Policy on Dividend Payment

The Company has a policy to pay 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 interim dividend to shareholders when it is of the view that the Company has sufficient profit and cash flow to pay 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 year is 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	62.50%	63.29%
- Second half <sup>(1)</sup>	917	0.06	1,345	1,400	68.18%	65.22%
Total in 2016	1,681	0.11	2,563	2,606	65.48%	64.71%

Remark : <sup>(1)</sup> This is included in the Agenda for the 2017 Annual Ordinary General Meeting of Shareholders on April 11, 2017.

## 7.5 Policy on Dividend Payment of the Subsidiaries

NECL does not have a policy on dividend payment other than that specified in Article 40 of the Articles of Association which specifies that NECL must appropriate to a reserve fund, at each dividend payment, at least one-twentieth (1/20) of the profits, until the reserve fund reaches one-tenth (1/10) of the capital of NECL. The board of directors may from time to time pay to the shareholders such interim dividends as it appears to the board of directors that NECL has sufficient profits to do so. If NECL sustains a loss, no dividend shall be paid until such loss has been made good.

BMN has a policy to pay dividend at the rate of approximately 40 percent of the net profit after deduction of legal reserves, taking into account the operational results in the accounting year of the separate financial statements as at the end of the accounting year and under the conditions of the loans agreement, subject to the investment plan, other necessities and appropriateness.

## 8. Management Structure

The Company's management structure comprises 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 consists of 17 qualified members, comprising five executive directors, six independent directors and six non-executive directors, thereby constituting a counterbalance from non-executive directors. In this regard, the Company has six independent directors, which represent more than one-third of all directors.

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

## 8.1 Board of Directors

The Board of Directors has 17 directors, whose names, as at December 31, 2016, are 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	6/6
2	Mr. Plew Trivisvavet	Deputy Chairman of the Board of Directors Chairman of the Executive Board Nomination and Remuneration Committee Member	Executive Director	6/6
3	Mr. Vitoon Tejatussanasoontorn	Chairman of the Audit Committee Nomination and Remuneration Committee Member	Independent Director	6/6
4	Gen. Chetta Thanajaro	Chairman of the Nomination and Remuneration Committee Audit Committee Member	Independent Director	5/6
5	Gen. Sampao Choosri	Chairman of the Corporate Governance and Risk Management Committee Audit Committee Member	Independent Director	6/6
6	Dr. Annop Tanlamai <sup>(1)</sup>	Audit Committee Member	Independent Director	4/5
7	Mrs. Vallapa Assakul	Corporate Governance and Risk Management Committee Member	Independent Director	6/6
8	Mr. Supong Chayutsahakij	Executive Director Nomination and Remuneration Committee Member	Executive Director	6/6
9	M.L. Prasobchai Kasemsant	Director	Non-executive Director	6/6
10	Mr. Phongsarit Tantisuvanitchkul	Executive Director Corporate Governance and Risk Management Committee Member	Executive Director	3/6
11	Mr. Werapong Suppasedsak	Director	Non-executive Director	6/6
12	Mr. Panit Dunnvatanachit	Director	Non-executive Director	5/6
13	Mr. Yuttana Yimgarund <sup>(2)</sup>	Director	Non-executive Director	N/A
14	Mr. Theeraphan Tachasirinugune	Director	Non-executive Director	5/6
15	Mr. Dumkerng Pankam <sup>(3)</sup>	Director	Non-executive Director	N/A
16	Dr. Sombat Kitjalaksana	Executive Director Corporate Governance and Risk Management Committee Member	Executive Director	4/6
17	Mrs. Payao Marittanaporn	Executive Director Corporate Governance and Risk Management Committee Member	Executive Director	6/6

**Remarks :** Directors' profiles appear on pages 207 to 212.

- |                           |  |
|---------------------------|--|
| (1) Dr. Annop Tanlamai    | was appointed as director on February 25, 2016 to replace Prof. Suphachai Phisitvanich who passed away on January 19, 2016.  |
| (2) Mr. Yuttana Yimgarund | was appointed as director on November 30, 2016 to replace Mr. Tana Janusorn who resigned on November 29, 2016.   |
| (3) Mr. Dumkerng Pankam   | was appointed as director on November 30, 2016 to replace Mrs. Uravadee Choosri who resigned on October 4, 2016. Mrs. Uravadee Choosri was appointed as director on April 5, 2016 to replace Mr. Prasit Dachhiri who resigned on February 2, 2016. |

### 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 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 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 submission date of the application for permission to the SEC, 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 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 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 submission date of the application for permission to the SEC;

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 commencement of 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 submission date of the application for permission to the SEC;
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 submission date of the application for permission to the SEC;
7. Not being a director appointed as 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 provision of independent opinions on the Company's operations.

## 8.2 Management Team

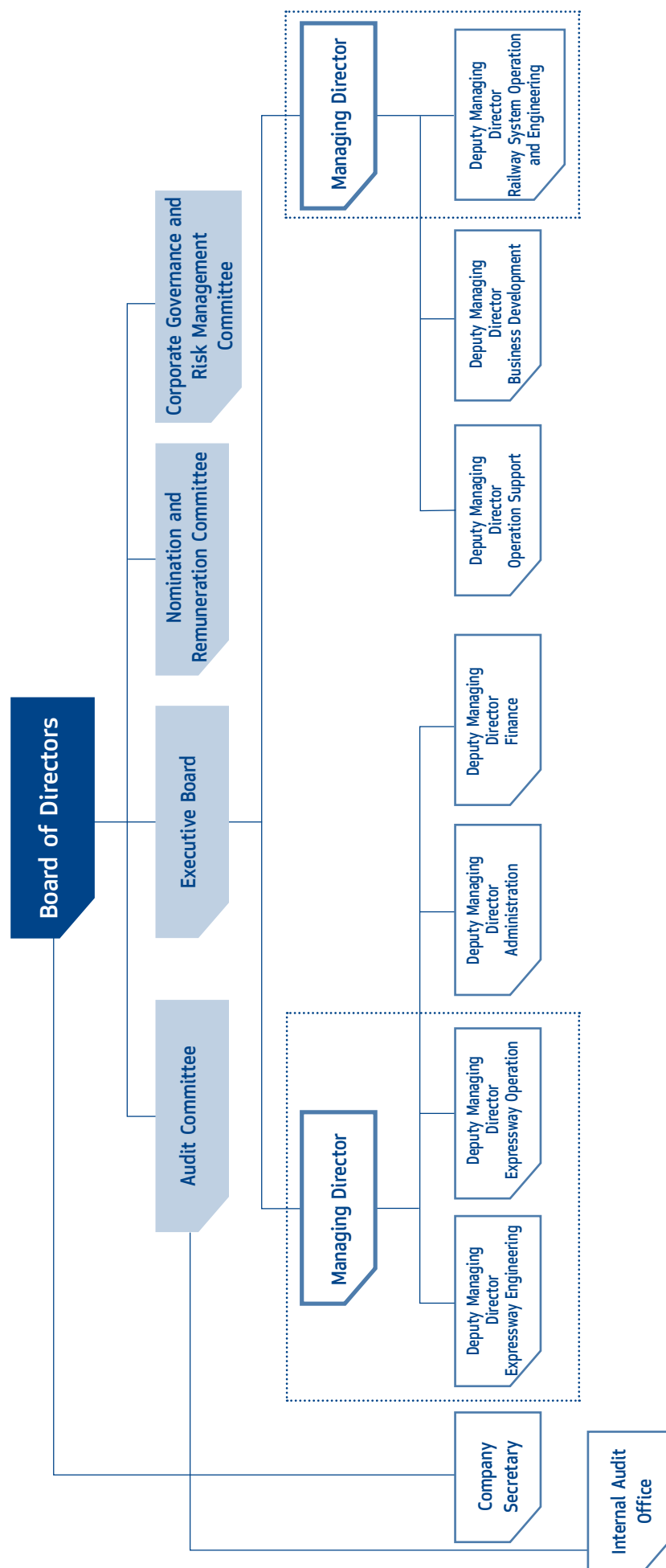
### 8.2.1 List of Names of Management Team

The Management Team under the structure as at December 31, 2016 comprises 8 persons as listed below: (information of executives appears on pages 211 to 213).

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

## 8.2.2 Management Structure of the Company

Organization 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 at December 31, 2016, the Board of Directors of Northern Bangkok Expressway Company Limited comprises six qualified directors as follows:

1. Mr. Plew	Trivisvavet	Chairman of the Board of Directors
2. Mr. Supong	Chayutsahakij	Director
3. Mr. Phongsarit	Tantisuvanitchkul <sup>(1)</sup>	Director
4. Dr. Sombat	Kitjalaksana <sup>(2)</sup>	Director
5. Mr. Wichan	Ekarintrakul <sup>(3)</sup>	Director
6. Mrs. Payao	Marittanaporn	Director

Remarks : (1), (2) were appointed as directors on February 25, 2016.

(3) was appointed to hold office on May 17, 2016 to replace Mr. Narong Gieddech who resigned from office on January 19, 2016.

#### Authorized Directors

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

#### 2) Bangkok Metro Networks Limited

As at December 31, 2016, the Board of Directors of Bangkok Metro Networks Limited comprises six qualified directors as follows:

1. Mr. Supong	Chayutsahakij	Chairman of the Board of Directors
2. Dr. Sombat	Kitjalaksana	Director
3. Mr. Anukool	Tuntimas	Director
4. Mr. Phongsarit	Tantisuvanitchkul	Director
5. Mrs. Thipsuda	Yimwilai	Director
6. Mr. Nattavut	Trivisvavet	Director

#### Authorized Directors

Bangkok Metro Networks Limited has determined six directors authorized to sign and bind the subsidiary, namely, either Mr. Supong Chayutsahakij or Dr. Sombat Kitjalaksana or Mr. Anukool Tuntimas and either Mrs. Thipsuda Yimwilai or Mr. Phongsarit Tantisuvanitchkul or Mr. Nattavut Trivisvavet, totaling two persons, shall jointly sign and affix the subsidiary's seal.

## 8.3 Company Secretary

The Board of Directors considers appointing the qualified person as Company Secretary. On December 30, 2015, the Board of Directors appointed Mr. Phakpoom Thaweewittayarut, who is knowledgeable and capable in the fields of accounting, law, and audit, as well as fully understands rules, regulations and criteria applicable to listed companies, to serve as Company Secretary (details of his profile appear on page 212, No. 20), 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 information necessary for 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 provision of various training courses and providing information useful for 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.

## 8.4 Remuneration of Directors and Executives

The Company has a policy to pay appropriate remuneration for directors and executives as per the criteria for determination of remuneration as follows:

### Remuneration for Directors and Managing Directors

1. 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 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 level of remuneration shall be sufficient to attract and retain knowledgeable and qualified directors to perform duties for the Company.
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 stays at the same level as that in the same sector and is adequate to retain the directors and the Managing Directors who possess the required qualifications.

### 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 2016, the Company paid remuneration for directors and executives as follows:

(1) Monetary remuneration

- (1.1) Remuneration for directors of the Company comprises annual remuneration, meeting allowance, and bonus. In 2016, the total remuneration for directors of the Company amounted to Baht 35,698,338, in line with the resolution of its 2016 Annual Ordinary General Meeting of Shareholders which approved the remuneration for directors in the total amount not exceeding Baht 37,250,000, namely, bonus for directors for 2015 in an amount not exceeding Baht 19,250,000 and remuneration for directors for 2016 in an amount not exceeding Baht 18,000,000.
- (1.2) In 2016, the Company paid remuneration comprising salary and bonus for its executives at the levels of Managing Director downwards to Deputy Managing Director, totaling nine persons, in the total amount of Baht 69,897,500.
- (1.3) In 2016, NECL paid remuneration for its directors, comprising annual remuneration, meeting allowance, and bonus, in the total amount of Baht 3,719,483, in line with the resolution of its 2016 annual ordinary general meeting of shareholders which approved the remuneration for directors in an amount not exceeding Baht 4,700,000, namely, bonus for its directors in 2015 in an amount not exceeding Baht 1,600,000 and remuneration for its directors for 2016 in an amount not exceeding Baht 3,100,000.
- (1.4) In 2016, BMN paid remuneration for its directors, comprising annual remuneration and meeting allowance in the total amount of Baht 831,000, in line with the resolution of its 2016 annual ordinary general meeting of shareholders which approved the remuneration for directors for 2016 in an amount not exceeding Baht 1,014,000.

(2) Other remuneration

(2.1) Other remuneration for directors

- None -

(2.2) Other remuneration for executives

The Company establishes a provident fund, which represents long-term remuneration upon termination of employment with the Company or upon retirement, whereby executives pay savings at the rate of 5-10 percent of his/her salary according to service years and the Company pays contributions at the same rate to the fund. In 2016, the Company paid contributions to the provident fund for nine executives in the amount of Baht 4,436,710.

The contribution rate paid by the Company is in accordance with the resolution of the Board of Directors' Meeting, 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, 2016, the Company has a total of 3,032 staff, per the details as follows:

Expressway business: there were a total of 962 staff, comprising personnel in two main functions, namely, Operation and Engineering, representing 83 percent of all staff, and personnel in supporting functions, namely, Administration and Finance, representing 17 percent of all staff.

Rail business: there were a total of 2,070 staff, comprising personnel in main functions, namely, Train Operation Group, Engineering & Maintenance Group, Project Development Group, Safety & Quality Division, Information and Operational Results Division, representing 87 percent of all staff, and personnel in supporting functions, namely, Management Group, Accounting and Finance Department, Office of the Managing Director, Office of the Internal Audit, and Office of the Human Resources, representing 13 percent of all staff.

As at December 31, 2016, the Company has its staff in main functions (excluding executives) as follows:

Main Functions	Staff (persons)
1. Main functions	2,600
2. Supporting functions	432
<b>Total</b>	<b>3,032</b>

NECL has no employment of executive and permanent staff, but operates the Udon Ratthaya Expressway by means of a service agreement with BEM.

As at December 31, 2016, BMN has its staff in each work unit (excluding executives) as follows:

Departments	Staff (persons)
Marketing and Business Development Department	47
Accounting, Finance and Administration Department	24
Operation Department	48
<b>Total</b>	<b>119</b>

Significant Change in Number of Staff over the Past Three Years

- None -

Significant Labor Dispute over the Past Three Years

- None -

#### 8.5.2 Personnel Development Policy

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 achievement of the Company's objectives. The Company realizes the significance of internal personnel development and improvement by 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 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.

### 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 shall pay savings at the rate of 5 to 10 percent of his/her salary according to his/her ability and the Company shall pay contribution at the rate of 5 to 10 percent according to his/her service years and requirements of the fund. Staff who are fund members shall gain benefits arising from management in proportion to each staff's money in the fund. The Company also arranges group life insurance for staff so as to ensure security for staff family accordingly.

#### 2) Staff Welfare

In addition to welfare required by law, the Company also provides staff with 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, whereby the human resources unit shall serve as advisor, support and provide the supervisors with regular training on personnel management and understanding of work rules and regulations of the Company. The Company also sets out the investigation procedures in case of any disciplinary misconduct by staff to ensure fairness and solutions to prevent repeated misconduct, including clear and rapid grievance procedures. Moreover, the Company 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 and music club. The sports club arranges for activities all year round, e.g., jogging for good health, as well as participation in 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 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 the construction business and metro business, together with motorists and the society around 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 on November 14, 2008, 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 as such, 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 Lloyd's Register Rail (LR) as 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 Company's Welfare Committee, 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 specific occasion.
2. Supporting and promoting all staff to take a role and participate in 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 Welfare Committee 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 Company's Welfare Committee 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 in one system, to inspect every step of the operating procedures and cross-platform processing, including financial data tracking, which help prevent corruption efficiently.

# **9. Corporate Governance**

## **9.1 Corporate Governance Policy**

The Board of Directors realizes the significance and benefits of good corporate governance to ensure the Company's efficient, transparent and auditable management systems that help build up trust and confidence for shareholders, investors, stakeholders, and all parties concerned, thereby resulting in the Company's sustainable growth. The Company adheres to its corporate governance policy which is in compliance with corporate governance principles in five sections, namely:

### **1. Shareholders' Rights**

Shareholders are encouraged to exercise their fundamental rights and the Company takes care of its shareholders beyond their rights as specified by law without any actions in violation of or depriving shareholders of their rights

### **2. Equitable Treatment of Shareholders**

The Company ensures that all shareholders are equally treated according to their fundamental rights, and lays down measures to prevent inside information usage for advancing personal interests or the interests of others which causes damage to shareholders as a whole.

### **3. Role of Stakeholders**

The Company takes care of every group of stakeholders based on their rights as specified by applicable laws without any actions in violation of or which deprive stakeholders of their rights, establishes compensation measures in case any stakeholder sustains any damage arising from violation of the rights, and promotes cooperation between the Company and stakeholders in order to build up wealth, financial stability and sustainability of the Company.

### **4. Disclosure and Transparency**

All activities are undertaken with transparency and are open for inspection with sufficient information disclosure to all relevant parties, including disclosure of material information relating to the Company,

both financial and non-financial information, which is made correctly, completely, timely and transparently through channels that are accessible easily, equally and reliably.

## **5. The Board of Directors' Responsibilities**

The Board of Directors performs their duties with honesty and due care for the optimum benefit of the Company and fairness to all shareholders under the good internal control system and suitable risk management, including compliance with the Company's code of ethics

To build up confidence for shareholders, investors and all parties concerned, the Board of Directors regularly reviews its corporate governance policy every year. In this regard, the Company has disclosed and disseminated the corporate governance policy on its website for both internal and external communication and via the electronic mail for internal communication with staff for information and compliance with such policy. The Board of Directors has then reviewed its practices in accordance with the Company's good corporate governance principles, and the Company has also prepared good corporate governance guidelines for compliance.

The Company has adhered to good corporate governance principles in its management by taking into account the significance of and responsibilities towards the Company's shareholders and stakeholders, and as such, in 2016 the Company received a very good rating in the assessment of corporate governance.

The Company has complied with the Principles of Good Corporate Governance for Listed Companies in accordance with the best practices of the Stock Exchange of Thailand in five sections, as follows:

### **9.1.1 Shareholders' Rights**

The Board of Directors acknowledges shareholders' ownership rights to decide on the Company's significant changes. The Board of Directors also understands the significance of shareholders' rights and therefore refrains from taking any actions in violation of or which deprive shareholders of their rights as well as facilitates their exercise of such rights. Shareholders are sufficiently informed on rules and procedures for participation in meetings and provided with other information in support of their consideration of each agenda item in due course in accordance with the practices of the Stock Exchange, as follows:

#### **1) Shareholders' Meetings**

##### **1.1 All groups of shareholders' participation in shareholders' meetings**

The Company realizes shareholders' ownership rights and thus manages its business with good, acceptable and reliable governance. Shareholders control the Company through the appointment of the Board of Directors. In this connection, the Board of Directors clearly sets out the corporate governance policy that the Company must encourage 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. The Board of Directors has supervised and monitored to ensure that shareholders' fundamental rights under laws must be protected, whereby the Company must not take any actions in violation of or which deprive shareholders of their rights. Shareholders' right to decide on significant changes shall be promoted by providing sufficient access to the Company's information, encouraging their participation in shareholders' meetings to vote on appointment of directors, determination of remuneration for directors, appointment of auditors and determination of audit fee, including voting on any important matters of the Company.

In case it is inconvenient for any shareholder to attend meetings in person, the Company prepares proxy forms to facilitate shareholders' voting, and nominates one independent director who may be appointed as proxy of shareholders for exercising the right to attend meetings and vote on

each agenda item by proxy. Three available proxy forms under 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 of 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 both in Thai and English versions for the benefit of foreign shareholders. The Company posts notices of meetings on the Company's website 30 days in advance. As for the 2016 Annual Ordinary General Meeting of Shareholders on April 5, 2016, the Company disseminated the notice of the meeting on its website since March 4, 2016 and also sent the notice of the meeting to Thailand Securities Depository Company Limited, as the Company's share registrar, for delivery to shareholders 14 days prior to the meeting, namely, March 21, 2016, so as to allow shareholders to have time to consider the details of each agenda item. Furthermore, the shareholders' meeting has been proceeded in accordance with the order of agenda as specified in the notice of the meeting without adding any agenda to the meeting without prior notice to shareholders in the meeting, 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 2016, the Company convened one the shareholders' meeting, namely, the 2016 Annual Ordinary General Meeting of Shareholders on April 5, 2016 at 14.00 hrs. at Plaza Athne Bangkok, A Royal Mridien Hotel No. 61 Wireless Road, Lumpini Subdistrict, Pathumwan District, Bangkok, where shareholders could travel to by metro.

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

The Company welcomes shareholders' inquiries concerning meetings in each agenda item or submission of questions or suggestions prior to meeting dates, subject to procedures described in the notices of meetings. The Company also discloses the detailed procedures for submission of questions in advance on its website at [www.bemplc.co.th](http://www.bemplc.co.th). Shareholders may send questions via the Company's website or e-mail address : [companysecretary@bemplc.co.th](mailto:companysecretary@bemplc.co.th), Telephone : 0 2641 4611, Facsimile: 0 2641 4610, and by post to the Managing Director Office, Bangkok Expressway and Metro Public Company Limited Branch Office (1) No. 238/7 Asoke-Dindaeng Road, Bangkok Subdistrict, Huai Khwang District, Bangkok 10310.

Shareholders may submit questions in advance for the Company's ordinary general meetings of shareholders. Answers to shareholders' questions submitted in advance may be given via e-mail, facsimile, other appropriate channels, or at ordinary general meetings of shareholders.

As for the 2017 Annual Ordinary General Meeting of Shareholders, shareholders may submit questions for the Company's ordinary general meeting of shareholders in advance via the website since October 1, 2016.

## **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 for the purpose of accuracy, convenience and rapidity, and as such, voting results can be displayed online immediately.

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

The Board of Directors realizes the significance of their participation in shareholders' meetings to answer questions and take suggestions of shareholders into consideration. In 2016, there were 15 directors from a total of 16 directors attending the 2016 Annual Ordinary General Meeting of Shareholders, which the Chairman of the Board of Directors, Audit Committee Chairman, chairs of various subcommittees, Managing Directors, and the Management Team of the Company attended to answer shareholders' questions on various issues.

### **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 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**

The Company uses the barcode system to record and display voting results. A legal advisor and at least two independent persons as shareholders' representatives witness the counting of votes to ensure transparency and compliance with the laws and the Articles of Association. The Company's Board Chairman who presides over shareholders' meetings introduces the examiners of vote counting to the meetings and has it recorded in the minutes of the shareholders' meeting. In respect of voting results of the meetings, favorable, unfavorable, and abstaining votes, including voided voting cards would be displayed. The results of vote counting are open to shareholders' examination. The Company discloses resolutions, together with voting results on each item to the meetings and disseminates such resolutions via the Stock Exchange's system as well as makes such resolutions and minutes of meetings available on the Company's website for the shareholders' information and examination of voting results.

### **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 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 for computer processing in advance. The legal advisor and the shareholders' representatives examine the counting of votes by proxy, in which case, no voting cards are provided to the proxies attending the meetings.
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 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 to ensure transparency in the counting of votes which can be requested for review at a later date.

## **2.6 Shareholders' opportunity to share opinions or ask questions**

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 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 written 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 disseminates resolutions of shareholders' meetings on its website in addition to the disclosure to the Stock Exchange via SET Community Portal (SCP), within the shareholders' meeting day for information and review of voting results.
2. The Company prepares minutes of every shareholders' meeting with accuracy and completeness, comprising the following information:
  - The list of directors attending the meeting;
  - The number of shareholders/shares present at the meeting (in person/by proxy);
  - Brief explanation on material issues, such as, voting procedures and display of voting results, to the meeting prior to conducting the meeting;
  - Names of persons who ask/answer questions or share opinions in brief;
  - Resolutions of the meeting, with details of votes for, against or abstentions.
3. Draft minutes of shareholders' meeting are made available for all shareholders' information on the Company's website after the minutes have been delivered to the Stock Exchange within 14 days after the end of the meeting.
4. Video presentation of the atmosphere of the shareholders' meeting is made available on the Company's website for the shareholders absent from the meeting or for any persons interested in the Company's information, to review details of the meeting other than those recorded in the minutes, and such video presentation is available on the website until the next shareholders' meeting.

### 9.1.2 Equitable Treatment of Shareholders

The Board of Directors realizes the significance of supervision and monitoring to ensure the Company's equal and fair treatment of all shareholders, both executive and non-executive, including foreign shareholders, for the protection of shareholders' fundamental rights, and adopts measures to prevent inside information usage for advancing personal interests or the interests of others which may cause damage to shareholders as a whole.

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

The Board of Directors ensures that the Company gives notice of the meeting, 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 notice is posted on the Company's website on the following business day; ensures that the Company prepares the notice of the meeting, together with details of each agenda item, both in Thai and English, for the convenience of foreign shareholders; and disseminates such notice of the meeting, together with details of each agenda item, on its website one month prior to the meeting date. As for the 2016 Annual Ordinary General Meeting of Shareholders on April 5, 2016, the Company disseminated the notice of the meeting since March 4, 2016. 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

The Company is determined to facilitate shareholders' exercise of their rights to supervise the Company's business through the Board of Directors in order 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' meeting and to nominate qualified candidates for appointment as directors via the Company's website. Shareholders may exercise such rights three months prior to the end of each accounting year. As for the 2017 Annual Ordinary General Meeting of Shareholders, the Company allowed shareholders to propose agenda items of the 2017 Annual Ordinary General Meeting of Shareholders and nominate qualified candidates for appointment as directors in advance via the Company's website at <http://www.bemplc.co.th> from October 1, 2016 to December 31, 2016. The Company has informed its shareholders of such change via the Stock Exchange's website, including relevant rules on the Company's website since October 1, 2016. In this regard, the Board of Directors considers incorporating agenda items proposed by shareholders as appropriate. As for the candidates 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' meeting.

The shareholders' meeting proceeds in accordance with the order of the agenda as specified in the notice of the meeting and may not add any agenda item to the meeting without prior notice to shareholders, so that shareholders have the opportunity to study information in support of consideration of each agenda item.

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 Inside Information Usage

The Board of Directors has set out written guidelines for protection and prevention of inside information usage, and informed all staff of such guidelines for compliance. In this regard, the Company has established measures to prevent inside information usage to advance the interests of directors and executives by informing all persons of their roles and duties to report their own securities holdings, and

those of their respective spouses or minor children who hold securities of the Company; and to report on every change in such securities holding 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. The Board of Directors has required such directors and executives to report on their securities trading or holding to the Board of Directors' Meeting on a quarterly basis. 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.

#### 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 receipt thereof.

Report on securities holding by directors and executives for 2016

Names of Directors/Executives	Amount of Ordinary Shares			
	As at December 31, 2015	Change in 2016	As at December 31, 2016	
			Amount	Percent (%)
<u>Directors</u>				
1. Dr. Virabongsa Ramangkura	-	-	-	-
2. Mr. Plew Trivisvavet	21,706,878	-	21,706,878	0.1420
Spouse	2,102,527	300,000	2,402,527	0.0157
3. Mr. Vitoon Tejatussanasoontorn	2,906,393	(2,102,500)	803,893	0.0053
4. Gen. Chetta Thanajaro	2,102,527	-	2,102,527	0.0138
5. Gen. Sampao Choosri	-	-	-	-
6. Dr. Annop Tanlamai <sup>(1)</sup>	N/A	-	-	-
7. Mrs. Vallapa Assakul	1,496,296	(1,496,296)	-	-
8. Mr. Supong Chayutsahakij	2,102,527	(2,102,527)	-	-
9. M.L. Prasobchai Kasemsant	-	-	-	-
10. Mr. Phongsarit Tantisuvanitchkul	-	-	-	-
11. Mr. Werapong Suppasedsak	-	-	-	-
12. Mr. Panit Dunnvatanachit	-	-	-	-
13. Mr. Yuttana Yimgarund <sup>(2)</sup>	N/A	-	-	-

Names of Directors/Executives	Amount of Ordinary Shares			
	As at December 31, 2015	Change in 2016	As at December 31, 2016	
			Amount	Percent (%)
14. Mr. Theeraphan Tachasirinugune	-	-	-	-
15. Mr. Dumkerng Pankam <sup>(3)</sup>	N/A	-	-	-
16. Dr. Sombat Kitjalaksana	4,699,141	(2,100,000) 1,000,000	3,599,141	0.0235
17. Mrs. Payao Marittanaporn	-	-	-	-
<u>Executives</u>				
18. Mr. Sanguan Kunatinun	-	-	-	-
19. Mrs. Sudruthai Prommart	-	-	-	-
20. Mr. Phakpoom Thaweewittayarat	-	-	-	-
21. Miss Panan Tosuwanthaworn				
22. Mr. Witoon Hatairatana	2,102,527	(2,102,527)	-	-
23. Mr. Alvin Gee	-	-	-	-
Spouse	447,210	(302,938)	144,272	0.0009

Remarks : <sup>(1)</sup> Dr. Annop Tanlamai was appointed as director on February 25, 2016.  
<sup>(2)</sup> Mr. Yuttana Yimgarund was appointed as director on November 30, 2016.  
<sup>(3)</sup> Mr. Dumkerng Pankam was appointed as director on November 30, 2016.

#### 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 or voting on such items. The management gives prior notice to such directors and executives who are not allowed to participate in the meeting or 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 in accordance with the Board of Directors' policy requiring directors and executives to report on their personal interests.

### 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 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 interests in the future, such as, hiring a group of persons who may have a conflict of interests to carry out construction, project management, project maintenance, the Board of Directors, in association with the Audit Committee, shall 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 interests under the definition of the SEC.
3. Should the Audit Committee do not have expertise to consider 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 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 Baht One Million 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 or the Stock Exchange.

### 5.3 Prevention of a conflict of interests

1. Directors and executives must inform the Company of relationships or connected transactions in any business which may give rise to a conflict of interests;
2. Any connected transaction with directors which may give rise to a conflict of interests 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 prior to proposing the same to seek approval from the Executive Board or the Board of Directors (as the case may be) in accordance with the good corporate governance principles, and in compliance with the rules of the Stock Exchange and the SEC;
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 all staff's understanding and adherence to the same.

### 9.1.3 Role of Stakeholders

The Company has a clear policy which focuses on 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 stakeholder 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 of Each Group of Stakeholders

**1.1 Customers:** The Company has a commitment to provision of quality and reliable services in response to customers' needs to save their travelling time in Bangkok and its surrounding provinces as well as to realizing the significance of fair treatment towards all customers. Work plans/programs are continuously set out for improvement of the expressway and metro services for users to ensure a more rapid and convenient service with standard safety. Rules and regulations of service provision to which the Company has adhered are as follows:

1. Providing quality services to satisfy service users' expectations.
2. Ensuring prompt responses to service users' needs, 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 contractual party, and fairly treats its business counterparts on the basis of equitable treatment, without any barrier, special right or 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 the efficient and regular services. In this regard, the Company arranges for

monthly performance satisfaction assessment by EXAT in order to develop and improve the efficiency of the operations. According to the assessment results, EXAT is completely satisfied with the Company's excellent collaboration.

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 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 with all traders in compliance with the work procedures regarding procurement 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 competition on the basis of equal information access, without preventing any trader from participating in business competition.
3. Preparing contracts in appropriate and standard forms.
4. Arranging for management and monitoring system to ensure the full compliance with contracts and internal control system to prevent fraud and misconduct in all steps of the procurement procedures.
5. Making payments to traders on time in accordance with terms of payment as mutually agreed.
6. Not allowing directors and/or staff to personally accept any benefits from traders.
7. Evaluating traders on a yearly basis and informing them of the results of 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 its Credit Facilities Agreements at all times to build up 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 procedures:

1. Strictly complying with the conditions of the Credit Facilities Agreements as mutually agreed. In case it is unable to comply with any condition, the lenders must be informed thereof in advance to jointly seek a solution.
2. Equitably and fairly treating all lenders on the basis of a win-win solution for both sides.
3. Regularly and timely reporting on accurate and complete financial information to lenders.
4. Refraining from demanding, receiving or accepting engagement for any fraudulent benefits in commercial terms.
5. Disclosing information on demand, or acceptance of any fraudulent benefits, to lenders to jointly resolve such problems fairly and promptly.

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 success, and then clearly sets out the staff practices and proper treatment of staff, subject to the Board of Directors' review of the performance in compliance therewith every year. Moreover, the Company sets out the policy and practices on occupational safety and health, as follows:

1. Treatment of staff

- 1) Providing fair and appropriate benefits to staff according to their respective work competency, by mainly employing staff performance evaluation system for development of competency as well as clearly measuring their performance based on KPIs in every key activity in support of consideration of merits of staff and for motivation of work development, including remuneration in line with the value added to the business in the long run.
- 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 staff's development of their knowledge and capacities, whereby the Company allows staff to develop their knowledge by encouraging them to attend training courses or further study in order to enhance their skills and competency, and the Company also organized staff health activities to support the balance between work efficiency and good health and well-being of staff; as well as widely and constantly fostering the attitudes and values on quality work system, including awareness of energy saving and environment preservation. In 2016, the Company arranged for staff training averaging 42.27 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) Ensuring 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 due to mistaken beliefs, whereby the Company supervises staff to ensure that they use lawful products and refrain from infringement of copyrights or intellectual property, along with support of compliance with the operational guidelines and performance of duties with integrity, without any involvement with corruption 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 from working by setting out the policy on safety and hygiene, as follows:

- 1) The Company has an effort to prevent any occupational-related accident, injury and illness through sincere cooperation among all staff as well as restrict and cope with work-related risks on safety under the normal operating process.
- 2) The Company provides for design of tools and equipment, prepares practices on training and supervision by taking into account safety for life and property of staff, and the Company as a whole.



Maintaining the work environment on the basis of occupational health and safety for life and property of staff and the Company, whereby the Company takes into account the safety of staff's operation and the service users, and as such, organizes 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, implement 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 principal of ensuring staff welfare, safety, occupational health and work environment in relation to the metro operations.

In 2016, the Company's statistics of work-related accidents on the expressways represented five times and its statistics of work-related accidents in metro operations were two times, without any staff's death.

**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 where the Company's business premises are located :** The social and environmental impacts of its business operations on the communities adjacent to the expressways, metro routes, or near its office are of concern to the Company, and therefore, the Company continues to organize special activities and provide support to various community activities.

## 2) 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 proper conduct of directors, executives and staff via the code of business ethics of the Company. Furthermore, with the potential damage 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 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.

In this regard, the Company has supervised and monitored to ensure corruption prevention by setting out the clear and precise operating process, with the Internal Audit Unit which has the duty to audit actual performance for preventing/suppressing corruption of all kinds.

### **3) Policy and Practices on Non-infringement of Intellectual Property**

The Company respects and complies with the intellectual property laws, and has policy forbidding 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 of 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 the 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 operate its business with particular emphasis on society and the environment for the Company's sustainable business growth. As such, the Company makes sure that its operations are transparent and fair, with the aim to benefit and grow together with all groups of stakeholders as appropriate. Therefore, the Company has set forth its operating policy for sustainable development, as follows:

1. To lead the organization in accordance with the sustainable development concept, 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 a 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.

Details of activities relating to the corporate social responsibility and sustainable development of the Company in 2016 appear in Item 10: Corporate Social Responsibility.

### **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 environmental impact on service users, staff and communities;

2. Raising staff awareness and promoting the efficient use of energy and natural resources;
3. Complying with environment-related laws and other regulations;
4. Reviewing objectives and goals for continued improvement of the environment management system;
5. Communicating the environmental policy to the public and parties concerned.

It is the responsibility of all the Company's staff and contractors to seriously and regularly implement this policy to ensure a good quality environment for service users, staff, contractors and communities nearby.

## 7) Procedures and Channels of Complaints

### 7.1 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, Bangkok Subdistrict,
Company Secretary	Huai Khwang District, Bangkok 10310
Telephone	: 0 2641 4611
E-mail	: companysecretary@bemplc.co.th

### 7.2 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.

### 7.3 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 safety, appropriate protection measures must be implemented.
5. Those who sustain damage will be compensated by way of appropriate and fair procedures.

#### 9.1.4 Disclosure and Transparency

- 1) The Board of Directors sets out a policy to disclose information to the public, so that the Company's business operations will be transparent and open for inspection with sufficient information disclosure equally to all parties concerned. The Managing Directors have the power to disclose information and ensure the accurate, complete, timely and transparent disclosure of material information relating to the Company, both financial and non-financial, as required by the SEC and the Stock Exchange, via the equitably accessible channels.

In regard to the compliance with the good corporate governance principles, the Board of Directors sets out the disclosure guidelines and ensures the Company's report on compliance with best practices and policies, including any noncompliance, together with an explanation.

- 2) The Company has established the Investor Relations unit to represent the Company in communicating information useful to shareholders, debenture holders, investors, securities analysts, mass media, and relevant parties. The Company has also been a member of Thai IR Club and set up an Investor Relations unit for communication purposes, and a dedicated team is ready to provide information and news to investors and securities analysts and mass media, make appointments, as well as coordinate with shareholders, debenture holders, and investors to ensure sufficient and equal access to appropriate information without any discriminatory treatment of any specific group. 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 so that they would be personally aware of opinions and requirements of Thai and foreign investors. The Managing Directors, the Deputy Managing Directors, the Assistant Managing Directors, the Finance Division General Manager and the Company Secretary 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 answer questions from the public and the press, in accordance with the Company's disclosure policy.

The Board of Directors, executives, advisors and staff of the Company are obliged to keep any undisclosed information strictly confidential. The Company's work rules and regulations 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), good corporate governance guidelines, 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 updated on the 10<sup>th</sup> day of the following month, so as to be regularly and timely available to all investors on the website. Users of such information can conveniently access such information in a timely manner to their best interests. 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 200.

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 revise the Analyst Consensus for the purpose of accuracy, 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 2016, 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 foreign investors, as follows:

- Non deal Roadshows, in association with CH. Karnchang Public Company Limited and CLSA Securities (Thailand) Ltd., in England, Denmark, Netherlands, Germany and France.
- “Thailand Corporate Day”, in association with dbTISCO Thailand Corporate Day at TISCO Tower.
- “SET Thai Corporate Day 2016-Driving Economy with Sustainable Growth” Roadshow at Anantara Siam Bangkok Hotel, organized by SET & CIMB Securities (Thailand) Co., Ltd.
- “CLSA Asean Forum 2016” Roadshow at Grand Hyatt Erawan Bangkok, organized by CLSA Securities (Thailand) Ltd.
- Money Expo 2016 No. 16, in association with CH. Karnchang Public Company Limited, TTW Public Company Limited and CK Power Public Company Limited at IMPACT Muang Thong Thani.
- “Thailand Corporate Access Day”, in association with SET & DBS Vickers Securities in Singapore.
- SET US Roadshow, in association with SET & Maybank Kim Eng in New York, Boston and San Francisco in USA.
- Non deal Roadshow, in association with Credit Suisse in Singapore.
- “Thailand Focus 2016: A New Growth Strategy”, in association with the Stock Exchange of Thailand, Bank of America Merrill Lynch and Phatra Securities at Grand Hyatt Erawan Bangkok.
- Non deal Roadshow, in association with Bualuang Securities in Hong Kong.

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. The Company also participated in the Opportunity Day event organized by the Stock Exchange 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 Si Rat newsletter for disseminating business 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 communication and Investor Relations activities in 2016 (BEM IR SURVEY) for further improvement. The survey revealed that the provision of service in such Investor Relations activities was satisfactory to 91.32 percent of those surveyed.

#### **4) Rules on securities trading by inside information users**

Other than the report on securities trading of executives in accordance with the requirements of the SEC, in regard to other executives along with staff who are authorized to access the Company’s material information which may influence securities price movements, securities trading by usage of inside information, such as, information on capital increase or decrease, dividend payment, the Company’s operational results, joint investments, etc., is considered as taking advantage of general investors. In this respect, the Company prevents any insider trading of securities by requiring its executives to report on their securities trading in accordance with the rules as required by the Stock Exchange, whereby all insiders should refrain from trading securities or should wait until the public has been informed of such information with a reasonable period of time to study.

### 9.1.5 The Board of Directors' Responsibilities

The Board of Directors acknowledges its role and responsibilities to set policies and directions of the Company's operations under the laws, its business objectives, the Articles of Association, as well as resolutions of shareholders' meetings. The Board monitors and supervises management to efficiently and effectively perform in compliance with the specified policies in order to protect the Company's interests, maximize its economic value and create wealth for shareholders based on the good corporate governance principles. The Board of Directors also monitors and supervises management to ensure that the strategies have been applied to the business operations for sustainable growth.

The Board of Directors complies with the best practices of the Stock Exchange in various aspects, as follows:

#### 1. The Board of Directors' Structure

- 1.1 The structure of the Board of Directors consists of 17 qualified members with useful skills, knowledge and experiences to efficiently perform their duties, comprising five executive directors, six independent directors and six non-executive directors, constituting a counterbalance from non-executive directors. The Company has six independent directors, which are more than one-third of all directors. In addition, three directors as EXAT's and MRTA's representatives who have experiences in the Company's core businesses are non-executive directors.
- 1.2 The Board of Directors includes six independent directors, in line with the number as required by the SEC, 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 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 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.
- 1.5 The Board of Directors has no policy to limit the number of companies in which each director may hold directorship since, after considering the matter; it is of the view that all directors devote their time to regularly attend meetings.

#### 2. 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 153 to 156.

### 3. Role, Duties and Responsibilities of the Board of Directors

- 1) The Board of Directors comprises personnel from the business sector and from various professional fields, with leadership, vision, knowledge, ability and experience in various fields, and has independence on decision making for the optimum benefits to the Company and shareholders as a whole. The Board of Directors participates in determination and approval of vision, missions, strategies, targets, business plan and budget of the Company, and supervises management to take actions in compliance with the business plan and budget with efficiency and effectiveness so as to result in the optimum economic value to the business and build up confidence to shareholders.
- 2) The Board of Directors has established the corporate governance policy which is reviewed at least once a year.
- 3) The Company has prepared its code of business ethics, with the approval by the Board of Directors. The code of ethics prescribes proper conduct and practices for directors, executives and staff, specifying guidelines for conduct and treatment towards the Company, colleagues, third parties and society, in accordance with the ethical conduct. In the past, all directors, executives and staff have been informed of and well understood the proper and ethical conduct and complied with such practices in the performance of their duties in line with the Company's mission, with honesty, integrity and fairness, to build up confidence of shareholders and all groups of stakeholders, including the public and society.
- 4) In consideration of any transaction which may involve a conflict of interests, interested directors may not attend nor vote on such matter at the meeting.
- 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.

In addition, the Company regularly reviews its code of ethics. Should the proper conduct and practices in the Company's code of ethics not cover its business operations, the Company will immediately update the same as appropriate. Other than the annual survey on compliance with the Company's code of ethics for directors, executives and staff which they must sign to signify their responsibility for compliance with the Company's code of ethics, and the annual training and test on the code of ethics by means of e-learning for the Company's executives and staff, the Company continuously supports corporate governance training on a yearly basis for high and middle level executives, so as to enhance their knowledge, understanding, visions, and good attitudes towards the Company's management in compliance with good corporate governance principles to build leadership and ensure succession to management, including performance of duties and corporate growth with morality and ethics.

#### 4. The Board of Directors' Meetings

The Company's Board of Directors' Meetings

Names of Directors	Attendances / Total Number of Meetings for 2016				
	Board of Directors	Executive Board	Audit Committee	Nomination and Remuneration Committee	Corporate Governance and Risk Management Committee
1. Dr. Virabongsa Ramangkura	6/6				
2. Mr. Plew Trivisvavet	6/6	11/11		3/3	
3. Mr. Vitoon Tejatussanasoontorn	6/6		4/4	3/3	
4. Gen. Chetta Thanajaro	5/6		4/4	2/3	
5. Gen. Sampao Choosri	6/6		4/4		4/4
6. Dr. Annop Tanlamai <sup>(1)</sup>	4/5		3/3		
7. Mrs. Vallapa Assakul	6/6				4/4
8. Mr. Supong Chayutsahakij	6/6	11/11		3/3	
9. M.L. Prasobchai Kasemsant	6/6				
10. Mr. Phongsarit Tantisuvanitchkul	3/6	11/11			2/4
11. Mr. Werapong Suppasedsak	6/6				
12. Mr. Panit Dunnvatanachit	5/6				
13. Mr. Yuttana Yimgarund <sup>(2)</sup>	N/A				
14. Mr. Theeraphan Tachasirinugune	5/6				
15. Mr. Dumkerng Pankam <sup>(3)</sup>	N/A				
16. Dr. Sombat Kitjalaksana	4/6	11/11			2/4
17. Mrs. Payao Marittanaporn	6/6	11/11			4/4

**Remarks :** (1) Dr. Annop Tanlamai was appointed as director on February 25, 2016.  
(2) Mr. Yuttana Yimgarund was appointed as director on November 30, 2016.  
(3) Mr. Dumkerng Pankam was appointed as director on November 30, 2016.

##### 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. The Board of Directors appoints the Executive Board to help provide management with suggestions and advice, and review the operations in compliance with the Company's policies and work plans in various aspects to ensure efficiency. The Executive Board meets every month in order to closely follow up performance of management.

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 2016, 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 2016, the Audit Committee considered executing three connected transactions.

### 2.2 Nomination and Remuneration Committee

The Nomination and Remuneration Committee will meet to nominate qualified candidates 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 2016, the Nomination and Remuneration Committee held its three meetings to nominate qualified candidates for appointment as the Company's directors to replace those directors who vacated office; and consider scrutinizing remuneration for directors for 2016 for proposal to the 2016 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 good corporate governance principles; 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.

The Company schedules the Corporate Governance and Risk Management Committee's meeting to be held on a quarterly basis.

Furthermore, the Board has reviewed the Company's operations in compliance with the corporate governance policy in five sections under the practices for the Principles of Good Corporate Governance for Listed Companies 2012.

In 2016, 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 the Board's responsibilities in risk management. The Board of Directors has considered risk management each quarter. Risks and risk management plan for 2017 have been reviewed and found that the Company is able to conduct risk management to meet the targeted plan, without any material impact on the Company's business operations. Furthermore, the 2017 annual risk management plan is sufficient 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 schedules to meet monthly 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 2016, the Executive Board held its 11 meetings to consider scrutinizing the agenda items as proposed to the Board of Directors, consider approving transactions with a value not exceeding Baht 200 Million, and consider salaries and bonus for staff.

## 5. 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 good corporate governance principles.

## Results of Board / Subcommittee Self-Assessment

In 2016, 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 improvement and correction of performance. In this regard, the opinions of most of 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, with the duties to help supervise and monitor the businesses; nominate qualified persons to be appointed as the Company's directors based on transparency and fairness and without influence of any person, and consider appropriate and competitive remuneration to retain competent directors; establish policies and directions of operations in respect of the good corporate governance of the Company, code of business ethics, including risk management; supervise and provide suggestions to management for the purpose of the Company's business operations pursuant to the 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 interests 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 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 candidates 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 candidates 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 alert system of all kinds of risks; 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.

## 6. 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 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 interests 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 interests 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 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.

## 7. 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.

## 8. 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 2016 is shown in the caption of Remuneration of Directors and Executives on pages 119 to 120.

## 9. 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 understanding of 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) (as per Information of Company Executives on pages 207 to 213).

## **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 2016, there were four new directors, 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 good corporate governance principles, 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 a training course, as suggested by the SEC, conducted by the Thai Institute of Directors Association (IOD).

## **10. Succession Plan**

The Board of Directors prepares and reports on 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 absence of the Managing Directors or executives in the key positions 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 the nomination of internal personnel, and promotion is considered every year under the specified criteria for development of personnel with good performance and competency for 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, considers this matter in accordance with the 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 reviews the criteria, and selects knowledgeable and qualified persons, while the Board of Directors considers appointing persons at the Managing Director level, and the Executive Board considers appointing the executives at the General Manager level and higher.

The executive who has been determined to succeed to an office must not only be qualified and experienced in the appropriate field, but must also have accepted transfer of knowledge and experience by rotation to other related work units as well as attended the additional necessary training courses to be well prepared in the 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 with sufficient allocation and follows up the assessment in respect of nomination process for qualified and knowledgeable persons as required, with appropriate and fair remuneration, determination of duties and responsibilities, performance of personnel, performance standard, personnel development and efficient communication, to ensure that the staff has knowledge and skills, and the Company's human resource management is

efficient and suitable, focusing on the development of the competency of staff and clarity of the assessment of performance in support of consideration of remuneration as 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, with the Managing Directors as the top executives of the Management Team, totaling 8 persons.

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 at December 31, 2016

1.	Dr. Virabongsa	Ramangkura	Chairman of the Board of Directors
2.	Mr. Plew	Trivisvavet	Vice Chairman of the Board of Directors
3.	Mr. Vitoon	Tejatussanasoontorn	Director
4.	Gen. Chetta	Thanajaro	Director
5.	Gen. Sampao	Choosri	Director
6.	Dr. Annop	Tanlamai	Director
7.	Mrs. Vallapa	Assakul	Director
8.	Mr. Supong	Chayutsahakij	Director
9.	M.L. Prasobchai	Kasemsant	Director
10.	Mr. Phongsarit	Tantisuvanitchkul	Director
11.	Mr. Werapong	Suppasedsak	Director
12.	Mr. Panit	Dunnvatanachit	Director
13.	Mr. Yuttana	Yimgarund	Director
14.	Mr. Theeraphan	Tachasirinugune	Director
15.	Mr. Dumkerng	Pankam	Director
16.	Dr. Sombat	Kitjalaksana	Director
17.	Mrs. Payao	Marittanaporn	Director

### The Board of Directors' Authority and Duties

1. 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 good corporate governance principles, 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.
2. Determining policies and directions of the Company's operations and supervising management to take actions to ensure compliance with the policy with efficiency and effectiveness so as to maximize the economic value to the business and great wealth to shareholders.
3. 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.
4. 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.
5. Considering approval for budget for investment and the Company's annual business operations, including

monitoring use of the Company's resources.

6. 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.
7. Introducing to the Company an internal control system, internal audit and efficient measures to manage risks, as well as following up on such matters on a regular basis.
8. Establishing subcommittees to ensure the good corporate governance.
9. 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.
10. 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 200 Million per transaction, excluding those transactions giving rise to conflict or interest, including such transactions requiring approval from shareholders as per the regulations of the SEC and the Stock Exchange.
11. 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.
12. 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 good corporate governance principles 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 at December 31, 2016, the Audit Committee comprises four independent directors as listed below:

- |                |                                    |                          |                        |
|----------------|------------------------------------|--------------------------|------------------------|
| 1. Mr. Vitoon  | Tejatussanasoontorn <sup>(1)</sup> | Audit Committee Chairman | (Independent Director) |
| 2. Gen. Chetta | Thanajaro                          | Audit Committee Member   | (Independent Director) |
| 3. Gen. Sampao | Choosri                            | Audit Committee Member   | (Independent Director) |

Remark: <sup>(1)</sup> Mr. Vitoon Tejtassanasoontorn served as audit committee member 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 interests 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 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 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 appropriateness of the auditor;
  - (e) Opinions on transactions which may involve a conflict of interests;
  - (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 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 interests;
  - (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 good corporate governance principles which state that the chairman of each subcommittee should be an independent director. As at December 31, 2016, 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, General Sampao Choosri, as independent director, was appointed as Chairman of the Corporate Governance and Risk Management Committee. As at December 31, 2016, the Corporate Governance and Risk Management Committee comprises five members as follows:

- |                                     |   |
|-------------------------------------|---|
| 1. General Sampao Choosri           | Corporate Governance and Risk Management Committee Chairman<br>(Independent Director) |
| 2. Mrs. Vallapa Assakul             | Corporate Governance and Risk Management Committee Member<br>(Independent Director)   |
| 3. Mr. Phongsarit Tantisuvanitchkul | Corporate Governance and Risk Management Committee Member                             |
| 4. Dr. Sombat Kitjalaksana          | Corporate Governance and Risk Management Committee Member                             |
| 5. Mrs. Payao Marittanaporn         | Corporate Governance and Risk Management Committee Member                             |

#### **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 at December 31, 2016, 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 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 200 Million per transaction, excluding those transactions giving rise to a conflict or interests 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 and affix the Company's seal on cheques and withdraw 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) or equivalent per transaction, but not exceeding Baht 40,000,000 (Forty Million Baht Only) or equivalent per month.
7. 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.
8. 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.
9. 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.
10. 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 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 submission date of the application for permission to the SEC, 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 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 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 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 submission date of the application for permission to the SEC;

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 commencement of 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 submission date of the application for permission to the SEC;
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 submission date of the application for permission to the SEC;
7. Not being a director appointed as 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 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 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 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 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 candidates to fill the vacancy.
2. Considering qualifications of the directors who represent EXAT and MRTA in accordance with the conditions as specified in the Concession Agreements.
3. Considering qualifications of candidates 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 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 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 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.

## **9.4 Supervision of Operations of the Subsidiaries**

The Company has the governance mechanism in respect of management and operations of its subsidiaries and associated companies, as follows:

- (1) The Board of Directors considers sending the Company's representatives to serve as directors in other companies according to its shareholding percentage. The directors who are the Company's representatives have power, duties and responsibilities in establishing the significant policies. In this regard, the Board of Directors considers and establishes policies for the directors who are the Company's representatives to vote on various key items of the subsidiaries.
- (2) The structures of the board of directors of the subsidiaries have been specified as follows:  
**Northern Bangkok Expressway Company Limited (NECL), comprising:**
  - 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)**
  - The Company sends its four representatives to serve as directors in BMN from a total of seven directors.
- (3) Governance mechanism of the subsidiaries regarding connected transactions and acquisition or disposition of assets  
For transactions with related persons and acquisition or disposition of assets, the Company has managed the subsidiaries to amend their respective articles of association regarding execution of transactions in accordance with the rules on disclosure and connected transactions. The directors who are the Company's representatives supervise to ensure the subsidiaries' strict compliance with such rules. The details of each such transaction are submitted to the Board of Directors for consideration in accordance with the rules.
- (4) The Company requires the subsidiaries to regularly review their respective internal control systems to ensure adequacy and appropriateness on a yearly basis, and the Company's Internal Audit Office regularly reviews and follows up their compliance with the internal control system, which is specified in the annual audit plans.

## **9.5 Control of Inside Information Usage**

The Company determines its written control of inside information usage in accordance with the good corporate governance principles, as follows:

### **Inside Information Usage Policy**

- (1) Due to the Company's listing on the Stock Exchange of Thailand, any sale or purchase of the Company's securities by its management or staff based on material facts that may affect the market price of the shares or securities, which have not yet been disclosed to the public, and which have been obtained due to their duties or positions in the Company, would be considered as taking advantage of third parties, and may be subject to a criminal penalty under the law.

To prevent the Company's staff and directors, including the Company itself, from performing any such illegal acts which may violate such law, as well as to comply with the good corporate governance guidelines of the Company, 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 Company's subsidiaries, including its affiliates;
3. All staff of the Company and of the Company's subsidiaries;
4. Spouses and minor children of the directors and staff; and
5. Relatives who live with such persons above.

Securities refer to shares, share warrants, convertible debentures and transferable subscription rights issued by the Company.

General Practice

1. Prohibited persons as described above should not sell or purchase the securities under any circumstances if they are aware or should be aware of material information that may affect the market price of the Company's securities, which has not yet been disclosed to the public.
2. Prohibited persons who are in possession of such material information due to 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, prohibited persons shall also follow the following guidelines:

1. Prohibited persons who are directly involved in the preparation of the Company's financial statements and balance sheet are prohibited from any purchase or sale from the commencement of such preparation until 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 disclosure date of the financial statements.
3. Prohibited persons, who know or should have known that the Company will disclose material information that may affect the market price of the Company's securities, are prohibited from selling or purchasing the Company's securities from the day that they know or should have known such information until the disclosure date of such information.

(3) Report of Prohibited Persons

#### 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.
- (3) The Company prohibits executives who have access to inside information from taking any actions contrary to Section 241 of 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 and certification of the financial statements in a timely manner, 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 2016 in the amount of Baht 2,505,000 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 2016 amounting to Baht 350,000 and Baht 1,050,000, respectively.

#### (2) Non-audit fee

In 2016, the Company used any other services from EY Office Limited in the amount of Baht 845,000 as additional fees after the amalgamation and from the service opening of new projects during the year, and from EY Corporate Services Limited in the amount of Baht 200,000 as fee for tax report on the MRT Chaloem Ratchamongkhon Line.

## 9.7 Compliance with the Principles of Good Corporate Governance

The Company has fully complied with the Principles of Good Corporate Governance for Listed Companies 2012, except the following matters:

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 the 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 knowledge and experience in the Company's business operations, thereby maximizing its value to shareholders.
2. Determination of the number of companies where each director will hold directorships in other companies: The Board of Directors has no policy to limit the number of companies in which each director may hold directorships since, after considering the matter; it is of the view that all directors devote their time to regularly attend meetings.

However, in 2016, none of the Company's directors held office as directors in more than five listed companies.

3. Determination of the number of companies where the Managing Directors will hold directorships in other companies: The Board of Directors has no policy to limit the number of companies in which the Managing Directors may hold directorships in other companies since, after considering the matter; it is of the view that the Managing Directors devote their time to conduct management and regularly attend meetings.

However, in 2016, two Managing Directors represented the Company to hold directorships in one listed company invested by the Company.

## 10. Corporate Social Responsibility

The Company, as the expressway and metro service provider, is committed to helping alleviate traffic problems in Bangkok and its surrounding provinces, through the fully-integrated mass rapid transit and transportation systems in order to upgrade the quality of life and shape the future of Thailand's transportation system. Furthermore, the Company operates its businesses based on the good corporate governance, and is socially responsible in both expressway and metro businesses.

### 10.1 Policy Overview

The Company is committed to operating its businesses with particular emphasis on society and the 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 to benefit and grow 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 of the Company's stakeholders;
2. To incorporate the sustainable development concept 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 regional operation and collaboration to achieve sustainable development.

### 10.2 Corporate Social Responsibility and Sustainable Development

The Company has operated the expressway business and the metro business, and actively involved in corporate social responsibility and sustainable development, which can be summarized below.

#### 10.2.1 Expressway Business

The Company, as the expressway operator, is regarded as a key component of the national development, and it is committed to becoming a leading expressway service provider with good corporate governance, convenience and safety under the quality management and continued development. The Company also focuses on the social dimension by setting a clear social mission to coexist with society and pursue its sustainable development without causing any negative environmental impact.

To ensure sustainable coexistence with society in parallel to the Company's ongoing growth under the said social mission in the hope of building a good foundation for people in society for future development, it is then necessary:

- To formulate the fundamental concept based on such social mission for staff to enable them to efficiently perform, coordinate and develop society in collaboration with the stakeholders for the purpose of development of the quality of the neighborhoods surrounding the expressway routes, which will ensure such concept to materialize in the Company's operations. The focus on this concept originates from potential impact of the Company's business operations, from construction to provision of service, on the communities surrounding the expressway routes.
- To improve and enhance the efficiency of the routes by way of regular review of the operating procedures, which takes into consideration not only the compatibility with the current operations, but also future improvement and enhancement (preventive thinking), to minimize potential risks and impacts, ensure rapid management, instant response and more effective cost management.



- To play a key role in helping alleviate the traffic problem for people in society. It is a known fact that traffic congestion has many effects upon society, such as, its economic effects on business interactions of people; its social effects on people's emotional states; and its environmental effects as a result of emission of pollution to society and this world. The Company is determined to minimize these impacts by building good and most suitable expressway routes for society.
- To be recognized as a socially responsible business through staff operations to monitor the quality of the routes to always be ready for service and safe, as well as take care of, share knowledge and opportunities to the neighborhoods adjacent to the existing and future routes.

In light of the Company's commitment to development of the national transportation system to alleviate the traffic problems, and potential risks from its operations, corporate social and environmental responsibility has always been of great importance to the Company and an abiding principle to which the Company adheres in its business operations, creating the "Path to Happiness" by formulating the expressway network in Bangkok and its vicinities. The Company is well-equipped to invest in projects pertaining to expressways, connecting roads and other infrastructure projects of the government on the public private participation (PPP) basis to upgrade the quality of life and develop Thai society towards sustainable growth.

In addition, the Company is determined to provide quality and safe expressway services, with due care and taking into account the impact on stakeholders, economy, society and environment. The Company has adhered to fair practice and business ethics in every step of its work procedures, as well as developed and promoted innovations in terms of efficiency, effectiveness and value added to the business and all parties concerned. The Company is socially responsible in its operations to build up a good impression for the expressway users and society as a whole.

It is a clear policy of the Company to be responsible for rights of all groups of stakeholders, as follows:

1. Internal stakeholders, i.e., staff and executives of the Company and its subsidiaries;
2. External stakeholders, i.e., customers, business partners, lenders, counterparts, competitors, society, communities and schools located near the rights of way, including government sector and relevant authorities.

The Company regularly organizes various activities, e.g., conferences, dialogues, visits, public hearings, studies and surveys on demands and satisfaction, to promote good relationships between the Company and stakeholders. Such activities are aimed at making their interests and concerns heard for further improvement of the Company's operations. This goes further from a plan for developing connections with stakeholders to a mechanism that promotes their participation, including submission of information to the Company's executives, in the consideration of the Company's corporate strategy in the following year.

To achieve its goals, the Company has set out practical guidelines for corporate social responsibility to cover the entire Path to Happiness, namely, covering the current and potential impact, both positive and negative, on major stakeholders; and taking into account the process of the Company's business operations. The Company then determines the scope of its corporate social responsibility in three dimensions as follows:

1. The Source of Happiness focuses on staff treatment, development and care in terms of the quality of life, competency, morality and ethics, active participation in both internal and external processes to deliver the best quality of service to service users under normal and emergency situations.
2. The Path to Happiness focuses on ensuring safety from construction to maintenance, including fair and reciprocal treatment of business partners, counterparts, as well as on creating innovations with social and environmental responsibility throughout the whole process.

3. The Happy Society focuses on acting as a good and responsible citizen for the communities along the routes so as to develop a good quality of life and contribute to society at large.

## Performance for Sustainable Development

The Company's business philosophy for sustainable development focusing on creation of the "Path to Happiness" materializes by engaging staff collaboration with communities, society and environment in support of the achievement and continuity of the Company's social mission, as follows:

### 1. The Source of Happiness

The Company arranges for development of staff both in main and supporting lines of work, particularly staff in main line of work directly related to services on the expressways, 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 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 carriageway.

#### 1.1 Rescue Operation and Traffic Management

Rescue operation drills and assistance in case of serious accidents on the expressways are conducted. Safety training is organized every year, including training on use of the rescue operation vehicles on the expressways, traffic volunteer training and on the job training, and three-month new staff orientation prior to actual operation on the expressways, as well as service mind training.

#### 1.2 Toll Collection Operation

The Company's personnel in charge of this field comprise personnel with the duty to collect tolls from the service users 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 for facilitating the expressway service users' toll payment to be made rapidly. The Company's personnel in charge of toll revenue operation are responsible to ensure that tolls are correctly, transparently and timely collected, in collaboration with the government sector, namely, EXAT, which has the duty to collect tolls from the expressway service users. The Company provides internal on the job training regarding the role and responsibilities of toll collection controllers, emphasizing that tolls must be collected timely, and the counting of vehicles and collection records must be verified for accuracy.

In addition, the condition of toll collection equipment must be checked to be ready for full-time service and to ensure the accuracy of toll collection, which will help assure the Company's steady revenue streams and equally protect the interests of shareholders and stakeholders. The personnel in charge of this field will also attend overseas study visits on toll collection systems.

- 1.3 Structure Maintenance Operation: This is to ensure that the expressways will be ready and safe for service. The Company was 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.

### 2. On the Path to Happiness

The expressway users are the heart of the Company. The Company is then ready to deliver and improve the expressway services to ensure the efficiency 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. This is to fulfill the Company's committed responsibility for the expressway users.

- 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 impact on at-grade traffic and dust and noise pollution during the construction. The construction was 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 256.1 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. 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, and 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 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 service 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 safety of the expressways by means of road safety audits. The audit results are used for the expressway improvements for greater safety.

Under emergency situations or disaster occurrences: In case there is an event or external factor which results in an emergency, namely, peril, serious accident, earthquake and events which may be caused by terrorism or sabotage such as bombing and riot, including gathering of people for inciting public unrest, the Company requires all units to have emergency plans in response to any events which may suddenly occur and arranges for staff training to ensure that the staff in charge would be able to immediately take actions to resolve such emergency, as well as establishes a unit

for monitoring, warning and coordinating with relevant agencies to prevent the occurrence of any serious accident. The Company controls and monitors for strict compliance with the relevant laws. Moreover, the Company further establishes measures for inspection of the routes and their surrounding areas, including cooperation with police officers responsible for the areas around the routes. The Company takes out insurance against Property Damage of the structures of the Si Rat Expressway, the Si Rat - Outer Ring Road Expressway and the Udon Rattaya Expressway, and against Business Interruption, including Public Liability, on a yearly basis, in order to prevent any impact from possible damage.

Political Unrest : At-grade traffic was congested, including congestion at certain on-ramps and off-ramps of the expressways nearby the political rally locations. In order to minimize such impact, the Company arranges for an emergency backup plan in response to possible occurrences. The emergency backup plan involves staff rehearsals for all relevant units to resolve problems, as well as establishes a unit to follow up alerts and coordinate with relevant public agencies to monitor and immediately take actions to resolve such event.

During special long holidays, the Company, in association with EXAT, organizes safe travelling programs. Service units are set up on the expressways to provide a free initial car checkup, including drinking water and refreshing towels as refreshments for long distance trips which will help reduce accident rates.

- 2.4 Treatment towards Traders: Since the Company's business is a unique service which requires high investments for its operations, creditability can be built by the Company's fair treatment of its traders and financial sponsors, which is considered a key success factor to the Company's delivery of quality services to the expressway users, even during a crisis. The Company therefore sets out its practices for traders, namely, fair business operations; a commitment to procurement of standard goods and services, for the purpose of development and maintenance of sustainable relationship with traders, with the clear objectives in terms of quality of goods and services worth their value, technical standard and creditability. The Company therefore provides fair and equal procurement procedures to all traders in compliance with the work procedures regarding procurement in accordance with the requirements of ISO 9001 Quality Management System, based on procedures and measures against unfair competition; setting out guidelines for recognition of and respect for intellectual property of traders as well as protection of such rights; dealing 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. Financial sponsors include lenders, shareholders and creditors, with whom the Company strictly complies with contracts and its obligations to maintain its financial discipline.

### 3. The Happy Society

The Company takes care of communities surrounding the expressway routes to ensure that its business operations will not affect the quality of life and the environment. In doing so, the Company regularly surveys the communities and society nearby the rights of way according to plan. In this respect, the Company also sets out standard work procedures, including its requirement for equipment to prevent any impact or pollution to the nearby communities. In addition, the Company issues press releases to provide details and accepts complaints regarding various projects operated by the Company in order to prevent any possible difficulty to the nearby communities.

In order for guidelines for environmental concerns to be clear, measurable and acceptable, the Company applies ISO 14001: Environment Management System under the following environmental policy:

- Giving priority to pollution prevention and control through the operation and maintenance of the expressways in compliance with international standards, taking into account environmental impact on the expressway users, staff and communities;
- Raising staff awareness and promoting the efficient use of energy and natural resources;
- Complying with environment-related laws and other regulations;
- Reviewing objectives and goals for continued improvement of the environment management system;
- Communicating the environmental policy to the public and all parties concerned.

### 3.1 Business operations affecting the corporate social responsibility

In 2016, the Company and its subsidiaries operated their business in compliance with the laws and applicable rules and regulations without committing any offense or violation of the laws which may affect the Company's corporate social responsibility.

### 3.2 Corporate Social and Environmental Contribution Activities

The Company has a policy and is determined to continuously take care of every sector of society in respect of management of improved operational results, and value added to shareholders, focusing on nearby communities as well as take care of both nearby and remote communities. In 2016, the Company organized the corporate social and environmental activities as follows:

#### 1) Good Family Relationships

##### **"Moms & Kids Strengthen Relationships with BEM at CORO Field in Ratchaburi"**

was held on the occasion of the National Mother's Day, as a special family day, in which the Company played a part in strengthening family relationships by inviting the expressway users and their 14 families, totaling 42 persons, to travel on the Si Rat - Outer Ring Road Expressway heading to Ratchaburi Province to learn new theory agriculture as well as participating in activities to strengthen family relationships in such special time when moms and kids jointly decorated trees in loving and warm atmosphere for all families.

##### **"Dads & Kids to Strengthen Relationships with BEM at the Palace in Nakhon Pathom"**

was held on the occasion of the National Father's Day as the Company continued to realize the significance of activities to strengthen family relationships and then organized the "BEM Invites Dads & Kids to Visit the Palace in Nakhon Pathom" activity by inviting the expressway users and their 13 families, totaling 39 persons, to visit the Control Center Building of the Si Rat - Outer Ring Road Expressway (CCB7) and travel on the Si Rat - Outer Ring Road Expressway connecting with Krungthep - Krungthong heading to Nakhon Pathom Province to appreciate the picturesque of the Sanam Chandra Palace; learn the history in King Rama VI reign; pay homage to the Phra Pathom Chedi; visit the Little Tree Market; and participate in the painting with natural color activity to strengthen family relationships.

#### 2) Awareness of Environmental Preservation

Environmental preservation is of great importance to everyone and requires active participation. The Company then organized the program titled **"Let's Love Environment with BEM"** to campaign for the awareness of environmental and natural preservation by taking management and staff to participate in the Siam Weed Elimination activity to ensure more plant and food areas for wild animals at Khao Yai National Park in Nakhon Ratchasima Province.

#### 3) Moral and Ethical Awareness for Corporate Social Responsibility

**"Hearing the Dharma with BEM"** is intended to promote staff's moral and ethical awareness in order to pave a sustainable way for corporate social responsibility. The Company then organized this activity in which a group of executives and staff participated in hearing the Dharma by



Luang Phoo Mai Intasiri, Abbot of Wat Pha Khao Phu Luang, Nakhon Ratchasima Province, in order to properly apply such teaching to their present lifestyle and work environment.

**“Blood Donation”** is to give blood to give life as a part of the greatest giving. The Company, in association with The Thai Red Cross Society and Faculty of Medicine Vajira Hospital, Navamindradhiraj University, then organized three blood donation activities, with active participation of management and staff.

#### 4) Good Relationships with Related Authorities

The cooperation for 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:

**“Watch Movie with Expressway”** is an event where families of staff of EXAT and police officers of the Expressway Police Station 2 as well as families of the Company’s staff were invited to watch the movie **“Batman v Superman : Dawn of Justice”** at Esplanade Cineplex. All family members had a good time and enjoyed games and the 3D movie.

**“Donation of Cars and Motorcycles to EXAT and the Expressway Police Station 2”**, the Company is committed to taking care of and promoting the performance of the relevant authorities to ensure smooth operations, and to monitor and provide the rapid and efficient services for the expressway users. The Company granted cars and motorcycles to EXAT and the Expressway Police Station 2 for use on the Si Rat Expressway to facilitate the convenient travelling and maximum safety of the expressway users.

#### 5) Promotion of Youth Learning

Education represents a key foundation for youths’ sustainable development of knowledge, thoughts and values in order to become decent and quality citizens of society. The Company continues to encourage and support youth education every year through various activities as follows:

**“Scholarships to Staff’s Children”**, the Company granted scholarships to the Company’s staff’s children with good academic records at the levels of elementary and high school, and for higher education.

**“Scholarships to Adjacent Schools”**, the Company organized the **“BEM Grants Scholarships to Adjacent Schools”** activity, by granting scholarships to underprivileged students with good academic records, including funds for school development for educational purposes to 15 schools adjacent to the Si Rat Expressway, the Si Rat - Outer Ring Road Expressway and the Udon Ratthaya Expressway.

**“Scholarships to Children of EXAT’s Staff”**, the Company, in association with the EXAT and the EXAT Club, granted scholarships to children of EXAT’s staff who are working on the Si Rat Expressway and the Udon Ratthaya 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 collaborate with the Company in ensuring convenience and safety of the expressway users.

## 6) Support for Outdoor Learning Experience

The Company realizes that learning is not restricted only to classroom, and outdoor experience is an opportunity for children to personally and directly learn from experience. Such experience will help them understand various things clearly and comprehensively, and apply the knowledge in the future. The Company thus organized outdoor learning experience activities as follows:

**“Audio Library for Young Blinds”**, the Company acknowledges that reading will bring about sustainable knowledge. The Company supported and took part in the Audio Library for Young Blinds project, as organized by Nation Broadcasting Corporation Public Company Limited and the Foundation for the Blind in Thailand under the Royal Patronage of H.M. the Queen, in order to assist and share knowledge to youths with visual disabilities, by means of audio book recording, which will be organized as an audio library for children.

**“Let’s Inspire Children’s Talents”**, an activity on the occasion of National Children’s Day for 2016, was held for children to explore their own talents through fun activities, with participation by a number of children of the Company’s staff and children of the Expressway Police Station 2’s police officers, students from adjacent schools, including neighbors.

## 7) Support for Other Social Activities

**“Support for “Lankilaphat” Project under H.M. the King’s Initiative”** As His Majesty the King and Her Majesty the Queen have always expressed a concern for the well-being of their people in all aspects, by giving priority to development of personnel and communities to ensure their people are in better physical and mental health, the Office of H.M. Principal Private Secretary, in its capacity as secretary to His Majesty the King and the royal family members, one of whose missions is to be committed to performing works under the royal initiative in respect of improvement of the quality of people’s life, and in response to this royal initiative, initiated a project for construction of people’s playgrounds named “Lankilaphat”, literally meaning a “Sport Field for Growth”, to promote a variety of recreational activities, sports, community development, and other social and public activities, focusing on sustainable quality of life of people and communities, to carry on such royal initiative.

The Company took part in fulfilling such royal initiative by sponsoring and serving as member of the administration committee and subcommittee of the “Lankilaphat” project, starting with two pilot projects, namely, Lankilaphat 1 in Khlong Chan Housing Community, Bang Kapi District, which is currently completed and open for service, and Lankilaphat 2 under the Urupong Expressway, Ratchathewi District, which is under construction.

**“Jointly Granting Proceeds from Happy Running Marathon Activity to the Queen Sirikit National Institute of Child Health (the Children Hospital)”**, the Company, in association with the Expressway Authority of Thailand (EXAT), granted proceeds without deducting any expense from the Happy Running Marathon with the Si Rat - Outer Ring Road Expressway to the Queen Sirikit National Institute of Child Health (the Children Hospital) on the occasion of “Her Majesty the Queen’s 84th Birthday Anniversary” in order to develop the Queen Sirikit National Institute of Child Health to be our country’s key institute in full-service provision of care of and medical treatment to infants and babies with birth defects, including premature labor.

## 10.2.2 Metro Business

### 10.2.2.1 Overview

Based on the Company's commitment to socially and environmentally responsible business operations to ensure the sustainable business growth, the Company has taken into consideration potential impacts on the service users and all groups of stakeholders.

In this regard, stakeholders of the metro business include staff, customers, shareholders, traders, competitors, collaborators, creditors, regulatory units, media, society, communities, and environment.

Moreover, the Company focuses on transparency and fairness in selection of its partners along with support of fair treatment of labor, and establishes an eco-friendly procurement policy. The Company has taken care of its staff by way of competency development, and also taken care of society by way of career development and promotion of education, environmental management system, eco-friendly procurement, renewable resources utilization, and support of environmental innovations. The Company also jointly signed the Memorandum of Agreement on Cooperation Network for Development of Manpower and Expertise in Rail System Technology of the Country.

### 10.2.2.2 Operations and Reporting

The Company discloses its information on CSR in process and CSR after process via the Annual Report of the Company in compliance with the G4 Global Reporting Initiative (GRI) Sustainability Reporting Guidelines taking into account the four-dimensional indicators, namely, economy and finance, environment and energy, society and communities, and supervision. Moreover, the Company is committed to the socially/community and environmentally responsible business operations by complying with the laws and rules without taking advantage of the society as a whole, by realizing the accountability, value and significance of the social interest and environmental preservation.

### 10.2.2.3 Corporate Social Responsibility

This is for stakeholders in five aspects, which will lead to the Company's sustainability.

1. **Staff:** The Company realizes that all of the Company's staff are valuable and play an important role in its business operations, the Company then regularly and continuously supports development and training of staff at all levels. The Company is 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 labor relations laws. The Company treats all staff equally regardless of gender, age, race and religion, position or physical abilities; everyone is treated and cared for in all respects as to job description, safety and work environment, training and development, career opportunity and advancement, consideration and welfare, whereby the clear criteria for career path are set out and appropriate remuneration is based on industrial benchmarking and in other many aspects. This is to satisfy staff to work for the Company to achieve the Company's goals and promote a participatory work environment and teamwork as well as organize the workplace on the occupational safety and health basis. Staff are allowed to show off their abilities as the Company has the notion that staff are regarded as valuable resources and strongly believes 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.

Moreover, the Company implemented the occupational safety and health policy in the business premises so that staff are healthy and safe in working.

“**Happy Workplace**”, the Company realizes that the happy work life of staff is important, as when staff are happy in their work, they will efficiently perform their duties, and quality works will then be delivered to the organization’s customers, thereby ensuring the organization’s sustainable growth. Therefore, the Company organized the “Happy Workplace” campaign, as an activity to enhance and improve the quality of work life for staff to ensure that they are able to work efficiently and happily, which covered eight aspects, as follows:

- 1) **Happy Body** : This activity promoted staff’s good health, both physically and mentally. The Company, in association with Intermedical Care and Lab Hospital, organized the activity to provide staff with information and advice on health and nutrition, exercise, mental care, and weight control to be in the standard criteria in order for staff to apply the obtained knowledge to self-care, etc. Moreover, the Company provided sports support, such as, forming a walking & running for health club and a football club, and held an activity for sports togetherness with staff in CH. Karnchang group and affiliated companies to strengthen relationships and ensure more efficient teamwork.
- 2) **Happy Society** : This activity promoted staff’s unity and social contribution to make society and environment better. The Company regularly communicated information relating to activities, both inside and outside the organization, via the intranet system
  - 2.1) **Internal Society**, the Company has continued to take care of staff, including their families, and always visits them when they are ill. In times of grief for a loss of their loved ones, the Company and colleagues jointly extended our condolences and jointly sponsored funeral ceremonies as well as provided financial assistance for arrangements.
  - 2.2) **External Society**, the Company organized activities to promote staff’s contributions to society and communities, such as, granting of scholarships and donation of supplies, clothes, sports equipment, books and stationery to students and schools in need or various foundations.
- 3) **Happy Heart** : This activity promoted generosity and volunteer spirit among staff and highlighted the Company’s contributions to society, namely, merit-making activities, such as, food offerings to monks on the occasion of New Year Day, merit-making on the occasion of the anniversary of MRT operations, contribution of supplies and items to temples, listening to Dharma talk, Blood Donation to Thai Red Cross Society, and Kathina Robe Offering ceremonies with temples located in the MRT alignment, with the objectives to support Buddhism and build up staff’s giving habits resulting in a happy mind from merit-making, a rise in work morale, and strengthening good relationships with communities along the MRT routes.
- 4) **Happy Relax** : This activity encouraged staff to relax and express their talents, e.g., “**Thank You Party**” at which staff played music and performed on stage, etc.
- 5) **Happy Family** : This activity encouraged staff to participate in common activities and build a relationship like a single family, in both their personal and work lives. One of the activities organized by the Company for staff to promote Thai traditions and strengthen the family institution was the “**Promote Thai Traditions during Songkran Festival**”, which involved a bathing rite for Buddha images, and pouring scented water over the palms of executives, etc.
- 6) **Happy Money** : This activity encouraged staff to know methods of financial management, self-sufficient economy, money utilization and savings. The Company initiated

the legal clinic program to provide staff with accurate and appropriate legal advice without charge, and the Happy Hour by Happy Workplace program which allowed staff and their families to sell goods, sweets, snacks and inventions produced by staff and their families at the Company's canteen for free, together with the **"Marketplace"** activity as regularly held by the Company for distribution of special-priced goods to staff or provision of news and information which were beneficial for staff in relation to money savings or debt management by various financial institutions.

- 7) **Happy Soul** : This activity encouraged staff to apply Dharma to livelihood both in their personal and social lives, namely, staff were allowed to participate in Buddhist ceremonies on traditional days, i.e., **"Guide to Practice Meditation for Happy and Mindful Life"**, whereby staff jointly prayed, meditated and listened to Dharma talk to enhance their physical and mental readiness and concentration on working via a variety of activities.
- 8) **Happy Brain** : This activity provided staff with knowledge in many forms, such as, provision of knowledge via internal communication channel to ensure that staff could catch up with news occurring on issues like health care, report and following up on new contagious diseases, provision of knowledge via articles of financial institutions and other knowledge which was useful for staff's self-care and application in their daily life.

**"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 to ensure staff career paths. In the near future, the Company's personnel should triple in order to accommodate the MRT Purple Line service, including other potential lines in the years to come. Therefore, the human resources management has become absolutely essential and necessary, and the Company must establish more clear and concrete direction for enhancement of competency of human resources starting from 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.

**"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 mass rapid transit operator. 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 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 train operations, the Company also promoted a community of practices (CoPs) to ensure learning and sharing of work experiences, problems, 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 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 refresher training for the existing staff to update their knowledge by way of E-Learning & E-Exam, including regular exams for relevant staff once a year.

### **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 train operations, including rules, regulations and requirements; a work safety program; and a quality management system program. The existing permanent staff are given refresher training on basic 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.

## **2. Products and Services**

To be one of the world's leading mass rapid transit operators with high quality of service, the Company is thus committed to development of the services to be comparable with the world's leading mass rapid transit systems by way of improvement of the quality of services to customers' satisfaction. Therefore, the Company pays attention to customer care in all respects, together with regular improvement and development of the quality of services according to the results of the annual survey on satisfaction, needs and expectations of passengers towards the MRT service quality; the results of inspection and monitoring of the internal processes; the results of inspection and monitoring by external agencies, etc., in order for customers as major stakeholders to derive satisfaction from the use of the MRT service. The Company's mission to provide safe, convenient, fast, reliable and punctual MRT service has been continuously applied to the operating plans so as to value added to the services, covering the areas as follows:

- 1) Value added to safety: The Company's business operations give priority to 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, Lloyd's Register Rail (LR) is engaged as 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. As a result, the statistics of work-related accidents, including the statistics of passengers' injuries while using the MRT service, are likely to reduce. It is for this reason that the Company did receive the National Outstanding Awards 2013-2014 for Occupational Safety, Health and Environment for two years in a row.
- 2) 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. To 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.

- 3) 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.
- 4) Value added to reliability: The Company is committed to the regular services of 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 MRT service capability was assessed by Train Service Delivery, namely, the Company's MRT service capability was always more than 99 percent. In 2016, the Company's Train Service Delivery represented 99.78 percent from the target of 99.70 percent.
- 5) Value added to punctuality: The clear and punctual schedule of the MRT service enable 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 2016, the Company's Train Punctuality (Delay within 5 Min.) represented 99.93 percent from the target of 99.75 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 of 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.

### 3. Traders

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, playing an important part in promoting and supporting to ensure the strength of the business operations, and upon the strength of the Company's business supply chain, the Company stably grows accordingly.

The Company operates its business fairly, with commitment to ethical treatment towards other organizations or the government sector, whether they be traders, business partners, contractual parties, competitors, as well as builds up the good relationship with these stakeholders, by emphasizing on the anti-corruption, public responsibility, fair competition, corporate social responsibility, and respect of the intellectual property, based on the guidelines and guiding practices which the Company treats the business stakeholders, such as, execution of any transactions with any traders/suppliers, and competitors, based on the guidelines for business operations with fairness and transparency, support of lawful labor, and promotion of sustainable business operations.

#### **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 18001:2011 and OHSAS 18001:2007, 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.

#### **4. Society**

As the Company is the service provider for the MRT Chaloem Ratchamongkhon Line (MRT Blue Line) and the MRT Chalong Ratchadham Line (MRT Purple Line) or the MRT which cover the main routes in Bangkok and Nonthaburi so the communities surrounding the MRT routes are considered another group of stakeholders which has been prioritized by the Company. Therefore, provision of the services without having any impact on livelihood of the communities and society, including support and development of the communities and society in the areas where the Company operates its business, and the improved quality of life, are counted as the Company's significant responsibility in its capacity as a good citizen.

In this regard, the Company is determined to mainly improve the quality of life of residents in the communities, by focusing on development of the quality of life in four aspects, namely, family and community economies, physical health, mental health of residents in the communities, and environment in the communities, in which the Company strongly believes that these good factors will give rise to the positive effects on the quality of life of residents in the communities and also bring about a better society in the future. Over the past years, the Company organized a variety of activities to improve the quality of life of the communities and society, for instance, educational promotion project (Getting Fit Beat GAT by MRT), cooperation project with the government and private sectors to provide knowledge relating to health care and safety of use of the MRT services (M Care activity), art and cultural promotion activity projects (activities on the Children Day, activities on the Songkran Day), projects for glorification of the family institution, communities, private development organizations, including religious institution (activities on the Father Day, the Mother Day, the Elderly Day, Buddhist monk robe offering ceremonies), and internal society promotion activities through Happy Society project.

#### **5. Environment**

The Company is committed to continuing its operations on the environment in accordance with ISO 14000 standards, by implementing pollution prevention and control measures, mitigating environmental impacts and sustainable use of resources on the basis of three aspects of sustainable development, namely, society, economy, and environment.

For years, the Company continues its leading role in energy conservation by adopting energy conservation innovations in its business operations, along with sustainable environmental protection in accordance with the energy conservation policy and energy management manual, and also formulates the environmental impact mitigation measures and monitoring program, as well as submitting reports on its compliance with such measures to the Office of Natural Resources and Environmental Policy and Planning, the Ministry of Natural Resources and Environment. Moreover, the Company also formulates a policy on eco-friendly procurement and utilizes renewable resources to ensure the sustainable resource utilization, such as, water resource management project, return the metro cards project, paper conversion and recycling project.

In 2016, the Company implemented the energy-saving policy to save energy and minimize CO<sub>2</sub> emission to meet the annual target through the main projects as follows:

- 1) Controlling main air conditioning system operation at stations to ensure appropriateness by selecting low-voltage main air conditioning system with its capacity to cool areas as required at Chatuchak Station and Huai Khwang Station; and
- 2) Organizing energy-saving promotion activities by taking all staff or officials to go sightseeing at other leading organizations or companies with success in energy-saving implementation for use as guidelines in improvement of performance to ensure the organization's efficient energy utilization as well as helping project the image that "BEM is one of the leading organizations which gives priority to reduction of energy utilization for the country".

In 2017, the Company plans to regularly implement the energy-saving project for sustainable development of the energy management system as follows:

- 1) Project for installation of LED lighting system in replacement of fluorescent tubes inside (Southern) nine MRT stations;
- 2) Project for Energy Baseline inside MRT stations to assess the efficiency of the organizational energy management;
- 3) Energy-saving promotion activities for all staff or officials.

**Environmental Innovation Support :** The Company focuses on adaptation of energy conservation innovations in parallel with sustainably environmental conservation, by identifying instruments for operations heading the same direction to ensure the utmost efficiency, for instance, energy management handbook, annual energy preservation plan. In the previous years, the Company did create work innovations to reduce energy utilization in the train operation service on a regular basis and employ technologies to help save cost in the train operation service for the purpose of energy-saving together with environmental conservation, namely, giving precedence to metro specification and design in new lines to ensure that the metro system's structures, inside equipment and controlling systems have more efficiency in energy utilization; and in respect of main equipment in stations, introducing the Variable Speed Drive (VSD) to control the air conditioning system inside the stations, using LED lighting bulbs in replacement of ordinary lighting bulbs consuming more electricity in order to save energy inside the stations, and sharing energy management guidelines with international agencies from NOVA group of metros, etc. Moreover, the Company encourages its staff to participate in environment-related development in the business operations to build up and raise the awareness of energy-saving and optimal utilization of resources, and energy-saving promotion activities, let alone that the Company is determined to create the metro image that the metro is the new commuting mode choice for all to alleviate traffic congestion in Bangkok which gives rise to air pollution (vehicle exhaust) and reduce energy of the country (fuel oil), and it is regarded as one of the leading organizations which gives priority to reduction of energy utilization for the country.

#### 10.2.2.4 CSR after Process in the Previous Year

“Return the Metro Cards for Environmental Protection and Sustainable Social Development project”, the Company has maintained its commitment to environmental protection, together with social development with sustainability, to fully satisfy communities’ economic, social and environmental requirements through a variety of social contribution activities, with a focus on environmental protection. To this end, the Company organized the “Return the Metro Cards for Environmental Protection and Sustainable Social Development” project to invite MRT passengers to return their expired cards. The Company would donate Baht 10 per card for development of the quality of life in communities through activities in response to needs and livelihood of communities. These included the Share 2 Child activity for youths to learn the use of the MRT service for sightseeing at various places; and the M Care activity, in association with the Company’s alliances, in order to provide information on public health for passengers and the general public, including corporate social responsibility activities in other special occasions.

This project signifies the concerted efforts of all MRT users. The Company is committed to creating and pushing forward with the promotion of quality of life in society, together with environmental protection, to ensure a better quality of life for everyone in society with a bright future for future generations through sustainable development and growth.

In 2016, the Company spent monies from this project to organize activities for development of the quality in various terms of the communities surrounding the MRT routes, i.e., the MRT Chaloem Ratchamongkhon Line (MRT Blue Line) and the MRT Chalong Ratchadham Line (MRT Purple Line), classified into three parts as follows:

#### 1. Activities for Development of Quality of Life on Education

##### “Share 2 Child Activity”

January 9, 2016	The Company, in association with the Nonthaburi Civic Center, organized an exhibition booth on the occasion of National Children’s Day for 2016 by holding activities to develop outdoor learning skills on how to use service of the MRT Chalong Ratchadham Line (MRT Purple Line, Bang Yai - Tao Poon Section) to the participating children, youths and people, namely, <b>Fun Quizzes and Speak Out activity / Painting M Dolls activity / Playing Toss with MRT activity</b> , all of which would help them enhance outdoor experience; have more creative thinking and have fun with MRT, as well as granting shoes to youths in need, organizing an exhibition booth to give ice cream, and drinking water for free throughout the event.
March 4, 2016	The Company organized an activity in association with groups of students and teachers from Wat Pracha Sattha Tham School, Bangkok, located in the alignment of the MRT Chalong Ratchadham Line (Wongsawang Station), which were targeted for being allowed to take a free trial of the MRT Chaloem Ratchamongkhon Line (MRT Blue Line, Hua Lamphong - Bang Sue Section) to travel, to learn, and to experience Buddhism; to join activities enhancing meditation and wisdom at Wat Traimitr Withayaram Voraviham and Lord Buddha Museum at Wat Debsirindrawas.



August 19, 2016	The Company organized an activity in association with groups of students and teachers from Wat Madua School, Nonthaburi Province, located in the alignment of the MRT Chalong Ratchadham Line (Sam Yaek Bang Yai Station and Bang Phlu Station), which were targeted for being allowed to take a free trial of the MRT Chalong Ratchadham Line and the MRT Chaloem Ratchamongkhon Line to travel to broaden their experience by visiting the Chan-Based Buddhism; appreciating the picturesque of Chinese temple architecture at Wat Boromracha Kanchanaphisek Anusorn (Wat Leng Nei Yi 2) in Nonthaburi Province and Children's Discovery Museum (in Bangkok) to expand and inspire youths' imaginations.
September 4, 2016	The Company, in association with the Mass Rapid Transit Authority of Thailand (MRTA) and Bangkok Metro Networks Limited (BMN), organized the "Getting Fit Beat GAT by MRT Year 8.1" activity on the occasion of the service opening of the MRT Chalong Ratchadham Line by providing an opportunity for senior high school students to gain more knowledge from such activity for use in preparing themselves for General Aptitude Test (GAT) to further study at university level, in order to support education of Thai youths, let alone that this activity helped carry on the Company's commitment to social assistance, particularly in educational development of youths as target group which would be the key power of the national development in the future.
September 16, 2016	The Company organized an activity in association with groups of students and teachers from Wat Bang Rak Yai School, Nonthaburi Province, located in the alignment of the MRT Chalong Ratchadham Line (Bang Rak Yai Station), which were targeted for being allowed to take a free trial of the MRT Chalong Ratchadham Line and the MRT Chaloem Ratchamongkhon Line to travel to broaden their experience by visiting Thai civilization learning places to enhance knowledge under the educational course of history, language and literature subjects, at Thai Nithat Exhibition Hall in the Thailand Cultural Center, and ending with fun activities through realistic paintings at the Art in Paradise in Bangkok to enhance learning and practice observation by touching real paintings.
October 6, 2016	The Company organized an activity in association with groups of students and teachers from Chum Chon Wat Samorakoat School in Nonthaburi Province, located in the alignment of the MRT Chalong Ratchadham Line (Yaek Nonthaburi 1 Station), which were targeted for being allowing to take a free trial of the MRT Chalong Ratchadham Line to broaden their experience by visiting scientific learning places at Children's Discovery Museum (in Bangkok) to expand and inspire youths' imaginations.
November 18, 2016	The Company organized an activity in association with groups of students and teachers from Dhammasiri Suksa School (Wat Noi Nok) in Nonthaburi Province, located in the alignment of the MRT Chalong Ratchadham Line (Phra Nang Klao Bridge Station), which were targeted for being allowed to take a free trial of the MRT Chalong Ratchadham Line and the MRT Chaloem Ratchamongkhon Line to travel to broaden their experience by visiting historic learning places in the eras of Krungsri Ayutthaya to Rattanakosin at Rattanakosin Exhibition Hall, Ratcha Damnoen Avenue.

## 2. Activity for Development of Quality of Life on Public Health

“M Care Activity”, the Company, in association with its partners, organized an exhibition booth to provide information on health, safety, and free health checkups for MRT passengers and residents surrounding the MRT routes and nearby communities, as follows:

- Exhibitions on health care and checkup by private hospitals to provide knowledge relating to proper and safe use of the MRT service (by Safety & Quality Division), such as, warning of pickpockets, safety in using escalators, etc., together with CSR bulletin board of Bangkok Expressway and Metro Public Company Limited.
- Passengers’ registration for getting coupons to join activities at various exhibition booths and bringing such coupons to make prize drawing within such event, namely, MRT tickets for 50 prizes worth Baht 50 each, totaling Baht 2,500, M Dolls / flash drives, fans, key rings, cotton bags, notebooks, etc.
- **Free Thai massage** by Thailand Caulfield Foundation for the Blind under the Royal Patronage of Her Royal Highness Princess Maha Chakri Sirindhorn.
- **Health checkup service (Pulse diagnosis)** and health care suggestions by traditional Chinese doctors, Alternative Medicine College, Chandrakasem Rajabhat University.
- **Health checkup service (Electrical pulse diagnosis)** according to elements, hand grip test, basic eye test by Kluaynamthai Hospital.
- **Fasting blood sugar, blood pressure checkup service, health risk assessment, health consult with professional nurses** from Bangpo Hospital.
- **Educating and demonstrating how to make initial breast cancer checkup** by Chulalongkorn Hospital.
- **“Adventure in No Belly Land”** with Thai Health Promotion Foundation (THPF).
- **Healthy food cooking demonstration** as well as educating on nutrition by Intermedical Care and Lab Hospital.
- **Initial oral and teeth health checkup service** by Mahidol University Faculty of Dentistry.
- **Health checkup service, health care suggestions with Thai tradition medicine and Chinese tradition medicine** by College of Oriental Medicine, Rangsit University.

## 3. Activity for Promotion of Other Public Benefits

“**Buddhist Monk Robe Offering Ceremony for 2016**”, the Company in association with communities surrounding the routes of the MRT Chaloem Ratchamongkhon Line (Blue Line) and the MRT Chalong Ratchadham Line (MRT Purple Line), together with the groups of executives and staff, jointly hosted the Buddhist monk robe offering ceremony for 2016 at Wat Madua, Nonthaburi Province, to raise funds for renovation of monks’ dwellings and support for Buddhism, whereby MRT passengers made donations with the Company in the total amount of Baht 817,000.

“**Return the Metro Cards for MRT Lucky Draw**”, which campaigned for passengers’ greater recognition of the “Return the Metro Cards for Environmental Protection and Sustainable Social Development” project by distributing metro card envelopes to passengers who purchased or showed their 1-Day Pass, 3-Day Pass or 30-Day Pass, filling in their names-addresses on the envelopes, inserting used-up 1-Day Pass, 3-Day Pass or 30-Day Pass in the envelopes, and then dropping them into the metro card boxes for lucky draw.

“**MRT’s Free Drinking Water Service for People to Mourn for His Majesty the King’s Passing**” Bangkok Expressway and Metro Public Company Limited (BEM) expressed our deepest and sincere condolences to remembrance of His Majesty the late Phra Bat Somdet Phra Poramintharamaha Bhumibol Adulyadej Mahitalathibet Ramathibodi Chakkrinaruebodin Sayamminthathirat Borommanatbopit by installing free drinking water service counter for people who went to pay respect to the corpse of the late King during October 29 - 30, 2016 at Exit No. 2 of Hua Lamphong MRT station.

## 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 proper conduct of directors, executives and staff via the code of business ethics of the Company. Furthermore, with the potential damage 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 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 Expressway Business

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 good corporate governance principles. 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 Subsidiary 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 by way of training, using both physical and psychological approaches, to develop a positive attitude. The Company believes that decency emanates from inside out, so it regularly organized the “Hearing the Dharma with BEM” throughout 2016. In preparation for the application for certification of membership in Thailand’s Private Sector Collective Action Coalition Against Corruption, the Company 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 executives 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 subjected 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.

### 10.3.3 Metro Business

The Company gives priority to good corporate governance, including anti-corruption measures, and the Company has made determined arrangements to tackle issues of corruption pursuant to the good corporate governance. The Company has made its anti-corruption policy known to all staff and disseminated such policy on intranet website and the Company’s main website regarding the content of Corporate Governance, as well as providing training courses for all new directors of the Company to ensure their awareness of such matters from the beginning and holds an annual refresher and testing program for all staff, in order to review their conduct in accordance with the code of business ethics. Moreover, the Company takes into account potential damage as a result of corruption by arranging for a whistleblower guide for any matter which may give rise to damage to the Company by reporting directly to the Audit Committee.

# 11. Internal Control and Risk Management

## 11.1 Internal Control

The Board of Directors has always realized 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 achieve goal or mission with efficiency and effectiveness, as well as minimize risk and prevent possible 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 to ensure 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, the timely, accurate and reliable financial reports, 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 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 effectiveness of the risk management system is reviewed and evaluated every year, 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 acknowledgement and further report to the Board of Directors. The significant risk factors and management are described in Risk Factors on pages 87 to 92.

**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 without material fault in the internal control system; and it could prevent improper or unauthorized use by executives or employees of the property of the Company and the subsidiaries. The financial report of the Company was 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 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 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 subjected to the Audit Committee's approval. (The details are described in Attachment 3 on pages 216 to 217.)

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 in Attachment 3 on pages 217 to 218.)

## 12. Connected Transactions

### 12.1 Criteria and Procedures for Approval of Execution of Connected Transactions

Transactions with persons who may have a conflict of interests are subject to the conditions and criteria in the ordinary course of business. The execution of connected transactions and transactions with a conflict of interests 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 interests 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 interests, 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 interests in the future, for example, engagement of a group of persons who may have a conflict of interests 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 interests in accordance with the definition of the SEC.

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 Interests for 2016 and 2015

Persons who may have a conflict of interests	Relationship	Nature of Transaction	Transaction Value (Baht)		Necessity/Details	Opinion of the Audit Committee
			2016	2015		
1. CH. Karnchang Public Company Limited	- This company is a major shareholder of the Company, with 29.73 percent of shares in the Company as at September 15, 2016.	The Company - Advance Payment	-	398,250,000	- Advance Payment and Fee for Management of the Si Rat - Outer Ring Road Expressway Project.	- CH. Karnchang Public Company Limited has expertise, experience and know-how in the Segment Box Girder construction methodology in accordance with the terms of reference of the Si Rat - Outer Ring Road Expressway Project, together with experience in administering the lump sum turnkey contracts for the Company with good quality of work and low maintenance costs as well as construction completion according to schedule and within the fixed budget; and its strategic investment partnership with the Company which would assure its responsibility and commitment for the successful operation of the Project.
	- Mr. Plew Trivisvavet, director, executive director, and executive of CH. Karnchang Public Company Limited, serves as director and Chairman of the Executive Board of the Company.	- Project Management Fee	4,100,011,478	8,370,000,000	On September 14, 2012, the Company engaged CH. Karnchang Public Company Limited as Project Manager of the Si Rat - Outer Ring Road Expressway Project, in the total value of Baht 22,500 Million, with a construction period of not exceeding 48 months, commencing on December 15, 2012.	
	- Mr. Prasert Marittanaporn, director and Senior Executive Vice President of CH. Karnchang Public Company Limited is the spouse of Mrs. Payao Marittanaporn, director, executive director, Managing Director of the Company and Acting Managing Director of NECL.	- Trade accounts payable	65,002,500	1,954,890,000		
	- Mr. Phongsarit Tantisuvanitchkul, executive of CH. Karnchang Public Company Limited, serves as director and executive director of the Company.	The Company - Costs of inspection and repair of the structure of the expressway  - Trade accounts payable	-	14,644,976  14,644,976	- Inspection and repair of the structure of the Si Rat Expressway, No. 3, Phase 3: On September 1, 2014, the Company executed a contract engaging CH. Karnchang Public Company Limited to carry out the inspection and repair of the structure of the Si Rat Expressway, No. 3, Phase 3, in the total value of Baht 26,771,325, with a contract term of 10 months from the date of the contract signing.	- The price of the work is reasonable and lower than the price assessed by the independent consulting company. In addition, the contractor has expertise and experience in construction of the Si Rat Expressway, and as such, it should be capable to carry out the work properly and is well-prepared to promptly start the work.

Persons who may have a conflict of interests	Relationship	Nature of Transaction	Transaction Value (Baht)		Necessity/Details	Opinion of the Audit Committee
			2016	2015		
1. CH. Karnchang Public Company Limited (Continued)		- Costs of inspection and repair of the structure of the expressway	6,300,106	-	- Inspection and repair of the structure of the Si Rat Expressway, No. 3, Phase 5: On October 1, 2016, the Company executed a contract engaging CH. Karnchang Public Company Limited to carry out the inspection and repair of the structure of the Si Rat Expressway, No. 3, Phase 5, in the total value of Baht 32,341,810, with a contract term of 10 months from the date of the contract signing.	
		- Trade accounts payable	2,416,794	-		
		<u>The Company</u>				
		- Gain on sale of investment	-	1,235,536,377	- Sale of ordinary shares in Bangkok Metro Public Company Limited: On July 2, 2015, the Company sold its 2,050,134,895 shares in Bangkok Metro Public Company Limited to CH. Karnchang Public Company Limited, at the price of Baht 1.79 per share, whereby the Company received payment on the transaction date in the amount of Baht 2,000 Million, with the remaining payment to be gradually made until completion by August 2017.	- The selling price of shares is reasonable and comparative to market price. Such price was concluded after negotiation and agreement based on the weighted average price of Bangkok Metro Public Company Limited's shares for the past 60 days, less discount of approximately 5 percent due to big lot trading. The conditions on payment were set to allow the Company to be able to sell all such shares on a single occasion at the agreed price.
		- Interest income	35,985,138	44,994,038		
		- Subscriptions receivable net of deferred interest income	756,834,379	1,320,849,241		
		<u>The Company</u>				
		- Other accounts receivable	12,840,000	17,120,000	- Engineering Services and Commissioning for Operation Service in the MRT Purple Line Project, Contract 4: On May 2, 2014, the Company executed the Contract engaging CH. Karnchang Public Company Limited for Engineering Services and Commissioning for Operation Service in the MRT Purple Line Project, Contract 4: Concession for Supply of M&E Systems and O&M Services (Khlong Bang Phai Station - Tao Poon Station), for the total contract value of Baht 450 Million.	- The contract was made with clear terms of payment. CH. Karnchang Public Company Limited is an experienced and specialized company in this type of work and was also responsible for the civil infrastructure work in relation to each train station. CH. Karnchang Public Company Limited has information of electric systems and civil work, which would enhance the efficiency in construction of such project.
		- Advance payment received under the Contract for Engineering Services (which was recorded in deferred project cost of rail in the Company's statement of financial position)	104,000,000	86,000,000		

Persons who may have a conflict of interests	Relationship	Nature of Transaction	Transaction Value (Baht)		Necessity/Details	Opinion of the Audit Committee
			2016	2015		
1. CH. Karnchang Public Company Limited (Continued)		<u>The Company</u> - Cost of maintenance of civil infrastructure and electrical and mechanical systems	87,555,556	2,444,444	- Civil Infrastructure and Electrical and Mechanical Systems Maintenance for the MRT Chaloem Ratchamongkhon Line Project (MRT Blue Line): On November 17, 2015, the Company executed the Project Management Agreement engaging CH. Karnchang Public Company Limited for Civil Infrastructure and Electrical and Mechanical Systems Maintenance for the MRT Chaloem Ratchamongkhon Line Project (MRT Blue Line) for a period of 9 years, for the total contract value of Baht 1,270 Million.	- The value of the Project Management Agreement with CH. Karnchang Public Company Limited for Civil Infrastructure and Electrical and Mechanical Systems Maintenance for the MRT Blue Line is reasonable and lower than the price assessed by the independent consulting company under the same scope of work. In addition, CH. Karnchang Public Company Limited is a large-sized construction company in Thailand, having experience and expertise, and familiarity to equipment, including civil infrastructure of the metro, as it was responsible for the construction of tunnels and metro stations in the southern part of the MRT Blue Line Project. Therefore, it is well prepared for management of the maintenance and supply of equipment for the maintenance service.
		- Trade accounts payable	41,441,667	2,615,556		
		<u>The Company</u> - Cost of maintenance of civil infrastructure and electrical and mechanical systems	55,000,000	-	- On November 17, 2015, the Company executed the Project Management Agreement engaging CH. Karnchang Public Company Limited 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 for a period of 8 years from November 17, 2015 to November 16, 2023, for the contract value of Baht 1,520 Million. Subsequently, on December 14, 2016, the Company executed additional Project Management Agreement engaging CH. Karnchang Public Company Limited for Civil Infrastructure and Electrical and Mechanical Systems Maintenance for the MRT Purple Line, for the contract value of Baht 155 Million, for a period of 7 years from January 1, 2017 to December 31, 2023.	- The value of the Project Management Agreement with CH. Karnchang Public Company Limited for Civil Infrastructure and Electrical and Mechanical Systems Maintenance, as well as supply of equipment and tools for train operation and maintenance services, for the MRT Purple Line is reasonable and lower than the price assessed by the independent consulting company under the same scope of work. In addition, CH. Karnchang Public Company Limited is a large-sized construction company in Thailand, having experience and expertise, and familiarity to equipment, including engineering structures of the MRT Purple Line.
		- Improvement of civil infrastructure in stations and depot, as well as supply of related spare parts and equipment (which was recorded in deferred project cost of rail in the Company's statement of financial position)	53,000,000	-		
		- Trade accounts payable	52,715,333	-		

Persons who may have a conflict of interests	Relationship	Nature of Transaction	Transaction Value (Baht)		Necessity/Details	Opinion of the Audit Committee
			2016	2015		
1. CH. Karnchang Public Company Limited (Continued)		Northern Bangkok Expressway Company Limited ("NECL")	24,972,181	608,350	<ul style="list-style-type: none"> <li>Inspection and repair of the structure of the Udon Rathaya Expressway, No. 3, Phase 4: On December 1, 2015, the subsidiary (NECL) executed a contract engaging CH. Karnchang Public Company Limited to carry out the inspection and repair of the structure of the Udon Rathaya Expressway, No. 3, Phase 4, in the total value of Baht 25,580,531, with a contract term of 10 months from the date of the contract signing.</li> <li>BMN entered into the office space lease agreement in Viriyathavorn Building with CH. Karnchang Public Company Limited, with a term of three years until February 9, 2016, and extended the lease term for another five months until July 9, 2016. Subsequently, BMN relocated its office by entering into the office space lease agreement in Viriyathavorn 2 Building with CH. Karnchang Public Company Limited, with a term of three years, from July 10, 2016 to July 9, 2019.</li> </ul>	<ul style="list-style-type: none"> <li>The price of the work is reasonable and lower than the price assessed by the independent consulting company. In addition, the contractor has expertise and experience in construction of the Si Rat Expressway, and as such, it should be capable to carry out the work properly and is well-prepared to promptly start the work.</li> <li>This rental rate is comparable to the rental rates charged by the lessor to third party lessees.</li> </ul>
		- Costs of inspection and repair of the structure of the expressway				
		- Trade accounts payable	-	650,935		
		Bangkok Metro Networks Limited ("BMN")	7,188,358	6,675,592		
2. Mass Rapid Transit Authority of Thailand ("MRTA")	<ul style="list-style-type: none"> <li>The Mass Rapid Transit Authority of Thailand holds shares in the Company representing 8.22 percent as at September 15, 2016.</li> <li>Mr. Yuttana Yingarund, director of MRTA, serves as director of the Company.</li> <li>Mr. Theeraphan Tachasirinugune, executive of MRTA, serves as director of the Company.</li> </ul>	The Company	503,539,074	466,697,678	<ul style="list-style-type: none"> <li>The remuneration to MRTA from the fare revenue and commercial development revenue.</li> <li>In 2015, the building and land taxes amounted to Baht 3.14 Million, and the building and land taxes with retroactive effect for 2005 - 2013 amounted to Baht 11.34 Million.</li> </ul>	<ul style="list-style-type: none"> <li>The transaction is in accordance with the conditions of the Concession Agreement with which the Company is required to comply.</li> <li>The transaction is the expense which was made and paid under the Agreement.</li> </ul>
		- Remuneration from fare revenue and commercial development revenue				
		- Building and land taxes	3,521,496	14,481,380		
		- Trade accounts and other payables (Remuneration payable from revenue and others)	102,915,876	103,204,494		



Persons who may have a conflict of interests	Relationship	Nature of Transaction	Transaction Value (Baht)		Necessity/Details	Opinion of the Audit Committee
			2016	2015		
2. MRTA (Continued)		<u>BMN</u> - Remuneration from commercial development revenue	236,963	484,160	- BMN took on lease of the area for advertising board installation in the vicinity of the Interchange Building at the MRT Sukhumvit Station, covering an area of 12 square meters, which ended in August 2016.	- The rental rate of such advertising media is reasonable.
		- Building and land taxes	6,675,561	22,568,816	- In 2015, building and land taxes amounted to Baht 5.54 Million, and the building and land taxes with retroactive effect for 2005 - 2014 amounted to Baht 17.03 Million.	- The transaction is in accordance with the conditions of the Agreement.
		- Trade accounts payable	-	-		

## 13. Financial Highlights

### Summary of the Report of the Auditor

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 2016, 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 2016. 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 2016, their operational results and cash flow for the year then ended in accordance with Thai Financial Reporting Standards.

Statement of financial position	2016		2015		2014	
	Amount	Percent	Amount	Percent	Amount	Percent
<b>Assets</b>						
<b>Current assets</b>						
Cash and cash equivalents	777,001,145	0.94	4,483,374,825	5.74	2,377,047,712	3.39
Current investments	5,941,349,949	7.18	497,356,702	0.64	2,347,869,300	3.35
Trade and other receivables	1,614,563,463	1.95	84,628,359	0.11	101,814,657	0.15
Current portion of receivable from sales of investment	756,834,379	0.91	564,014,862	0.72	-	-
Other current assets	129,541,368	0.16	239,884,440	0.31	198,265,173	0.29
<b>Total current assets</b>	<b>9,219,290,304</b>	<b>11.14</b>	<b>5,869,259,188</b>	<b>7.52</b>	<b>5,024,996,842</b>	<b>7.18</b>
<b>Non-current assets</b>						
Receivable from sales of investment, net of current portion	-	-	756,834,379	0.97	-	-
Investments in associates	9,667,680,300	11.68	9,836,588,559	12.60	8,893,834,811	12.70
Other long-term investment	1,237,849,790	1.50	913,087,490	1.17	699,337,490	1.00
Investment properties	120,357,493	0.15	120,357,493	0.15	120,357,493	0.17
Building and equipment	340,732,838	0.41	154,365,572	0.20	152,078,567	0.22
Project costs under construction	-	-	19,600,400,995	25.10	10,744,375,635	15.34
Rights to operate completed expressway sectors	41,551,825,215	50.19	20,327,463,226	26.03	23,146,990,149	33.05
Rights to use sites for expressway construction	1,020,623,701	1.23	1,320,193,685	1.69	1,611,877,302	2.30
Intangible asset under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line	16,959,960,538	20.49	16,987,640,143	21.75	17,245,678,953	24.63
Advance payment under expressway construction contract	-	-	398,250,000	0.51	1,235,250,000	1.76
Project cost of the MRT Chalong Ratchadham Line	627,255,954	0.76	271,396,970	0.35	136,820,680	0.20
Deferred of project remuneration	1,614,607,949	1.95	942,249,276	1.21	308,832,264	0.44
Other Intangible assets	68,228,569	0.08	36,236,800	0.05	34,591,734	0.05
Deferred tax assets	201,887,940	0.24	474,860,502	0.61	622,207,992	0.89
Other non-current assets	155,262,494	0.18	85,418,857	0.09	48,734,082	0.07
<b>Total non-current assets</b>	<b>73,566,272,781</b>	<b>88.86</b>	<b>72,225,343,947</b>	<b>92.48</b>	<b>65,000,967,152</b>	<b>92.82</b>
<b>Total assets</b>	<b>82,785,563,085</b>	<b>100.00</b>	<b>78,094,603,135</b>	<b>100.00</b>	<b>70,025,963,994</b>	<b>100.00</b>

Statement of financial position (continued)	2016		2015		2014	
	Amount	Percent	Amount	Percent	Amount	Percent
<b>Liabilities and shareholders' equity</b>						
<b>Current liabilities</b>						
Short-term loans from financial institutions	4,715,775,247	5.70	22,410,000,000	28.70	2,000,000,000	2.86
Trade and other payables	819,413,535	0.99	2,579,553,648	3.30	2,009,237,107	2.87
Payable from purchase of investment - due within 1 year	-	-	-	-	313,695,000	0.45
Current portion of long-term loans from financial institutions	2,066,750,000	2.50	118,500,000	0.15	40,500,000	0.06
Unearned fare box revenue	111,971,378	0.14	89,973,896	0.12	86,935,236	0.12
Deposits on stored value ticket	43,313,997	0.05	34,738,933	0.04	35,474,683	0.05
Current portion of debentures	-	-	-	-	3,000,000,000	4.28
Income tax payable	31,444,025	0.04	306,735,926	0.39	308,734,049	0.44
Current portion of provision for compensation for site acquisition cost	1,500,000,000	1.81	1,500,000,000	1.92	1,500,000,000	2.14
Other current liabilities						
Retention guarantees	70,983,137	0.09	161,068,581	0.21	208,666,119	0.30
Others	198,105,957	0.23	114,148,191	0.15	133,895,027	0.19
<b>Total current liabilities</b>	<b>9,557,757,276</b>	<b>11.55</b>	<b>27,314,719,175</b>	<b>34.98</b>	<b>9,637,137,221</b>	<b>13.76</b>
<b>Non-current liabilities</b>						
Long-term loans from financial institutions, net of current portion	16,952,402,523	20.48	17,329,066,575	22.19	12,089,017,683	17.26
Debentures, net of current portion	23,167,912,861	27.99	-	-	16,384,594,851	23.40
Derivative financial liabilities	18,608,408	0.02	-	-	-	-
Provision for compensation for site acquisition cost, net of current portion	2,817,151,698	3.40	4,066,671,698	5.21	5,262,381,698	7.51
Provision for long-term employee benefits	471,043,876	0.57	237,842,102	0.30	211,263,100	0.30
Other non-current liabilities	17,982,160	0.02	16,269,432	0.02	232,982,188	0.34
<b>Total non-current liabilities</b>	<b>43,445,101,526</b>	<b>52.48</b>	<b>21,649,849,807</b>	<b>27.72</b>	<b>34,180,239,520</b>	<b>48.81</b>
<b>Total liabilities</b>	<b>53,002,858,802</b>	<b>64.03</b>	<b>48,964,568,982</b>	<b>62.70</b>	<b>43,817,376,741</b>	<b>62.57</b>

Statement of financial position (continued)	2016		2015		2014	
	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	18.46	15,285,000,000	19.57	28,500,000,000	40.70
Issued and paid-up						
15,285,000,000 ordinary shares of Baht 1 each	15,285,000,000	18.46	15,285,000,000	19.57	28,200,000,000	40.27
Premium on ordinary shares	5,816,938,084	7.03	5,816,938,084	7.45	5,816,938,084	8.31
Investment before amalgamation	-	-	-	-	(2,340,328,827)	-3.34
Retained earnings						
Appropriated - statutory reserve	928,690,000	1.12	800,490,000	1.02	800,000,000	1.14
Unappropriated	7,763,596,451	9.38	7,254,261,049	9.29	(6,390,591,344)	-9.13
Other components of shareholders' equity	(104,972,966)	-0.13	(113,097,160)	-0.14	(34,442,517)	-0.05
Equity attributable to shareholders of the Company	29,689,251,569	35.86	29,043,591,973	37.19	26,051,575,396	37.20
Non-controlling interests of the subsidiaries	93,452,714	0.11	86,442,180	0.11	157,011,857	0.23
<b>Total shareholders' equity</b>	<b>29,782,704,283</b>	<b>35.97</b>	<b>29,130,034,153</b>	<b>37.30</b>	<b>26,208,587,253</b>	<b>37.43</b>
<b>Total liabilities and shareholders' equity</b>	<b>82,785,563,085</b>	<b>100.00</b>	<b>78,094,603,135</b>	<b>100.00</b>	<b>70,025,963,994</b>	<b>100.00</b>



Income statement	2016		2015		2014	
	Amount	Percent	Amount	Percent	Amount	Percent
<b>Revenues</b>						
Revenue from expressway business	9,300,724,132	70.28	8,814,588,007	67.26	8,485,017,698	71.40
Revenue from rail business	3,230,064,080	24.41	2,373,562,621	18.11	2,247,826,551	18.92
Revenue from commercial development business	573,349,010	4.33	549,431,372	4.19	501,051,472	4.22
Other income						
Interest income	68,199,690	0.52	57,843,948	0.44	43,267,448	0.36
Gain from sales of investment before amalgamation	-	-	1,235,526,377	9.43	-	-
Gain from sales of investment	31,090,443	0.23	62,222,728	0.47	536,651,350	4.52
Others	29,967,268	0.23	11,636,374	0.10	69,584,458	0.58
<b>Total revenues</b>	<b>13,233,394,623</b>	<b>100.00</b>	<b>13,104,811,427</b>	<b>100.00</b>	<b>11,883,398,977</b>	<b>100.00</b>
<b>Expenses</b>						
Cost of expressway business	1,345,932,621	10.17	1,239,604,475	9.46	1,101,541,468	9.27
Cost of rail business	1,959,861,340	14.81	1,444,542,770	11.02	1,369,850,563	11.53
Cost of commercial development business	199,943,914	1.51	210,151,434	1.60	185,867,601	1.56
Amortisation of rights to operate completed expressway sectors and compensation for site acquisition cost	3,470,883,807	26.23	3,422,566,022	26.12	3,326,864,677	28.00
Amortisation on intangible asset under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line and remuneration fee to the grantor	851,636,080	6.44	777,584,371	5.93	572,317,474	4.82
Selling expenses	92,540,321	0.70	79,252,582	0.60	54,459,803	0.46
Administrative expenses	1,038,036,681	7.84	1,035,883,873	7.92	868,993,631	7.30
<b>Total expenses</b>	<b>8,958,834,764</b>	<b>67.70</b>	<b>8,209,585,527</b>	<b>62.65</b>	<b>7,479,895,217</b>	<b>62.94</b>
<b>Profit before share of profit from investments in associates, finance cost and income tax expenses</b>	<b>4,274,559,859</b>	<b>32.30</b>	<b>4,895,225,900</b>	<b>37.35</b>	<b>4,403,503,760</b>	<b>37.06</b>
Share of profit from investments in associates	347,349,465	2.63	461,212,789	3.52	546,426,651	4.59
<b>Profit before finance cost and income tax expenses</b>	<b>4,621,909,324</b>	<b>34.93</b>	<b>5,356,438,689</b>	<b>40.87</b>	<b>4,949,930,411</b>	<b>41.65</b>
Finance cost	(1,446,116,624)	-10.93	(1,934,186,129)	-14.76	(1,437,191,010)	-12.09
<b>Profit before income tax expenses</b>	<b>3,175,792,700</b>	<b>24.00</b>	<b>3,422,252,560</b>	<b>26.11</b>	<b>3,512,739,401</b>	<b>29.56</b>
Income tax expenses	(562,927,698)	-4.26	(721,234,596)	-5.50	(702,302,531)	-5.91
<b>Profit for the period</b>	<b>2,612,865,002</b>	<b>19.74</b>	<b>2,701,017,964</b>	<b>20.61</b>	<b>2,810,436,870</b>	<b>23.65</b>
<b>Profit attributable to:</b>						
Equity holders of the Company	2,605,854,468	19.69	2,649,736,343	20.22	2,744,542,901	23.10
Non-controlling interests of the subsidiaries	7,010,534	0.05	51,281,621	0.39	65,893,969	0.55
	<b>2,612,865,002</b>	<b>19.74</b>	<b>2,701,017,964</b>	<b>20.61</b>	<b>2,810,436,870</b>	<b>23.65</b>
<b>Basic earnings per share</b>						
Profit attributable to equity holders of the Company	0.170		0.173		0.180	

Statement of comprehensive income	2016		2015		2014	
	Amount	Percent	Amount	Percent	Amount	Percent
Profit for the period	2,612,865,002	19.74	2,701,017,964	20.61	2,810,436,870	23.65
Other comprehensive income						
Other comprehensive income to be reclassified to profit or loss in subsequent periods:						
Unrealised loss from cash flow hedges of the Company	(14,886,726)	-0.11	-	-	-	-
Unrealised gain (loss) from cash flow hedges of associate	19,198,381	0.15	(46,505,941)	-0.35	(1,754,805)	-0.01
Unrealised gain from revaluation of available for sale investment	3,812,539	0.02	-	-	-	-
Other comprehensive income to be reclassified to profit or loss in subsequent periods, net of income tax	8,124,194	0.06	(46,505,941)	-0.35	(1,754,805)	-0.01
Other comprehensive income not to be reclassified to profit or loss in subsequent periods						
Actuarial gain (loss) of the Company	(134,132,646)	-1.01	5,606,050	0.04	(4,689,568)	-0.04
Actuarial gain (loss) of associates	13,580	-	-	-	-	-
Other comprehensive income not to be reclassified to profit or loss in subsequent periods, net of income tax	(134,119,066)	-1.01	5,606,050	0.04	(4,689,568)	-0.04
Other comprehensive income for the period	(125,994,872)	-0.95	(40,899,891)	-0.31	(6,444,373)	-0.05
Total comprehensive income for the period	2,486,870,130	18.79	2,660,118,073	20.30	2,803,992,497	23.59
Total comprehensive income attributable to:						
Equity holders of the Company	2,479,859,596	18.74	2,608,836,452	19.91	2,738,098,528	23.04
Non-controlling interests of the subsidiaries	7,010,534	0.05	51,281,621	0.39	65,893,969	0.55
	2,486,870,130	18.79	2,660,118,073	20.30	2,803,992,497	23.59

Cash flow statement	2016	2015	2014
<b>Cash flows from operating activities</b>			
Profit before tax	3,175,792,700	3,422,252,560	3,512,739,401
Adjustments to reconcile profit before tax to net cash provided by (paid from) operating activities:			
Amortisation and depreciation	3,422,513,416	3,270,656,984	3,144,375,105
Allowance for doubtful debt	471,546	-	-
Amortisation of financial fees	17,883,479	39,449,343	21,491,782
Gain from sales of investment before amalgamation	-	(1,235,526,377)	-
Gain on investments	(31,090,443)	(62,222,728)	(536,651,350)
Loss (gain) on disposal/write off of equipment and intangible asset under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line	1,197,724	(3,481,422)	(4,397,582)
Compensation for site acquisition cost	550,049,984	595,973,617	625,658,983
Provision for long-term employee benefits	63,285,807	36,803,472	38,572,363
Share of profit from investments in associates	(347,349,465)	(461,212,789)	(546,426,651)
Unrealised loss (gain) on exchange rate	509,200	552,419	(5,710,436)
Interest income	(67,646,250)	(57,085,937)	(41,230,197)
Interest expenses	1,173,937,460	1,330,203,885	1,363,648,694
Profit from operating activities before changes in operating assets and liabilities	7,959,555,158	6,876,363,027	7,572,070,112
Operating assets (increase) decrease			
Trade and other receivables	(1,530,393,882)	21,466,299	(6,252,094)
Other current assets	100,361,854	(41,775,407)	(72,219,772)
Deferred of project remuneration	(672,358,673)	(633,417,011)	(227,082,264)
Other non-current assets	(59,034,205)	(27,667,427)	(575,696)
Operating liabilities increase (decrease)			
Trade payables and other payables	35,153,974	133,650,482	(233,224,883)
Unearned fare box revenue	21,997,482	3,038,660	9,468,703
Deposits on stored value ticket	8,575,064	(735,750)	3,114,102
Other current liabilities	(14,279,907)	(75,632,327)	110,347,238
Other non-current liabilities	(2,731,699)	(12,808,430)	(12,856,850)
Cash paid for compensation for site acquisition cost	(1,500,000,000)	(1,500,000,000)	(1,200,000,000)
Net cash flows from operating activities	4,346,845,166	4,742,482,116	5,942,788,596
Cash received from interest income	14,076,604	4,537,910	20,704,737
Cash paid for income tax	(515,595,620)	(585,484,131)	(505,029,424)
<b>Net cash flows from operating activities</b>	<b>3,845,326,150</b>	<b>4,161,535,895</b>	<b>5,458,463,909</b>

Cash flow statement (continued)	2016	2015	2014
<b>Cash flows from investing activities</b>			
Decrease (increase) in current investments	(5,419,545,593)	1,901,788,886	(1,543,142,652)
Increase of investments in subsidiary	-	(154,000,000)	-
Cash paid for purchases of investments in associates	-	(1,402,165,044)	(400,000,000)
Cash received from sales of investments in associates	46,971,310	42,514,120	1,097,300,894
Cash received from sales of investment before amalgamation	600,000,000	2,300,000,000	-
Increase in other long-term investments	(324,762,300)	(213,750,000)	(265,106,250)
Cash received from sales of equipment and intangible asset under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line	8,074,075	3,514,566	4,650,462
Purchase of equipment	(233,560,594)	(39,352,287)	(49,625,222)
Cash received from interest income	12,907,263	9,339,041	21,897,342
Cash received from dividend income	498,953,704	528,855,465	524,972,500
Cash paid for the MRT Chalong Ratchadham Line	(362,076,317)	(134,104,815)	181,837,781
Increase in intangible asset under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line	(412,493,534)	(141,867,979)	(81,439,260)
Cash paid for expressway construction	(5,732,648,468)	(7,038,885,967)	(6,361,914,211)
Interest expenses capitalised as cost of expressway projects	(301,989,908)	(385,316,949)	(249,509,380)
Increase in intangible assets	(43,075,180)	(8,680,720)	(7,462,181)
<b>Net cash flows used in investing activities</b>	<b>(11,663,245,542)</b>	<b>(4,732,111,683)</b>	<b>(7,127,540,177)</b>
<b>Cash flows from financing activities</b>			
Cash received for in short-term loans from financial institutions	10,400,000,000	20,410,000,000	2,000,000,000
Cash paid for short-term loans from financial institutions	(28,090,000,000)	-	-
Repayment of construction payable to related party	-	-	(60,185,781)
Cash received from long-term loans from financial institutions	12,344,000,000	5,356,000,000	2,460,185,781
Repayment of long-term loans from financial institutions	(10,759,185,781)	(40,500,000)	(2,259,064,970)
Cash received from debentures	23,500,000,000	-	4,000,000,000
Cash paid for redemption of debentures	(300,000,000)	(19,400,000,000)	(2,700,000,000)
Cash paid for financial fees	(67,423,644)	(21,495,301)	(14,143,028)
Interest paid	(1,081,644,863)	(1,702,101,798)	(1,104,272,809)
Dividend paid	(1,834,200,000)	(1,925,000,000)	(1,309,000,000)
<b>Net cash flows from (used in) financing activities</b>	<b>4,111,545,712</b>	<b>2,676,902,901</b>	<b>1,013,519,193</b>
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>(3,706,373,680)</b>	<b>2,106,327,113</b>	<b>(655,557,075)</b>
Cash and cash equivalents at beginning of period	4,483,374,825	2,377,047,712	3,032,604,787
<b>Cash and cash equivalents at beginning of period</b>	<b>777,001,145</b>	<b>4,483,374,825</b>	<b>2,377,047,712</b>

## 13.2 Financial Ratios of Financial Statements

	Unit	2016	2015	2014
<b>LIQUIDITY RATIO</b>				
1. Liquidity Ratio	Time	0.96	0.21	0.52
2. Quick Ratio	Time	0.87	0.19	0.50
3. Cash Flow Ratio	Time	0.21	0.23	0.65
4. Accounts Receivable Turnover*	Time	N/A	N/A	N/A
5. Average Collection Period*	Day	N/A	N/A	N/A
6. Accounts Payable Turnover*	Time	N/A	N/A	N/A
7. Average Debt Servicing Period*	Day	N/A	N/A	N/A
8. Cash Cycle*	Day	N/A	N/A	N/A
<b>PROFITABILITY RATIO</b>				
9. Gross Profit Margin	%	40.26	39.56	41.64
10. Cash to Profitability Ratio	%	92.07	86.24	127.22
11. Net Profit Margin	%	19.69	20.22	23.10
12. Return on Equity	%	8.87	9.76	11.04
<b>EFFICIENCY RATIO</b>				
13. Return on Total Assets	%	3.25	3.65	4.15
14. Return on Fixed Assets	%	12.53	15.31	14.21
15. Assets Turnover	Time	0.16	0.18	0.18
<b>FINANCIAL POLICY RATIO</b>				
16. Debt to Equity Ratio	Time	1.78	1.68	1.67
17. Interest Coverage Ratio	Time	6.62	6.03	5.88
18. Obligation Serviceability Ratio (Cash Basis)	Time	3.32	1.67	1.32
19. Net Debt to EBITDA	Time	5.96	5.48	4.87
<b>Per Share DATA</b>				
20. Book Value per Share	Baht	1.94	1.90	1.70
21. Net Earnings per Share	Baht	0.17	0.17	0.18
22. Dividend per Share	Baht	0.11	0.07	-

### Note

\* 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



## 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, detailed 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 establishes 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 2016 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  
22 February 2017



(Mrs. Payao Marittanaporn)  
Managing Director  
22 February 2017

## 14. Management Discussion and Analysis

### Significant events in this year

Bangkok Expressway and Metro Public Company and its subsidiaries (“the Company”), the operator of Expressway and Rail business has operated significant projects in the year 2016 as following order;

On August 6, 2016, the Company has operated the service for the MRT Purple Line project Bang Yai-Rat Burana, Bangyai-Bang Sue section (Klong Bang Pai station - Tao Poon station), which was awarded as PPP Gross Cost concession by the Mass Rapid Transit Authority of Thailand (MRTA). 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 repayment to the Company in the form of service fee for the O&M Services and the M&E Systems. The MRT Purple Line project’s total route is 23 kilometers with 16 stations, starting from Klong Bang Pai station and ends at Tao Poon station, where the passengers can access to the central of Bangkok via the MRT Blue Line at Bang Sue station.

On August 22, 2016, the Company has operated the Si Rat-Outer Ring Road Expressway (SOE). The Company was awarded the SOE concession by the Expressway Authority of Thailand (EXAT), which the Company was responsible for investment, design, construction, operation, service and maintenance in return for the rights in toll revenue and other revenue (if any). The SOE project’s total route is 16.7 kilometers, which starts from the Bangkok Outer Ring Road (Kanjapisek Road near Mahasawat water treatment plant) connects to the Si Rat Expressway System (SES) at the northern section of the Bus Terminal (Mo Chit 2) which can access to the central of Bangkok via at Bang Sue 2 toll plaza.

### Overview Operational Results

In the year 2016, the Company had the net profit attributable to equity holders of the Company in the amount of Baht 2,606 Million, representing an increase by Baht 925 Million or 55 percent, when compared with the net profit from normal operation of the year 2015 which excluded extraordinary transaction from a gain on sales of investment in Bangkok Metro Public Company Limited before an amalgamation, net of tax, in the amount of Baht 969 Million. The Company had the revenue from main business increased by Baht 1,366 Million. The toll revenue from Expressway business increased by Baht 486 Million or 5.5 percent due to an increase in the traffic volume in all routes and a positive impact from the opening of the Si Rat-Outer Ring Road Expressway on August 22, 2016. In addition, the revenue from Rail business also increased by Baht 856 Million or 36.1 percent, resulted from the increasing of passenger volume and the revenue of O&M service of the MRT Purple Line which operated on August 6, 2016. Cost of service increased in relevant to the opening of the projects. Moreover, financial cost decreased by Baht 488 Million or 25.2 percent from debt restructuring. Nevertheless, the interest cost from construction loans, which were formerly recorded as cost of construction, were recorded as interest expense in the income statement after the opening of the SOE project.

When compared the net profit of the year 2016 amounted to Baht 2,606 Million with the net profit of the year 2015 amounted to Baht 2,650 Million which included extraordinary transaction from a gain on sales of investment, net of tax, in the amount of Baht 969 Million, the net profit decreased from the previous year by Baht 44 Million or 1.7 percent due to there is no transaction in this year.

## Segmental performance

### 1. Expressway business

The Company had toll revenue of Baht 9,301 Million, representing an increase from the previous year by Baht 486 Million or 5.5 percent due to an increase from the traffic volume in all routes. The traffic volume of the First Stage Expressway (FES) and the Second Stage Expressway (SES) had increased from the previous year on the average of 15,000 trips/day or 1.4 percent. The SOE had traffic volume on the average since an opening on August 22 to December 31, 2016 at 39,400 trips/day. As a result, overall toll revenue from FES and SES included SOE increased by Baht 371 Million or 4.9 percent, when compared to the previous year. For the Bang Pa-in - Pak Kret Expressway, the traffic volume increased from the previous year on the average of 7,000 trips/day or 9.4 percent from the expansion of suburban area, which resulted in toll revenue increased by Baht 115 Million or 9.5 percent, when compared 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 2016, amounted to Baht 4,817 Million, representing an increase from the previous year by Baht 154 Million or 3.3 percent. This was mainly from the increase in traffic volume and the opening of the SOE.

### 2. Rail business

The Company had farebox revenue of Baht 3,230 Million, representing an increase from the previous year by Baht 856 Million or 36.1 percent. Farebox revenue had increased from the rising of the average ridership from the MRT Blue Line are at 13,400 trips/day or 5.1 percent and from the increasing of service revenue from the MRT Purple Line (O&M contract) which operated on August 6, 2016.

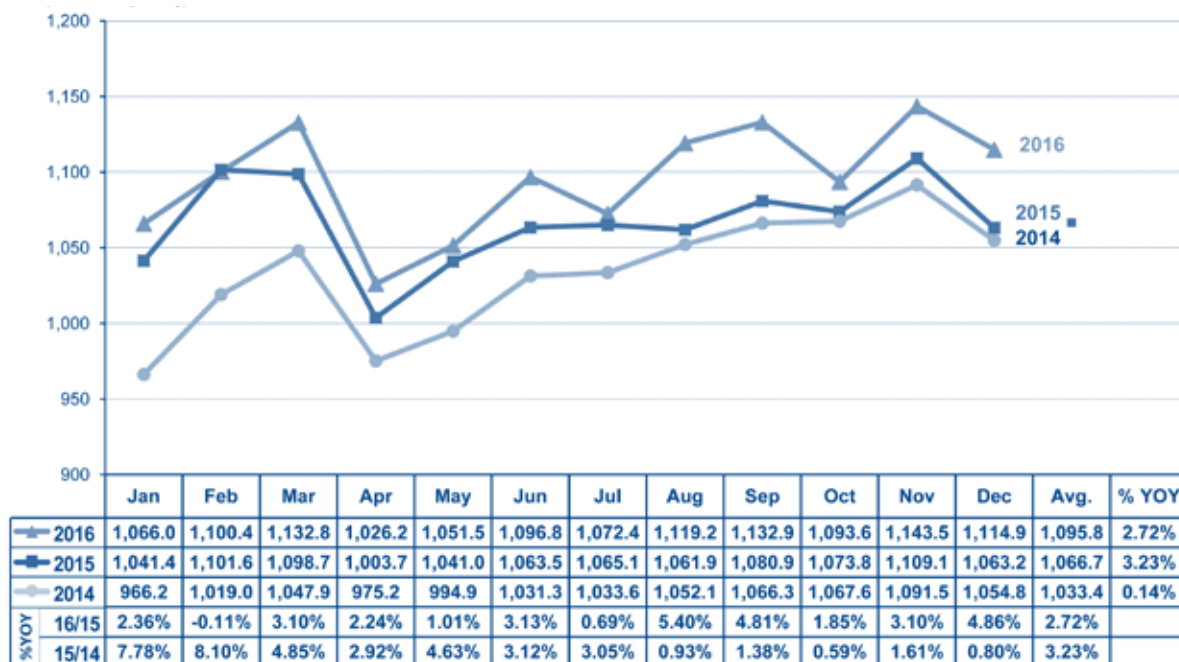
Cost of Rail business consisted of costs of farebox, cost for supplying O&M services, amortization of intangible asset under the MRT Blue Line Project, operation and remuneration to the grantor which for the year 2016, amounted to Baht 2,769 Million, representing an increase by Baht 576 Million or 26.3 percent from the previous year. This is caused by the increase in ridership and the initial cost of O&M services by the MRT Purple Line which is in line with revenue growth.

### 3. Commercial Development Business

In the year 2016, total commercial development revenue was Baht 573 Million, representing an increase from the previous year by Baht 24 Million or 4.4 percent, which was mainly from the commercial development revenue related to rail business.

### Average Daily Traffic Volume for the First Stage Expressway, the Second Stage Expressway and the Si Rat-Outer Ring Road Expressway

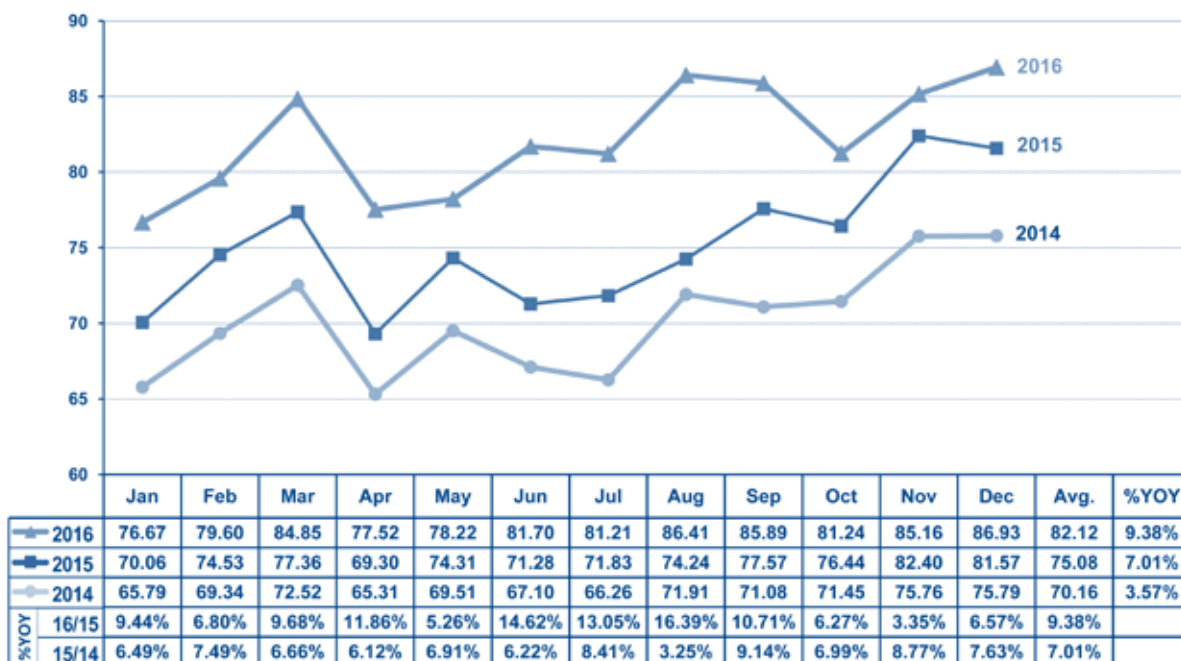
(Thousand Trips / Day)



Note : The Si Rat Outer Ring Road Expressway was opened on August 22, 2016

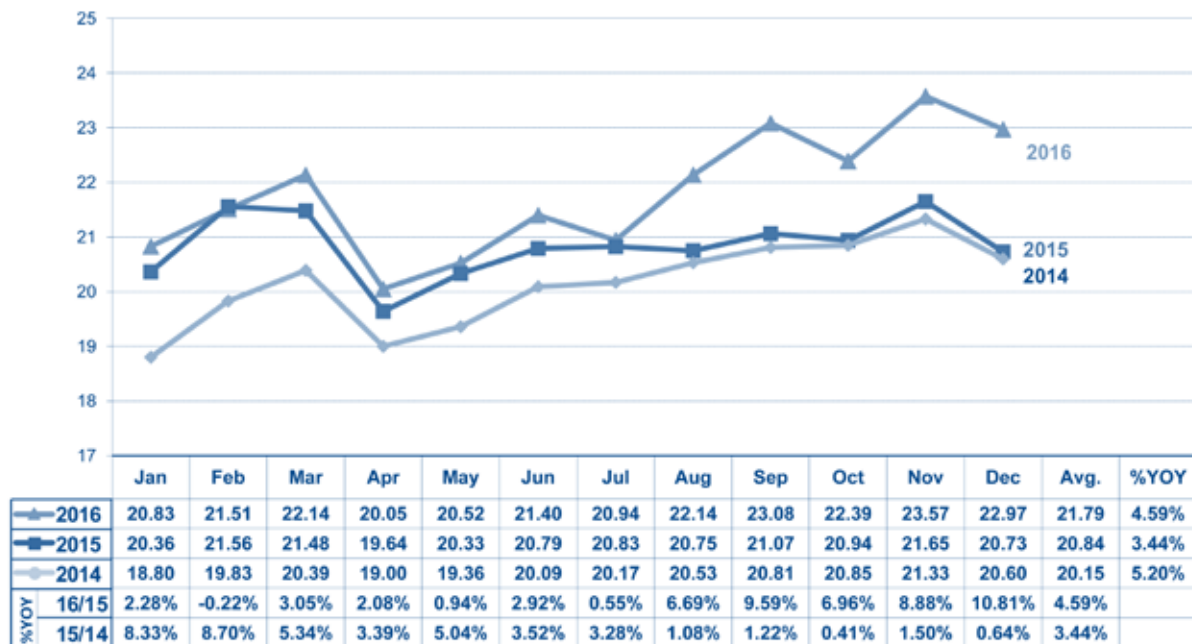
### Average Daily Traffic Volume for the Bang Pa-in - Pak Kret Expressway

(Thousand Trips / Day)



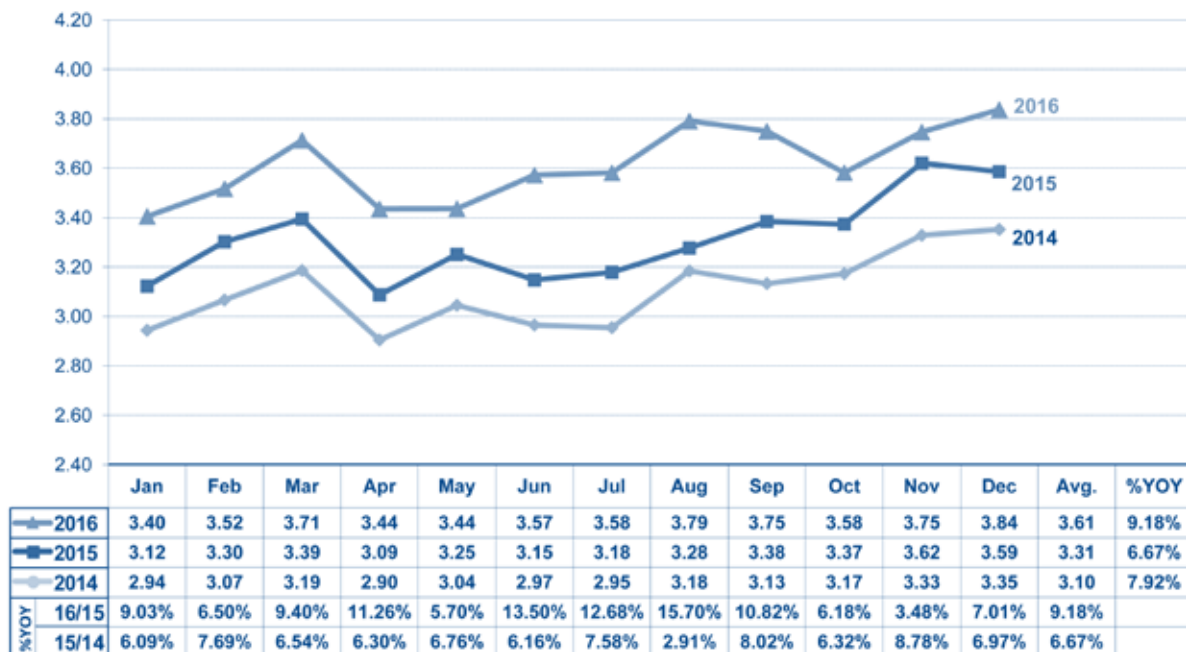
**Average Daily Toll Revenue for the First Stage Expressway, the Second Stage Expressway  
and the Si Rat-Outer Ring Road Expressway**

(Million Baht / Day)



**Average Daily Toll Revenue for the Bang Pa-in - Pak Kret Expressway**

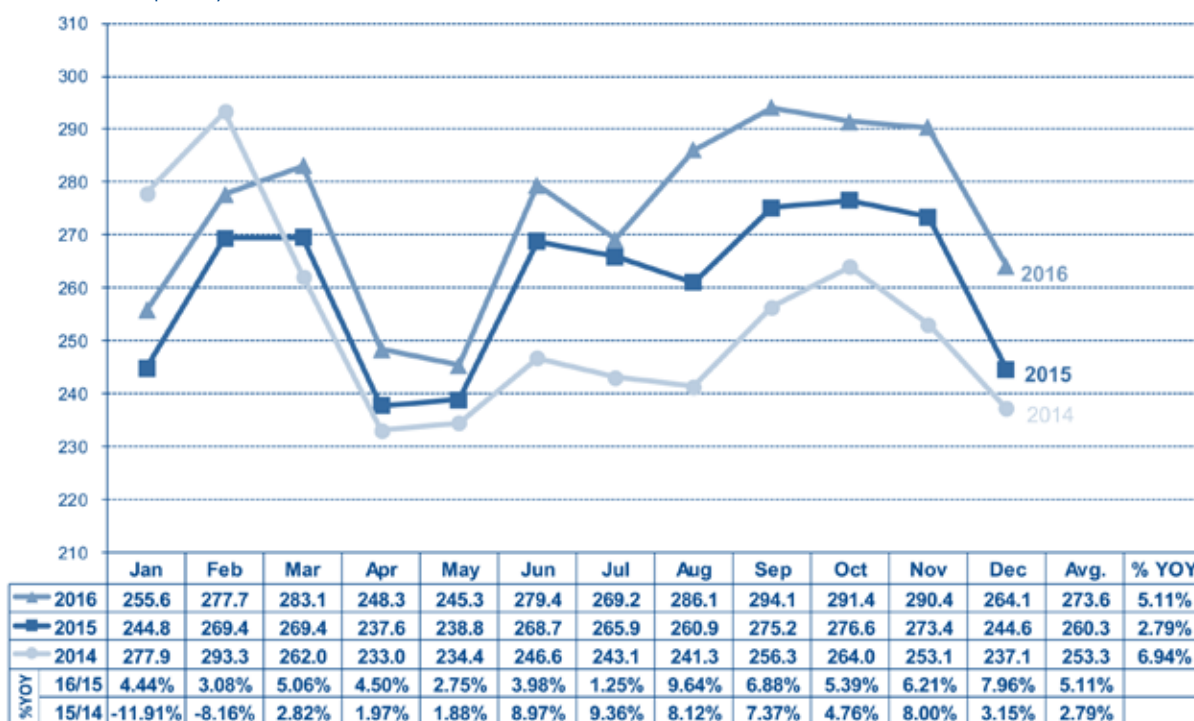
(Million Baht / Day)





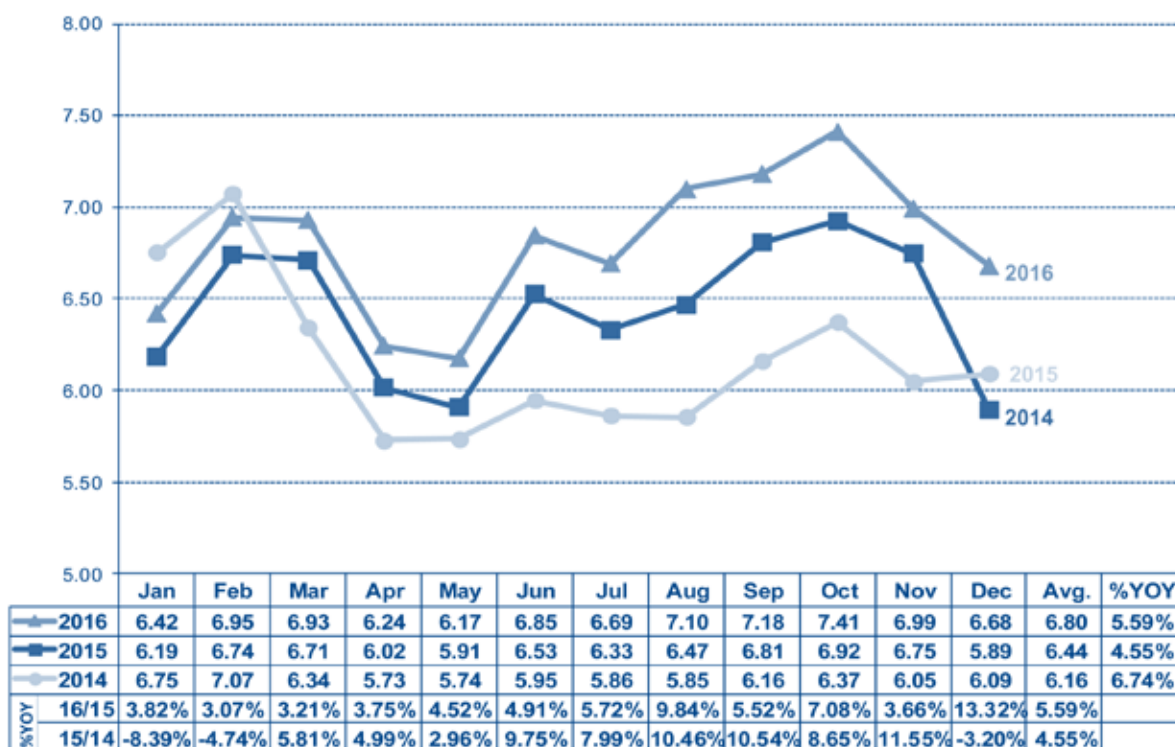
### Average Daily Ridership for Chaloem Ratchamongkhon Line

(Thousand Trips / Day)



### Average Daily Farebox Revenue for Chaloem Ratchamongkhon Line

(Million Baht / Day)



Note : Not include farebox revenue adjustment in June 2015

## Financial Position

As at December 31, 2016, the Company and its subsidiaries had total assets amounted to Baht 82,786 Million, representing an increase by Baht 4,691 million, when compared with total assets as at December 31, 2015, mainly from the increase in the project cost of the Si Rat-Outer Ring Road Expressway which was opened on August 2016. Total liabilities amounted to Baht 53,003 Million, representing an increase by Baht 4,038 Million which is consistent to the increase in asset. Total shareholders' equity amounted to Baht 29,793 Million, representing an increase by Baht 653 Million from the net profit and dividend payment of Baht 1,834 Million.

## Cash Flows

For the year 2016, the Company and its subsidiaries generated cash flows from operating activities amounting to Baht 3,845 Million. Cash utilized of Baht 11,663 Million from investing activities as follows (1) investment in the Si Rat-Outer Ring Road Expressway Project in the amount of Baht 6,035 Million, (2) investment in current investments and other investment in the amount of Baht 5,744 Million, (3) paid for the M&E equipment of the MRT Blue Line Project and investment in the MRT Purple Line Project in the net amount of Baht 766 Million, (4) acquisition of fixed assets and other assets in the net amount of Baht 277 Million, and (5) cash receipt from sales of investments and dividend from TTW and CKP in the amount of Baht 1,159 Million.

The Company and its subsidiaries had net cash of Baht 4,112 Million from financing activities due to (1) receipt from issuance of debentures in the net amount of Baht 23,200 Million, (2) draw down of long-term loans in the net amount of Baht 1,585 Million, (3) repayment of short-term loans in the net amount of Baht 17,690 Million, (4) dividend payment in the amount of Baht 1,834 Million, and (5) payment of interest and finance cost in the amount of Baht 1,149 Million.

As at December 31 2016, the Company and its subsidiaries had cash and cash equivalents amounting to Baht 777 Million, representing a decrease from the end of the previous year by Baht 3,706 Million.

## Significant Financial Ratios \*

For the year 2016, the Company had Net Profit Margin ratio at 19.69 percent, Return on Equity ratio at 8.87 percent, Return on Total Assets ratio at 3.25 percent, Debt to Equity ratio at 1.78 times and Interest Bearing Debt to Equity ratio at 1.33 times.

\* The operational results were calculated based on the consolidated financial statements which consist of the Expressway Business, Rail Business, Commercial Development Business, the manufacture and distribution of treated water business and electricity production business. Therefore, there was no similar type of business in the industry that can be used as a benchmark for comparison.

# Information of Directors, Executives and Company Secretary

(As at December 31, 2016)

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)	73	- 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 (First Class Honors), Chulalongkorn University - National Defence Course for the Joint State Private Sector, Class 1, National Defence College - Director Certification Program (DCP 43/2004), Thai Institute of Directors Association	-	-	2005 - Present 2004 - Present  1994 - 2015  1996 - 2012  2008 - Present 2006 - Present 2004 - 2016  1995 - Present  2012 - 2013	- Chairman of the Board of Directors - Director and Audit Committee Member - Chairman of the Board of Directors - Director - Chairman of the Board of Directors - Chairman of the Board of Directors - President - Chairman of the Executive Board - Chairman of the Board of Directors	<u>Listed Companies:</u> Finansa 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 Thai-Lao Association, Ministry of Foreign Affairs Double A (1991) Public Company Limited The Bank of Thailand
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)	71	- Honorary Doctorate (Civil Engineering), Kasetsart University - 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, Class 6, National Defence College - Director Certification Program (DCP 50/2004), Thai Institute of Directors Association - Director Accreditation Program (DAP 18/2004), Thai Institute of Directors Association - Finance for Non-Finance Directors (FND 13/2004), Thai Institute of Directors Association - Capital Market Academy Leader Program, Class 4/2007, Capital Market Academy	0.1577% (24,109,405 shares) (0.1420% held by himself, 0.0157% held by his spouse)	-	2011 - Present 2012 - Present 2009 - Present 2008 - Present  2007 - Present  2003 - Present  1994 - Present 1994 - 2015  2004 - 2015  1994 - 2015  2010 - Present  2006 - Present  2006 - Present  1996 - Present	- Director - Chairman of the Executive Board - Director - Vice Chairman of the Board of Directors - Corporate Governance and Risk Management Committee Member - Nomination and Remuneration Committee Member - Chairman of the Executive Board - Director - Chairman of the Executive Board - Nomination and Remuneration Committee Member - Chairman of the Board of Directors - Chairman of the Executive Committee - Nomination and Remuneration Committee Member - Chief Executive Officer - Director and Chairman of the Executive Board - Director and Chairman of the Executive Board - Director and Chairman of the Executive Board - Chairman of the Board of Directors and Chairman of the Executive Board	<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  CH. Karnchang 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

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 Tejatussanasoontorn - 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)	76	- B.A. in Commerce, 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 (AACP 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 2007 - Present 1999 - Present 2007 - 2014 2005 - 2015  2015 - Present 2004 - Present 1991 - Present  1991 - Present 1988 - Present 1988 - Present 1988 - Present 1988 - Present 1987 - Present 1986 - Present	- Chairman of the Nomination and Remuneration Committee - Chairman of the Corporate Governance and Risk Management Committee - Director and Chairman of the Audit Committee - Nomination and Remuneration Committee Member - Independent Director, Audit Committee Member, and Nomination and Remuneration Committee Member  - Director and Chairman of the Audit Committee - Director - Deputy Senior Managing Director  - Director - Director and Executive Director - Director and Executive Director - Director and Executive Director - Director and Executive Director - Director - Director and Executive Director	<u>Listed Companies:</u> CH. Karnchang Public Company Limited  Bangkok Metro Public Company Limited  <u>Other Companies:</u> Thaisri Insurance Public Company Limited Asahi Glass Foundation of Thailand AGC Flat Glass (Thailand) Public Company Limited Glass Way Co., Ltd. Kiarti Thane Country Club Co., Ltd. Pattaya Estate Co., Ltd. Kiarti Land Co., Ltd. Siracha Resort Co., Ltd. Diachrome Chemicals Limited Sakata-Thai Corporation Ltd.
4 Gen. Chetta Thanajaro - Director - Chairman of the Nomination and Remuneration Committee - Audit Committee Member (appointed on December 30, 2015)	78	- 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 - The Joint State-Private Sector Regular Course, National Defence College, Class 6 - Director Certification Program (DCP 33/2003), Thai Institute of Directors Association - Finance for Non-Finance Directors (FND 7/2003), Thai Institute of Directors Association - Board & CEO Assessment, Class 2/2003, Thai Institute of Directors Association	0.0138% (2,102,527 shares)	-	2005 - 2015  1999 - 2003  1996 - Present 2005 - Present  2005 - Present 2004 2003 - 2004	- Independent Director, Chairman of the Audit Committee - Chairman of the Nomination and Remuneration Committee - Audit Committee Member  - President Advisor - Director  - Chairman of the Audit Committee - Minister of Defence - Minister of Science and Technology	<u>Listed Companies:</u> Bangkok Metro Public Company Limited  Bangkok Expressway Public Company Limited <u>Other Companies:</u> The Royal Development Project Double A (1991) Public Company Limited L.P.N. Platemill Public Company Limited Ministry of Defence Ministry of Science and Technology
5 Gen. Sampao Choosri - Director - Chairman of the Corporate Governance and Risk Management Committee - Audit Committee Member (appointed on December 30, 2015)	75	- Chulachomklao Royal Military Academy - Royal Military Academy (Saint Cyr), France - The Army Command and General Staff College, Class 51 - National Defence Course for the Joint State Private Sector, Class 6, National Defence College - Director Accreditation Program (DAP 15/2004), Thai Institute of Directors Association	-	-	2004 - 2015 2007 - 2015  2013 - Present 2012 - Present 2001 - Present	- Director - Audit Committee Member - Chairman of the Nomination and Remuneration Committee - Corporate Governance and Risk Management Committee Member  - Chairman of the Mae Fah Luang University Council - Chairman of the Board of Directors - Chairman of the Board of Directors	<u>Listed Company:</u> Bangkok Expressway Public Company Limited  <u>Other Companies:</u> Mae Fah Luang University TIPS Co., Ltd. Dhospaak 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
6 Dr. Annop Tanlamai - Director - Audit Committee Member (appointed on February 25, 2016)	67	- 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 154/2011), Thai Institute of Directors Association	-	-	2012 - Present  2001 - 2015 2001 - 2015 2011 - 2015  2011 - 2015  Nov 2016 - Present  2012 - Sep 2016 2007 - 2011  1999 - 2007	- Director and Chairman of the Audit Committee - Director - Audit Committee Member - Nomination and Remuneration Committee Member - Corporate Governance and Risk Management Committee Member  - Dean of Faculty of Business Administration - Dean of College of Management - Dean of Faculty of Commerce and Accountancy - Director of the Committee of Master of Business Administration Program (MBA), Faculty of Commerce and Accountancy	<u>Listed Companies:</u> MK Restaurants Group Public Company Limited Bangkok Expressway Public Company Limited  <u>Other Companies:</u> Chitralada Technology College Mahidol University Chulalongkorn University
7 Mrs. Vallapa Assakul - Director - Corporate Governance and Risk Management Committee Member (appointed on December 30, 2015)	66	- Master of Economics, University of Detroit, USA - Bachelor of Economics (Second Class Honors), Chulalongkorn University - Audit Committee Program (ACP 21/2008), Thai Institute of Directors Association - Director Certification Program (DCP 86/2007), Thai Institute of Directors Association - Director Accreditation Program (DAP 37/2005), Thai Institute of Directors Association - Role of the Compensation Committee (RCC 5/2008), Thai Institute of Directors Association	-	-	2006 - Present  2012 - 2016 2010 - 2015  2009 - 2015 2012 - 2015 2005 - 2007 2004 - 2007  2013 - Present 2013 - Present 2010 - Present 2008 - Present 2010 - Jan 18, 2016	- Director - Chairman of the Nomination and Remuneration Committee - Supervision Committee Member - Director - Director and Executive Director  - Independent Director - Chairman of the Risk Committee - Director - Senior Executive Vice President, Corporate and Investment Banking Group  - Director - Director - Director - Director - Director and Executive Director	<u>Listed Companies:</u> Ocean Life Insurance Public Company Limited  Vinythai Public Company Limited Bangkok Expressway Public Company Limited Bangkok Metro Public Company Limited TMB Bank Public Company Limited  <u>Other Companies:</u> Ocean Property Co., Ltd. Ocean Development Co., Ltd. Siam Estate Co., Ltd. Amphan Co., Ltd. Northern Bangkok Expressway Company Limited
8 Mr. Supong Chayutsahakij - Director - Executive Director - Nomination and Remuneration Committee Member - Authorized Signatory Director (appointed on December 30, 2015)	75	- Honorary Ph.D. (Management Science), Phranakorn 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 8/2001), Thai Institute of Directors Association - Audit Committee Program (ACP 17/2007), Thai Institute of Directors Association	-	-	2006 - Present  2013 - Sep 21, 2016 1994 - 2015 2003 - 2015  2007 - 2015  2009 - 2015 2002 - 2015  2014 - Present 2009 - Present 2008 - Present 2008 - Present 2006 - Present 1996 - Present  2011 - 2013	- Director and Audit Committee Member - Director - Director - Vice Chairman of the Executive Board - Nomination and Remuneration Committee Member - Corporate Governance and Risk Management Committee Member - Vice Chairman of the Board of Directors - Director and Executive Committee Member  - Director - Chairman of the Board of Directors - Director - Director - Chairman of the Institute - Director and Executive Director  - Director	<u>Listed Companies:</u> Siam Steel International Public Company Limited CK Power Public Company Limited Bangkok Expressway Public Company Limited  Bangkok Metro Public Company Limited  <u>Other Companies:</u> Yayaburi Power Company Limited Bangkok Metro Networks Limited SouthEast Asia Energy Limited Nam Ngum 2 Power Company Limited Thai-Nichi Institute of Technology Northern Bangkok Expressway Company Limited CK Power 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
9 M.L. Prasobchai Kasemsant - Director (appointed on December 30, 2015)	61	- M.S. (Civil Engineering) and M.S. (Operations Research) Stanford University, USA , 1979 - B.S. (Civil Engineering, Mathematics) Virginia Military Institute, Virginia, USA, 1976 - Thailand Energy Academy Course for Management, Class 3, 2013 - National Defence Course, Class 50, National Defence College - Director Certification Program (DCP 33/2003), Thai Institute of Directors Association	-	-	1994 - 2015  Oct 2015 - Present 2013 - Sep 2015  2012 - 2013  2009 - 2010	- Director and Executive Director  - Retired Military Officer - Chairman of the Defence Advisory Board - Deputy Permanent Secretary for Defence (Energy and Defence Industry) - Director-General, Office of Defence Logistics, Office of Permanent Secretary	<u>Listed Company:</u> Bangkok Expressway Public Company Limited <u>Other Company:</u> Ministry of Defence
10 Mr. Phongsarit Tantisuwanitchkul - Director - Corporate Governance and Risk Management Committee Member - Executive Director - Authorized Signatory Director (appointed on December 30, 2015)	44	- Master of Engineering (Construction and Management), University of Michigan - Ann Arbor, USA - Bachelor of Engineering (Mechanical Engineering), Kasetsart University - Director Certification Program (DCP 155/2012), Thai Institute of Directors Association - Finance for Non-Finance Directors (FND 35/2007), Thai Institute of Directors Association - Understanding the Fundamental of Financial Statements (UFS 9/2007), Thai Institute of Directors Association	-	-	2016 - Present  Feb 16, 2016 - Present  2011 - Present  2014 - 2015  Feb 2016 - Present  2009 - Present 2012 - 2015	- Director and Chairman of the Executive Committee - Senior Executive Vice President: Operation Group - Acting Executive Vice President: Business Development - Director and Executive Director  - Director and Executive Director - Director and Executive Director - Director	<u>Listed Companies:</u> TTW 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 Transit Expert Co., Ltd.
11 Mr. Werapong Suppasedsak - Director (appointed on December 30, 2015)	50	- Master of Economics (Financial Economics), National Institute of Development Administration - Bachelor of International Economics, Ramkhamhaeng University - TLCA Executive Development Program (EDP 14/2014) Thai Listed Companies Association - Director Accreditation Program (DAP 100/2013), Thai Institute of Directors Association - Executive Development Program (ELDP), Fiscal Policy Research Institute Foundation 2011	-	-	2016 - Present  2014 - 2016  2011 - 2014 2016 - Present  2014 - Present  2012 - 2015 2011 - 2014	- Senior Executive Vice President - Group Head - First Executive Vice President - Group Head - Executive Vice President - Director - Director  - Director and Chairman of the Audit Committee - Director - Director	<u>Listed Companies:</u> Krung Thai Bank Public Company Limited  Krunghthai Panich Insurance Public Company Limited Suvarnabhumi Airport Hotel Company Limited Bangkok Metro Public Company Limited Krunghthai-AXA Life Insurance Public Company Limited <u>Other Company:</u> - None -
12 Mr. Panit Dunnvatanachit - Director (appointed on December 30, 2015)	60	- M.B.A. (Finance), Washington University, St. Louis, USA - Bachelor of Arts & Science, Washington University, St. Louis, USA - Board and CEO Assessment Program, Thai Institute of Directors Association - Director Certification Program (DCP 10/2001), Thai Institute of Directors Association - Capital Market Academy Leader Program, Class 14/2012, Capital Market Academy - Broadcasting Executive Forum, Class 1/2013, Office of the National Broadcasting and Telecommunications Commission - Thailand Energy Academy Course for Management, Class 4/2014, Thailand Energy Academy	-	-	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. Krunghthep Engineering Consultants Co., Ltd. Northern Bangkok Expressway Company Limited CBNP (Thailand) 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
13 Mr. Yuttana Yimgarund <sup>(1)</sup> - Director (appointed on November 30, 2016)	55	<ul style="list-style-type: none"> <li>- Master of Public Administration, National Institute of Development Administration (NIDA)</li> <li>- Bachelor of Laws, Ramkhamhaeng University</li> <li>- Graduate Diploma in Public Law, Thammasat University</li> <li>- Sukarak School Graduate Diploma, Customs Department</li> <li>- Advanced Certificate Course in Politics and Governance in Democratic Systems for Executives, Class 13, King Prajadhipok's Institute</li> <li>- Senior Executive Development Program (SED), Class 71, Office of the Civil Service Commission</li> <li>- Anti-Corruption Strategic Management Course for Senior Executives, Class 3</li> <li>- National Defence Course for the Joint State Private Sector, Class 25</li> <li>- Capital Market Academy Program (CMA), Class 18</li> <li>- Financial and Fiscal Management Program For Senior Executives, Class 2</li> <li>- Ministerial-Level Inspector General Program</li> </ul>	-	-	2013 - Present  Nov 2016 - Present  2015 - Present 2014 - Present  2015  2011 - 2015 2010 - 2011  2009 - 2010  2008 - 2009  2004	- Director representing the Ministry of Finance  - Director representing the Ministry of Finance - Inspector General - Director representing the Ministry of Finance - Principal Advisor on Customs Control Development - Deputy Director-General - Director of Laem Chabang Port Customs Bureau - Director of Regional Customs Bureau 1 - Director of Central Administration Bureau - Director of Land Investigation and Suppression Division	<u>Listed Company:</u> Erawan Hotel Public Company Limited  <u>Other Companies:</u> Mass Rapid Transit Authority of Thailand Ministry of Finance Thailand Tobacco Monopoly  Customs Department
14 Mr. Theeraphan Tachasirinugune - Director (appointed on December 30, 2015)	54	<ul style="list-style-type: none"> <li>- Master of Engineering Science (Development Technologies), University of Melbourne, Australia</li> <li>- Bachelor of Engineering, Kasetsart University</li> <li>- Director Accreditation Program (DAP 166/2015), Thai Institute of Directors Association</li> </ul>	-	-	2014 - 2015  2014 - Present  2012 - 2014 2008 - 2012	- Director  - Deputy Governor (Strategy and Planning) - Assistant Governor - Director of Technical Department	<u>Listed Company:</u> Bangkok Metro Public Company Limited  <u>Other Company:</u> Mass Rapid Transit Authority of Thailand
15 Mr. Dumkerng Pankam <sup>(2)</sup> - Director (appointed on November 30, 2016)	54	<ul style="list-style-type: none"> <li>- Bachelor of Laws, Thammasat University</li> <li>- Barrister at Law, The Institute of Legal Education</li> <li>- Graduate Diploma in Business Law, Thammasat University</li> </ul>	-	-	2015 - Present 2011  2009  2006	- Deputy Governor for Operation - Director of Toll Collection Department - Director of Land Acquisition Division, Land Acquisition Department - Director of Legal Affairs Division, Legal Department	<u>Listed Company:</u> - None - <u>Other Company:</u> Expressway Authority of Thailand
16 Dr. Sombat Kitjalaksana - Director - Corporate Governance and Risk Management Committee Member - Executive Director - Managing Director - Authorized Signatory Director (appointed on December 30, 2015)	59	<ul style="list-style-type: none"> <li>- Dr. Techn. in Soil Mechanic, University of Innsbruck, Austria</li> <li>- Bachelor and Master of Engineering (Civil), Chulalongkorn University</li> <li>- Director Certification Program (DCP 81/2006), Thai Institute of Directors Association</li> <li>- Finance for Non-Finance Directors (FND 19/2005), Thai Institute of Directors Association</li> <li>- Director Accreditation Program (DAP 36/2005), Thai Institute of Directors Association</li> </ul>	0.0235% (3,599,141 shares)	-	2000 - Present 2006 - 2015 2014 - 2015  2011 - 2014  2004 - 2015 2004 - 2011 2001 - 2010  2000 - 2011  Feb 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

**Remark:** <sup>(1)</sup> Mr. Yuttana Yimgarund was appointed as director on November 30, 2016 to replace Mr. Tana Janusorn who resigned from office on November 29, 2016.

<sup>(2)</sup> Mr. Dumkerng Pankam was appointed as director on November 30, 2016 to replace Mrs. Uravadee Choosri who resigned from office on October 4, 2016, whereby Mrs. Uravadee Choosri was appointed as director on April 5, 2016 to replace Mr. Prasit Dachsiri who resigned from office on February 2, 2016.

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
17 Mrs. Payao Marittanaporn - Director - Corporate Governance and Risk Management Committee Member - Executive Director - Managing Director - Authorized Signatory Director (appointed on December 30, 2015)	59	- 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, Class 11/2010, Capital Market Academy	-	-	2015 - Present  2007 - 2015 2013 - 2014  2007 - Present 2004 - Present 2011 - 2014	- Director - Nomination and Remuneration Committee Member - Risk Management 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
18 Mr. Sanguan Kunatinun - Deputy Managing Director - Expressway Engineering (appointed on December 30, 2015)	56	- M.B.A., Thammasat University - Bachelor of Engineering, Chulalongkorn University - Director Certification Program (DCP 101/2008), Thai Institute of Directors Association	-	-	2014 - 2015 2006 - 2014	- Deputy Managing Director, Engineering - Assistant Managing Director, Engineering	<u>Listed Company:</u> Bangkok Expressway Public Company Limited  <u>Other Company:</u> - None -
19 Mrs. Sudruthai Prommart - Deputy Managing Director - Expressway Operation (appointed on December 30, 2015)	53	- 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	-	-	2014 - 2015 2007 - 2014	- Deputy Managing Director, Operation - Assistant Managing Director, Operation	<u>Listed Company:</u> Bangkok Expressway Public Company Limited  <u>Other Company:</u> - None -
20 Mr. Phakpoom Thaweewittayarat - Deputy Managing Director - Administration - Company Secretary (appointed on December 30, 2015)	50	- M.B.A., Thammasat University - Bachelor of Laws, Chulalongkorn University - Bachelor of Accountancy, Chulalongkorn University - Certified Public Accountant (CPA) - Certified Internal Auditor (CIA) - Director Certification Program (DCP 102/2008), Thai Institute of Directors Association - Company Secretary Program (CSP 9/2005), Thai Institute of Directors Association	-	-	2014 - 2015 2012 - 2014 2008 - 2015 2011 2008 - 2011	- Deputy Managing Director, Administration - Assistant Managing Director, Administration - Company Secretary - Senior General Manager of Administration Division - Senior General Manager of Managing Director Office	<u>Listed Company:</u> Bangkok Expressway Public Company Limited  <u>Other Company:</u> - None -
21 Miss Panan Tosuwanthaworn - Deputy Managing Director - Finance (appointed on December 30, 2015)	49	- Master of Accountancy, Thammasat University - Bachelor of Accountancy, Thammasat University - Director Certification Program (DCP 158/2012), Thai Institute of Directors Association - CFO Certification Program, Class 1/2004, The Institute of Certified Accountants and Auditors of Thailand - Corporate Secretary Development Program, Class 13, Faculty of Commerce and Accountancy, Chulalongkorn University	-	-	2014 - 2015 2012 - 2014 2008 - 2011	- Deputy Managing Director, Finance - Assistant Managing Director, Finance - Senior General Manager of Finance Division	<u>Listed Company:</u> 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
22 Mr. Witoon Hatairatana - Deputy Managing Director - Railway System Operation and Engineering (appointed on December 30, 2015)	59	- Master of Science (Business Administration), California University of Pennsylvania, USA - Bachelor of Engineering (Civil), Chulalongkorn University - Anti-Corruption for Executive Program (ACEP 13), Thai Institute of Directors Association	-	-	2014 - 2015 2012 - 2014 2007 - 2012 2005 - 2015 2004 - 2012 2002 - 2004	- Deputy Managing Director - Acting Assistant Managing Director, Train Operation Group - Executive Vice President, Operations - Acting Marketing & Commercial Development Director - Risk Committee Member - Operations Director - Traffic Manager	<u>Listed Company:</u> Bangkok Metro Public Company Limited  <u>Other Company:</u> - None -
23 Mr. Alvin Gee - Deputy Managing Director Operation Support (appointed on December 30, 2015)	45	- Bachelor of Science in Finance, Boston College, USA - Director Certification Program (DCP 165/2012), Thai Institute of Directors Association	0.0009% (144,272 shares) (spouse)	Spouse of Mr. Plew Trivisavet's daughter	2013 - Feb 2016 2013 - Feb 2016  2011 - 2013 2008 - 2011  2013 - Feb 2016 2011 - 2013 2007 - 2008	- Director - Director, Executive Director and Managing Director - Deputy Managing Director, Accounting and Finance Department - Investor Relations Officer  - Director, Executive Director and Managing Director - Deputy Managing Director - Business Analyst, Corporate Finance	<u>Listed Companies:</u> CK Power Public Company Limited SouthEast Asia Energy Limited     <u>Other Companies:</u> Bangkok Metro Public Company Limited Nam Ngum 2 Power Company Limited TMB Maquarie Securites (Thailand)

# 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	15
1	Dr. Virabongsa	Ramangkura	2											2		2		
2	Mr. Plew	Trivisvavet	3,4		2,4	1,4	1	1,4	1	1	1	1,3	1	1,4	1,4	1,4	1	1
3	Mr. Vitoon	Tejatussanasoontorn	1			1												
4	Gen. Chetta	Thanajaro	1															
5	Gen. Sampao	Choosri	1															
6	Dr. Annop	Tanlamai <sup>(1)</sup>	1															
7	Mrs. Vallapa	Assakul	1															
8	Mr. Supong	Chayutsahakij	1,4	2	1,4									1	1	1		
9	M.L. Prasobchai	Kasemsant	1															
10	Mr. Phongsarit	Tantisuvanitchkul	1,4	1,4	1,4	5												
11	Dr. Sombat	Kitjalaksana	1,4	1	1,4							1,4						
12	Mrs. Payao	Marittanaporn	1,4		1,4							1						
13	Mr. Werapong	Suppasedsak	1															
14	Mr. Panit	Dunnvatanachit	1															
15	Mr. Yuttana	Yimgarund <sup>(2)</sup>	1															
16	Mr. Theeraphan	Tachasirinugune	1															
17	Mr. Dumkerng	Pankam <sup>(3)</sup>	1															
18	Mr. Sanguan	Kunatinun	5															
19	Mrs. Sudruthai	Prommart	5															
20	Mr. Phakpoom	Thaweewittayarut	5															
21	Miss Panan	Tosuwanthaworn	5															
22	Mr. Witton	Hatairatana	5															
23	Mr. Alvin	Gee	5															

- Remarks :**
- Definitions : 1 = Director; 2 = Chairman of the Board of Directors; 3 = Vice Chairman of the Board of Directors; 4 = Executive Director; 5 = Executive
  - Dr. Annop Tanlamai was appointed to hold office on February 25, 2016.
    - Mr. Yuttana Yimgarund was appointed on November 30, 2016 to replace Mr. Tana Janusorn who resigned from office on November 29, 2016.
    - Mr. Dumkerng Pankam was appointed on November 30, 2016 to replace Mrs. Uravadee Choosri who resigned from office on October 4, 2016, whereby Mrs. Uravadee Choosri was appointed on April 5, 2016 to replace Mr. Prasit Dachsi who resigned from office on February 2, 2016.
  - The Company
 

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 = Bang Pa-in Land Development Co., Ltd.
11 = SouthEast Asia Energy Limited	12 = Xayaburi Power Company Limited
13 = Nam Ngum 2 Power Company Limited	14 = CH. Karnchang Real Estate Co., Ltd.
15 = 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	2, 3	-
2.	Mr. Supong	Chayutsahakij	1, 3	2
3.	Mr. Phongsarit	Tantisuvanitchkul <sup>(1)</sup>	1, 3	1, 3
4.	Mr. Wichan	Ekarintrakul <sup>(2)</sup>	1	-
5.	Mrs. Payao	Marittanaporn	1, 3	-
6.	Mr. Sombat	Kitjalaksana <sup>(3)</sup>	1, 3	1
7.	Mr. Anukool	Tuntimas	-	1
8.	Mrs. Tipsuda	Yimwilai	-	1, 3
9.	Mr. Nattavut	Trivisvavet	-	1, 3

**Remarks :**

- Definitions: 1 = Director; 2 = Chairman of the Board of Directors; 3 = Executive Director
- 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) and (3)</sup> were appointed as directors on February 25, 2016.
- <sup>(2)</sup> was appointed as director on May 17, 2016 to replace Mr. Narong Gieddech who resigned from office on January 19, 2016.

# Details Relating to Head of the Internal Audit Unit and Head of the Compliance Unit

## 1. Head of 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>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 and ISO 14001</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> </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 for compliance with the plan;</li> <li>1.3 Concluding the results of 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;</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 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 results thereof as the overall emergency and risk management plans;</li> </ol> </li> </ol>

	<p>3.2 Quarterly following up and concluding the results of risk management from all relevant work units for presentation to the management and the Corporate Governance and Risk Management Committee on a quarterly basis;</p> <p>3.3 Coordinating and organizing the Corporate Governance and Risk Management Committee's meetings.</p> <p>4. Works on quality and environmental management system activity Following up the results of system audit by the monitoring subcommittee and external certification agencies.</p> <p>5. Other works as assigned by the Audit Committee.</p>
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**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 Thaweewittayarat
<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>	<p>Oct 2014 - Dec 2015    - Deputy Managing Director, Administration Bangkok Expressway Public Company Limited</p> <p>2012 - Sep 2014        - Assistant Managing Director, Administration Bangkok Expressway Public Company Limited</p> <p>Sep 2011 - Dec 2011    - Senior General Manager of Administration Division Bangkok Expressway Public Company Limited</p> <p>2008 - Aug 2011        - Senior General Manager of Managing Director Office Bangkok Expressway Public Company Limited</p>
<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> </ul>
<b>Duties and Responsibilities</b>	<p>1. Determining the scope of the good corporate governance in line with the Company's structure in comparison with international practices or principles;</p> <p>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;</p>

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|  | <ol style="list-style-type: none"><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 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 preparation of the Company's corporate governance development plan in compliance with the 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> |
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# 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 2016, 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 2016, 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 under the Royal Patronage of His Majesty the King 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.

## 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 for each matter are described below.

### *Revenue recognition from expressway and rail businesses*

During 2016, the Group recognised revenue from the expressway and rail businesses totaling Baht 12,531 million. In addition, in the current year, the Company started the operation of the MRT Chalong Ratchadham Line Project and the Si Rat - Outer Ring Road Expressway. As the revenue from the expressway and rail businesses is significant, I therefore focused on the amount and timing of revenue recognition in the financial statements in accordance with the Group's accounting policy, as described in Note 4 to the financial statements.



I have read and gained an understanding of the concession agreements relevant to the revenue of the expressway and rail businesses, and assessed and tested the IT system and its internal controls with respect to the revenue cycle and revenue collection to determine whether they were in compliance with the Group's policy. In addition, I performed analytical procedures on revenue data by route and by time duration, to detect possible irregularities in revenue recognition throughout the period.

#### *Intangible asset under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line*

As at 31 December 2016, the Company's intangible asset under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line with finite useful lives amounted to Baht 16,635 million. The Company has amortised these intangible assets based on ridership ratio, which relies on the judgment and experience of the external expert who was appointed by management to estimate ridership throughout the concession agreement. In addition, the process of determining whether there is impairment of intangible assets requires management to exercise a high degree of judgment to identify the cash generating units, estimate the cash inflows that are expected to be generated from those groups of assets in the future, and set the discount rate and growth rate.

I have assessed the identified cash generating units and the financial models selected by management by gaining an understanding of the management's decision-making process. In addition, I tested the significant assumptions applied by management in preparing estimates of the cash flows expected to be realised from the assets, through a comparison of those assumptions with information from both internal and external sources, a review of cash flow projections in comparison to actual operating results, and assessment of the discount rate applied by management through analysis of the Company's average costs. I also gained an understanding of and assessed the assumptions and approaches used by the expert in forecasting ridership throughout the concession period, tested the calculation of the recoverable amounts of the assets using the selected financial model and considered the impact of changes in key assumptions on those recoverable values, including changes in the discount rate and revenue growth rates throughout the remainder of the concession period. Moreover, I reviewed the disclosure made with respect to the impairment assessment for intangible assets.

#### *Disputes*

As discussed in Note 40.2 to the financial statements, the Company and its subsidiary has 3 ongoing disputes with amounts in dispute totaling Baht 1,589 million, which relate to the concession agreement of the expressway business. As these disputes are not yet finalised, the management needs to exercise significant judgement and take into account related laws and regulations in assessing their outcomes. However, the actual outcomes of the disputes may differ from the assessments made by management.

I inquired with the Company's management and legal department regarding the procedures followed to collate and monitor disputes filed and pending as at the date of the financial statements, and reviewed legal consultation fees of the Group. I also inquired into the details and progress of disputes and the methods applied by management to assess the outcomes of the disputes, and 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 Company and counterparties to the Arbitral Tribunal for the purpose of providing background into the disputes. I sent confirmation letters to the external lawyers retained by the Group to obtain case details and status. I also assessed the credibility of the lawyers in accordance with relevant auditing standards. In addition, I reviewed the disclosure of information relating to disputes in the notes to the financial statements.

#### *Recording and presentation of M&E system equipment related to the MRT Chalong Ratchadham Line under the concession agreement*

As discussed in Note 1.1 (B.2) to the financial statements, on 6 August 2016, the Company received M&E system equipment from a related company, and delivered this equipment to the Mass Rapid Transit Authority of Thailand ("MRTA") in accordance with Phase I of the concession agreement. On the same day MRTA delivered the operating civil infrastructure and M&E system equipment to the Company in order to start operation in accordance with Phase II of the agreement. Since this is a significant event during the current year, I have focused on the recording and presentation of transactions related to the M&E system equipment under Phase I of the agreement in the financial statements, and the disclosure made in the notes to financial statements.

I examined the accounting records and the presentation of transactions related to the M&E system equipment, and assessed the disclosure made in the notes to financial statements by reading and gaining an understanding of the agreements made with MRTA and the related party. I also inquired with the management to assess management's understanding of the substance of the transactions and the conditions and undertakings per the agreements, and assessed the judgment that management exercised in recording these transactions. In addition, I applied a sampling method to verify the supporting documents for initial recognition, and recognition of revenue, expenses, cash receipts and cash payments related to such transactions and reviewed the related disclosure in the notes to 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.

The engagement partner on the audit resulting in this independent auditor's report is Miss Waraporn Prapasirikul.



**Waraporn Prapasirikul**

Certified Public Accountant (Thailand) No. 4579

EY Office Limited

Bangkok: 22 February 2017

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Statement of financial position

As at 31 December 2016

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2016	2015	2016	2015
Assets					
Current assets					
Cash and cash equivalents	7	777,001,145	4,483,374,825	729,292,774	4,459,058,285
Current investments	8	5,941,349,949	497,356,702	5,932,097,666	479,973,933
Trade and other receivables	9	1,614,563,463	84,628,359	1,619,496,342	85,056,434
Current portion of receivable from sales of investment	6, 29	756,834,379	564,014,862	756,834,379	564,014,862
Current portion of long-term loans to related party	6	-	-	12,000,000	-
Other current assets		129,541,368	239,884,440	114,430,633	218,014,947
Total current assets		9,219,290,304	5,869,259,188	9,164,151,794	5,806,118,466
Non-current assets					
Receivable from sales of investment, net of current portion	6, 29	-	756,834,379	-	756,834,379
Long-term loans to and interest receivable from related parties	6	-	-	6,273,496,436	6,854,496,436
Investments in subsidiaries	10	-	-	303,585,600	303,585,600
Investments in associates	11	9,667,680,300	9,836,588,559	7,499,815,400	7,525,674,114
Other long-term investment	12	1,237,849,790	913,087,490	1,237,849,790	913,087,490
Investment properties	13	120,357,493	120,357,493	120,357,493	120,357,493
Building and equipment	14	340,732,838	154,365,572	283,862,387	150,637,870
Project costs under construction	15	-	19,600,400,995	-	19,600,400,995
Rights to operate completed expressway sectors	16	41,551,825,215	20,327,463,226	34,808,993,374	13,069,901,132
Rights to use sites for expressway construction	17	1,020,623,701	1,320,193,685	1,020,623,701	1,320,193,685
Intangible asset under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line	18	16,959,960,538	16,987,640,143	16,634,651,364	16,654,147,858
Advance payment under expressway construction contract	6	-	398,250,000	-	398,250,000
Project cost of the MRT Chalong Ratchadham Line	19	627,255,954	271,396,970	627,255,954	271,396,970
Deferred of project remuneration		1,614,607,949	942,249,276	1,614,607,949	942,249,276
Other Intangible assets	20	68,228,569	36,236,800	63,496,944	36,165,371
Deferred tax assets	34	201,887,940	474,860,502	198,541,907	472,107,377
Other non-current assets		155,262,494	85,418,857	120,793,415	50,907,716
Total non-current assets		73,566,272,781	72,225,343,947	70,807,931,714	69,440,393,762
Total assets		82,785,563,085	78,094,603,135	79,972,083,508	75,246,512,228

The accompanying notes are an integral part of the financial statements.

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Statement of financial position (continued)

As at 31 December 2016

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2016	2015	2016	2015
<b>Liabilities and shareholders' equity</b>					
<b>Current liabilities</b>					
Short-term loans from financial institutions	21	4,715,775,247	22,410,000,000	4,715,775,247	22,400,000,000
Trade and other payables	22	819,413,535	2,579,553,648	749,456,028	2,538,958,973
Current portion of long-term loans from financial institutions	23	2,066,750,000	118,500,000	2,066,750,000	75,000,000
Unearned fare box revenue		111,971,378	89,973,896	111,971,378	89,973,896
Deposits on stored value ticket		43,313,997	34,738,933	43,313,997	34,738,933
Income tax payable		31,444,025	306,735,926	13,598,158	306,735,926
Current portion of provision for compensation					
for site acquisition cost	25	1,500,000,000	1,500,000,000	1,500,000,000	1,500,000,000
<b>Other current liabilities</b>					
Retention guarantees		70,983,137	161,068,581	66,356,635	158,402,109
Others		198,105,957	114,148,191	177,267,676	99,468,810
<b>Total current liabilities</b>		<b>9,557,757,276</b>	<b>27,314,719,175</b>	<b>9,444,489,119</b>	<b>27,203,278,647</b>
<b>Non-current liabilities</b>					
Long-term loans from financial institutions, net of current portion	23	16,952,402,523	17,329,066,575	16,952,402,523	17,215,880,794
Debentures	24	23,167,912,861	-	23,167,912,861	-
Derivative financial liabilities		18,608,408	-	18,608,408	-
Provision for compensation for site acquisition cost,					
net of current portion	25	2,817,151,698	4,066,671,698	2,817,151,698	4,066,671,698
Unearned revenue from advertising management rights	6, 26	-	-	14,362,122	15,610,482
Provision for long-term employee benefits	27	471,043,876	237,842,102	461,245,260	230,180,611
Other non-current liabilities		17,982,160	16,269,432	2,756,127	1,429,421
<b>Total non-current liabilities</b>		<b>43,445,101,526</b>	<b>21,649,849,807</b>	<b>43,434,438,999</b>	<b>21,529,773,006</b>
<b>Total liabilities</b>		<b>53,002,858,802</b>	<b>48,964,568,982</b>	<b>52,878,928,118</b>	<b>48,733,051,653</b>

The accompanying notes are an integral part of the financial statements.



Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Statement of financial position (continued)

As at 31 December 2016

(Unit: Baht)

		Consolidated financial statements		Separate financial statements	
	Note	2016	2015	2016	2015
Shareholders' equity					
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	28	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
Retained earnings					
Appropriated - statutory reserve	30	928,690,000	800,490,000	928,690,000	800,490,000
Unappropriated		7,763,596,451	7,254,261,049	5,077,414,032	4,611,032,491
Other components of shareholders' equity		(104,972,966)	(113,097,160)	(14,886,726)	-
Equity attributable to shareholders of the Company		29,689,251,569	29,043,591,973	27,093,155,390	26,513,460,575
Non-controlling interests of the subsidiaries		93,452,714	86,442,180	-	-
Total shareholders' equity		29,782,704,283	29,130,034,153	27,093,155,390	26,513,460,575
Total liabilities and shareholders' equity		82,785,563,085	78,094,603,135	79,972,083,508	75,246,512,228

The accompanying notes are an integral part of the financial statements.

Bangkok Expressway and Metro Public Company Limited and its subsidiaries

Income statement

For the year ended 31 December 2016

		(Unit: Baht)			
		Consolidated financial statements		Separate financial statements	
		For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
Note					
<b>Revenues</b>					
	Revenue from expressway business	9,300,724,132	8,814,588,007	7,977,852,606	33,722,296
	Revenue from rail business	3,230,064,080	2,373,562,621	3,230,080,880	9,289,325
	Revenue from commercial development business	573,349,010	549,431,372	359,433,237	1,888,328
<b>Other income</b>					
	Interest income	68,199,690	57,843,948	246,333,581	1,574,453
	Dividend Income	-	-	498,953,704	-
	Gain from sales of investment before amalgamation	-	1,235,526,377	-	-
	Gain from sales of investment	31,090,443	62,222,728	45,235,624	94,782
	Others	29,967,268	11,636,374	137,747,730	708,582
	<b>Total revenues</b>	<b>13,233,394,623</b>	<b>13,104,811,427</b>	<b>12,495,637,362</b>	<b>47,277,766</b>
<b>Expenses</b>					
	Cost of expressway business	1,345,932,621	1,239,604,475	1,096,699,281	3,142,785
	Cost of rail business	1,959,861,340	1,444,542,770	1,959,861,340	6,916,308
	Cost of commercial development business	199,943,914	210,151,434	114,773,566	574,190
	Amortisation of rights to operate completed expressway sectors and compensation for site acquisition cost	16, 17, 25	3,470,883,807	3,422,566,022	2,956,153,554
	Amortisation on intangible asset under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line and remuneration fee to the grantor	18, 19	851,636,080	777,584,371	823,939,384
	Selling expenses		92,540,321	79,252,582	59,370,640
	Administrative expenses		1,038,036,681	1,035,883,873	975,452,881
	<b>Total expenses</b>		<b>8,958,834,764</b>	<b>8,209,585,527</b>	<b>7,986,250,646</b>
	<b>Profit before share of profit from investments</b>				
	in associates, finance cost and income tax expenses		4,274,559,859	4,895,225,900	4,509,386,716
	Share of profit from investments in associates	11.2	347,349,465	461,212,789	-
	<b>Profit before finance cost and income tax expenses</b>		<b>4,621,909,324</b>	<b>5,356,438,689</b>	<b>4,509,386,716</b>
	Finance cost		(1,446,116,624)	(1,934,186,129)	(1,434,581,980)
	<b>Profit before income tax expenses</b>		<b>3,175,792,700</b>	<b>3,422,252,560</b>	<b>3,074,804,736</b>
	Income tax expenses	34	(562,927,698)	(721,234,596)	(511,890,549)
	<b>Profit for the period</b>		<b>2,612,865,002</b>	<b>2,701,017,964</b>	<b>2,562,914,187</b>
<b>Profit attributable to:</b>					
	Equity holders of the Company		2,605,854,468	2,649,736,343	2,562,914,187
	Non-controlling interests of the subsidiaries		7,010,534	51,281,621	-
			<b>2,612,865,002</b>	<b>2,701,017,964</b>	<b>2,562,914,187</b>
<b>Basic earnings per share</b>					
	Profit attributable to equity holders of the Company	35	0.170	0.173	0.168

The accompanying notes are an integral part of the financial statements.

Bangkok Expressway and Metro Public Company Limited and its subsidiaries  
Statement of comprehensive income  
For the year ended 31 December 2016

(Unit: Baht)

	Note	Consolidated financial statements		Separate financial statements	
		For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
<b>Profit for the period</b>		<b>2,612,865,002</b>	<b>2,701,017,964</b>	<b>2,562,914,187</b>	<b>9,679,490</b>
<b>Other comprehensive income</b>					
<i>Other comprehensive income to be reclassified to profit or loss in subsequent periods:</i>					
Unrealised loss from cash flow hedges of the Company, net of income tax		(14,886,726)	-	(14,886,726)	-
Unrealised gain (loss) from cash flow hedges of associate, net of income tax	11.2	19,198,381	(46,505,941)	-	-
Unrealised gain from revaluation of available for sale investment	11.2	3,812,539	-	-	-
Other comprehensive income to be reclassified to profit or loss in subsequent periods, net of income tax		8,124,194	(46,505,941)	(14,886,726)	-
<i>Other comprehensive income not to be reclassified to profit or loss in subsequent periods</i>					
Actuarial gain (loss) of the Company, net of income tax	27, 34	(134,132,646)	5,606,050	(134,132,646)	-
Actuarial gain (loss) of associates	11.2	13,580	-	-	-
Other comprehensive income not to be reclassified to profit or loss in subsequent periods, net of income tax		(134,119,066)	5,606,050	(134,132,646)	-
<b>Other comprehensive income for the period</b>		<b>(125,994,872)</b>	<b>(40,899,891)</b>	<b>(149,019,372)</b>	<b>-</b>
<b>Total comprehensive income for the period</b>		<b>2,486,870,130</b>	<b>2,660,118,073</b>	<b>2,413,894,815</b>	<b>9,679,490</b>
<b>Total comprehensive income attributable to:</b>					
Equity holders of the Company		2,479,859,596	2,608,836,452	2,413,894,815	9,679,490
Non-controlling interests of the subsidiaries		7,010,534	51,281,621	-	-
		<b>2,486,870,130</b>	<b>2,660,118,073</b>		

The accompanying notes are an integral part of the financial statements.

Bangkok Expressway and Metro Public Company Limited and its subsidiaries  
Statement of changes in shareholders' equity  
For the year ended 31 December 2016

Consolidated financial statements										(Unit: Baht)	
Equity attributable to the shareholders of the Company											
Issued and paid-up share capital	Retained earnings (Deficit)		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
	Premium on ordinary shares	Investment before amalgamation	Appropriated - statutory reserve	Unappropriated	Unrealised gain (loss) from cash flow hedges	Surplus on change in value of investment in available-for-sale	Capital deficit from change in shareholding in subsidiary				
28,200,000,000	5,816,938,084	(2,340,328,827)	800,000,000	(6,390,591,344)	(34,442,517)	-	-	(34,442,517)	28,051,575,396	157,011,857	28,208,587,253
-	-	-	-	2,649,736,343	-	-	-	-	2,649,736,343	51,281,621	2,701,017,964
-	-	-	-	5,696,050	(46,505,941)	-	-	(46,505,941)	(40,809,891)	-	(40,692,891)
-	-	-	-	2,655,342,393	(46,505,941)	-	-	(46,505,941)	2,608,836,452	51,281,621	2,660,118,073
(12,915,000,000)	-	-	-	12,915,000,000	-	-	-	-	-	-	-
-	-	2,340,328,827	-	-	-	-	-	-	2,340,328,827	-	2,340,328,827
-	-	-	-	-	-	(32,148,702)	-	(32,148,702)	(32,148,702)	-	(32,148,702)
-	-	-	-	-	-	-	-	-	-	(121,651,290)	(121,651,290)
-	-	-	490,000	(490,000)	-	-	-	-	(1,925,000,000)	-	(1,925,000,000)
15,285,000,000	5,816,938,084	-	800,490,000	7,254,281,049	(60,948,458)	-	-	(113,097,160)	29,043,591,973	86,442,180	29,130,034,153
15,285,000,000	5,816,938,084	-	800,490,000	7,254,281,049	(60,948,458)	-	-	(113,097,160)	29,043,591,973	86,442,180	29,130,034,153
-	-	-	-	2,605,854,468	-	-	-	-	2,605,854,468	7,010,534	2,612,865,002
-	-	-	-	(134,119,060)	4,311,655	3,812,539	-	8,124,194	(125,994,872)	-	(125,994,872)
-	-	-	-	2,471,735,402	4,311,655	3,812,539	-	8,124,194	2,479,859,596	7,010,534	2,486,870,130
-	-	-	128,200,000	(128,200,000)	-	-	-	-	-	-	-
-	-	-	-	(1,834,200,000)	-	-	-	-	(1,834,200,000)	-	(1,834,200,000)
15,285,000,000	5,816,938,084	-	928,690,000	7,763,586,451	(78,636,800)	3,812,539	(32,148,702)	(104,972,966)	29,251,569	93,452,714	29,782,704,283

The accompanying notes are an integral part of the financial statements.

Bangkok Expressway and Metro Public Company Limited and its subsidiaries  
Statement of changes in shareholders' equity  
For the year ended 31 December 2016

	Separate financial statements						(Unit: Baht)
	Issued and paid-up share capital	Premium on ordinary shares	Retained earnings		Other components of shareholders' equity		
			Appropriated - statutory reserve	Unappropriated	Other comprehensive income		
					Unrealised loss from cash flow hedges	shareholders' equity	
Balance as at 30 December 2015 (Amalgamation date)	15,285,000,000	5,816,938,084	800,000,000	4,601,843,001	-	26,503,781,085	
Profit for the period	-	-	-	9,679,490	-	9,679,490	
Total comprehensive income for the period	-	-	-	9,679,490	-	9,679,490	
Transferred to statutory reserve (Note 30)	-	-	490,000	(490,000)	-	-	
Balance as at 31 December 2015	15,285,000,000	5,816,938,084	800,490,000	4,611,032,491	-	26,513,460,575	
Balance as at 1 January 2016	15,285,000,000	5,816,938,084	800,490,000	4,611,032,491	-	26,513,460,575	
Profit for the period	-	-	-	2,562,914,187	-	2,562,914,187	
Other comprehensive income for the period	-	-	-	(134,132,646)	(14,886,726)	(149,019,372)	
Total comprehensive income for the period	-	-	-	2,428,781,541	(14,886,726)	2,413,894,815	
Transferred to statutory reserve (Note 30)	-	-	128,200,000	(128,200,000)	-	-	
Dividend paid (Note 36)	-	-	-	(1,834,200,000)	-	(1,834,200,000)	
Balance as at 31 December 2016	15,285,000,000	5,816,938,084	928,690,000	5,077,414,032	(14,886,726)	27,093,155,390	

The accompanying notes are an integral part of the financial statements.



**Bangkok Expressway and Metro Public Company Limited and its subsidiaries**

**Cash flow statement**

**For the year ended 31 December 2016**

(Unit: Baht)

	<b>Consolidated financial statements</b>		<b>Separate financial statements</b>	
	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
<b>Cash flows from operating activities</b>				
Profit before tax	3,175,792,700	3,422,252,560	3,074,804,736	12,096,707
Adjustments to reconcile profit before tax to net cash provided by (paid from) operating activities:				
Amortisation and depreciation	3,422,513,416	3,270,656,984	2,872,420,659	10,803,177
Recognise to revenue from unearned revenue from advertising management rights	-	-	(1,248,360)	(6,712)
Allowance for doubtful debt	471,546	-	-	-
Amortisation of financial fees	17,883,479	39,449,343	17,883,479	-
Gain from sales of investment before amalgamation	-	(1,235,526,377)	-	-
Gain on investments	(31,090,443)	(62,222,728)	(45,235,624)	(94,782)
Loss (gain) on disposal/write off of equipment and intangible asset under concession agreement of the MRTA Initial System Project - Chalerm Ratchamongkhon Line	1,197,724	(3,481,422)	1,282,797	-
Compensation for site acquisition cost	550,049,984	595,973,617	550,049,984	2,715,838
Provision for long-term employee benefits	63,285,807	36,803,472	61,148,682	156,411
Share of profit from investments in associates	(347,349,465)	(481,212,789)	-	-
Unrealised loss (gain) on exchange rate	509,200	552,419	509,200	(67,989)
Dividend income	-	-	(498,953,704)	-
Interest income	(67,646,250)	(57,085,937)	(245,903,758)	(1,574,454)
Interest expenses	1,173,937,460	1,330,203,885	1,167,084,082	3,387,489
Profit from operating activities before changes in operating assets and liabilities	7,959,555,158	6,876,363,027	6,953,842,173	27,415,685
Operating assets (increase) decrease				
Trade and other receivables	(1,530,393,882)	21,466,299	(1,534,439,908)	23,063,969
Other current assets	100,361,854	(41,775,407)	97,193,942	15,256,485
Deferred of project remuneration	(672,358,673)	(633,417,011)	(672,358,673)	(4,164,667)
Other non-current assets	(59,034,205)	(27,667,427)	(55,823,728)	(286,260)
Operating liabilities increase (decrease)				
Trade payables and other payables	35,153,974	133,650,482	4,875,937	12,575,699
Unearned fare box revenue	21,997,482	3,038,660	21,997,482	195,509
Deposits on stored value ticket	8,575,064	(735,750)	8,575,064	31,500
Other current liabilities	(14,279,907)	(75,632,327)	(16,791,607)	504,835
Other non-current liabilities	(2,731,699)	(12,808,430)	(3,117,720)	(660,858)
Cash paid for compensation for site acquisition cost	(1,500,000,000)	(1,500,000,000)	(1,500,000,000)	-
Net cash flows from operating activities	4,346,845,166	4,742,482,116	3,303,952,962	73,931,797
Cash received from interest income	14,076,604	4,537,910	14,052,160	368,251
Cash paid for income tax	(515,595,620)	(585,484,131)	(494,208,005)	(3,683)
<b>Net cash flows from operating activities</b>	<b>3,845,326,150</b>	<b>4,161,535,895</b>	<b>2,823,797,117</b>	<b>74,296,365</b>

The accompanying notes are an integral part of the financial statements.

**Bangkok Expressway and Metro Public Company Limited and its subsidiaries**

**Cash flow statement (continued)**

**For the year ended 31 December 2016**

(Unit: Baht)

	Consolidated financial statements		Separate financial statements	
	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
<b>Cash flows from investing activities</b>				
Decrease (increase) in current investments	(5,419,545,593)	1,901,788,886	(5,428,000,700)	-
Increase of investments in subsidiary	-	(154,000,000)	-	-
Cash paid for purchases of investments in associates	-	(1,402,165,044)	-	-
Cash received from sales of investments in associates	46,971,310	42,514,120	46,971,310	-
Cash received from sales of investment before amalgamation	600,000,000	2,300,000,000	600,000,000	-
Increase in other long-term investments	(324,762,300)	(213,750,000)	(324,762,300)	-
Cash received from long-term loans to related parties	-	-	612,586,000	-
Cash paid for long-term loans to related party	-	-	(170,000,000)	-
Cash received from sales of equipment and intangible asset under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line	8,074,075	3,514,566	7,764,986	-
Purchase of equipment	(233,560,594)	(39,352,287)	(173,420,119)	(4,280,897)
Cash received from interest income	12,907,263	9,339,041	317,603,648	1,136,911
Cash received from dividend income	498,953,704	528,855,465	498,953,704	-
Cash paid for the MRT Chalong Ratchadham Line	(362,076,317)	(134,104,815)	(362,076,317)	(3,135,190)
Increase in intangible asset under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line	(412,493,534)	(141,867,979)	(393,001,035)	-
Cash paid for expressway construction	(5,732,648,468)	(7,038,885,967)	(5,731,793,324)	-
Interest expenses capitalised as cost of expressway projects	(301,989,908)	(385,316,949)	(301,989,908)	(2,614,171)
Increase in intangible assets	(43,075,180)	(8,680,720)	(37,541,180)	-
<b>Net cash flows used in investing activities</b>	<b>(11,663,245,542)</b>	<b>(4,732,111,683)</b>	<b>(10,838,705,235)</b>	<b>(8,893,347)</b>
<b>Cash flows from financing activities</b>				
Cash received for in short-term loans from financial institutions	10,400,000,000	20,410,000,000	10,400,000,000	-
Cash paid for short-term loans from financial institutions	(28,090,000,000)	-	(28,080,000,000)	-
Cash received from long-term loans from financial institutions	12,344,000,000	5,356,000,000	12,344,000,000	-
Repayment of long-term loans from financial institutions	(10,759,185,781)	(40,500,000)	(10,602,500,000)	-
Cash received from debentures	23,500,000,000	-	23,500,000,000	-
Cash paid for redemption of debentures	(300,000,000)	(19,400,000,000)	(300,000,000)	-
Cash paid for financial fees	(67,423,644)	(21,495,301)	(67,423,644)	-
Interest paid	(1,081,644,863)	(1,702,101,798)	(1,074,733,749)	(1,139)
Dividend paid	(1,834,200,000)	(1,925,000,000)	(1,834,200,000)	-
<b>Net cash flows from (used in) financing activities</b>	<b>4,111,545,712</b>	<b>2,676,902,901</b>	<b>4,285,142,607</b>	<b>(1,139)</b>
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>(3,706,373,680)</b>	<b>2,106,327,113</b>	<b>(3,729,765,511)</b>	<b>65,401,879</b>
Cash and cash equivalents at beginning of period	4,483,374,825	2,377,047,712	4,459,056,285	4,393,656,406
<b>Cash and cash equivalents at end of period</b>	<b>777,001,145</b>	<b>4,483,374,825</b>	<b>729,292,774</b>	<b>4,459,058,285</b>
<b>Supplemental cash flows information</b>				
Non-cash items consist of:				
Transfer of project costs under construction to completed expressway	19,600,400,995	7,065,481	19,600,400,995	-
Receivable from sales of other long-term investment	-	1,320,849,241	-	1,320,849,241
Payable from expressway construction	1,886,114,853	603,437,005	1,884,706,415	-
Purchase of equipment under financial lease	3,255,708	-	3,255,708	-

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 2016**

**1. General information**

**1.1 Corporate 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, Dindaeng Subdistrict, 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 Company 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 (the Second Stage Expressway System) 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 Sectors A, B and C, and on 17 April 1997 for Sector D. The EXAT has the right 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 right 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.

- 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 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 14 December 2012. The Company has the right to collect all toll revenue and rights to all other related income, and is to compensate 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 stated operation on 22 August 2016.

- A.3 The Udon Rattaya Expressway Project (Bang Pa-In - Pak Kret Expressway) under a concession 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 right 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 right 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.



## 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 Project - Chaloe M Ratchamongkhon (Blue Line (Hua Lamphong Station - Bang Sue Station)) (the "MRT Blue Line Project") under a concession agreement with the MRTA for the MRTA Initial System Project - Chaloe M Ratchamongkhon Line.

The Company, as concessionaire, 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. The MRTA Initial System officially commenced operation on 3 July 2004. Under the concession agreement, the Company has the right to collect all fare revenue and commercial development revenue and agrees to apportion revenue to the MRTA, including remuneration from fares, remuneration from commercial development, apportionment of profit calculated from the return on equity (ROE) and any benefit derived from the interest rate on a credit agreement being lower than a rate specified in the concession agreement.

- B.2 The MRT Chaloe M Ratchadham Line Project (Bang Yai-Rat Burana, Bang Yai-Bang Sue Section (Khlone 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 right 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 System 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.

Subsequently, in September 2013, the Company subcontracted all Phase 1 works under its responsibility to a related company for fees and interest amounting to Baht 20,011 million. However, the Company will pay the fees to the related company based on when the Company receives remuneration from MRTA. In addition, the Company has entered into an agreement assigning the rights to receipts under the agreement with the MRTA to the related company's bank, as collateral for loans.



On 6 August 2016, the Company received the M&E Systems and rolling stock under Phase I agreement from its related company and on the same date delivered the M&E Systems and rolling stock to the MRTA. Since the Company had transferred the performance obligations under the Phase 1 agreement to the related company and assigned the rights to receive payments under the Phase 1 agreement from the MRTA to the bank of the related company, as collateral for loans of the related company in 2013, the Company therefore presented receivable from MRTA - the M&E Systems and rolling stock, amounting to Baht 16,422 million, net of the amount payable to the related company for M&E Systems and rolling stock, amounting to Baht 16,422 million. In addition, the Company presented the revenue associated with these transactions net of related expenses in the consolidated and separate 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 for a period of 30 years from the date specified in the Commissioning Certificate and/or the date that the MRTA delivers the civil infrastructure and M&E Systems equipment to the Company. The compensation for Phase II under the agreement totals Baht 57,208 million (excluding escalations for inflation and adjustments to reflect electricity prices) and will be paid to the Company on a monthly basis over 30 years.

On 6 August 2016, the Company is delivered the operating civil infrastructure and M&E system equipment of the MRT Chalong Ratchadham Line to the MRTA. On that day, the operation of the MRT Chalong Ratchadham Line Project officially started.

#### **B.3 The MRT Blue Line Project: Tao Poon station-Bang Sue station**

The Company was selected as operator of the MRT Blue Line Project: Tao Poon station-Bang Sue station to supply M&E systems equipment, and operation and maintenance services, in accordance with a Cabinet resolution dated 28 October 2014. On 16 February 2017, the Company signed the agreement for a total contract price of Baht 918 million, with the MRTA. Details are as follows:

Phase I: Source and supply M&E systems. The term of Phase I is not more than 6 months from the date MRTA instructed the Company to commence.

Phase II: Providing O&M service. The term of Phase II is 2 years commencing from the official starting date of operation of the MRT Blue Line Project.

- C. Commercial development business, which consists of commercial developments related to the expressways and the operation of metro services.

## **1.2 Amalgamation**

The Company was formed as a result of the amalgamation of 2 companies in accordance with the Public Limited Companies Act B.E. 2535 on 30 December 2015. The amalgamating companies were Bangkok Expressway Public Company Limited and Bangkok Metro Public Company Limited.

As a result of the amalgamation, the Company received the assets, liabilities, rights and obligations of these companies and therefore presented beginning account balances based on the combined net book values as presented in the financial statements of these companies as of 29 December 2015. This amalgamation was considered to be a business combination under common control. The amalgamation did not result in a change in the group's shareholding structure, and the Company presented information in the consolidated financial statements for the year ended 31 December 2015 to reflect the financial position, operating results, and cash flows of the group of companies under common control on the basis of economic substance, even though the legal form of the Company was established on 30 December 2015.

The Stock Exchange of Thailand approved the listing of the shares of the Company to be traded on the Stock Exchange of Thailand commencing from 5 January 2016.

## **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 28 September 2011, 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>2016</u>	<u>2015</u>
			Percent	Percent
Northern Bangkok Expressway Company Limited	Operation and management of Bang Pa-In - Pakkret Expressway	Thailand	99.99	99.99
Bangkok Metro Networks Limited	Rental of retail space and provision of advertising services and telecommunication services in underground train stations	Thailand	65.19	65.19

- 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 Company and the subsidiaries 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 associates presented under the cost method.



### **3 New financial reporting standards**

#### **3.1 Financial reporting standards that became effective in the current year**

During the year, the Company and subsidiaries have adopted the revised (revised 2015) and new financial reporting standards and accounting treatment guidance issued by the Federation of Accounting Professions which become effective for fiscal years beginning on or after 1 January 2016. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards, with most of the changes directed towards revision of wording and terminology, and provision of interpretations and accounting guidance to users of standards. The adoption of these financial reporting standards does not have any significant impact on the Company and its subsidiaries' financial statements.

#### **3.2 Financial reporting standard that will become effective in the future**

During the current year, the Federation of Accounting Professions issued a number of the revised financial reporting standards and interpretations (revised 2016) and new accounting treatment guidance which is effective for fiscal years beginning on or after 1 January 2017. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards revision of wording and terminology, and provision of interpretations and accounting guidance to users of standards.

The management of the Company and its subsidiaries believe that the revised and new financial reporting standards and interpretations and new accounting treatment guidance will not have any significant impact on the financial statements when they are initially applied.

However, one standard involves changes to key principles, which are summarised below.

##### **TAS 27 (revised 2016) Separate Financial Statements**

This revised standard stipulates an additional option to account for investments in subsidiaries, joint ventures and associates in separate financial statements under the equity method, as described in TAS 28 (revised 2016) Investments in Associates and Joint Ventures. However, the entity is to apply the same accounting treatment for each category of investment. If an entity elects to account for such investments using the equity method in the separate financial statements, it has to adjust the transaction retrospectively.

At present, the management of the Company and its subsidiaries is evaluating the impact of this standard to the financial statements in the year when it is adopted.

#### **4. Significant accounting policies**

##### **4.1 Revenue and expense recognition**

###### **a) Toll revenue**

Toll revenue represent the invoiced value, excluding value added tax, of service rendered.

###### **b) Toll revenue sharing**

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 when the services are rendered. 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 from provision of operating services**

Revenue from provision of operating services is recognised when services have been rendered taking into accounting the stage of completion, excluding value added tax. Service rate charged is in accordance with rates stipulated in the agreement.

###### **e) Commercial development revenue**

Commercial development revenue is recognised as income when service has been rendered.

###### **f) Other revenues and expenses recognition**

###### **Interest income**

Interest income is recognised on an accrual basis based on the effective rate.

###### **Dividends**

Dividends are recognised when the right 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 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 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.
- c) 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).
- d) Investment in associates are accounted for in the consolidated financial statements using the equity method.
- e) 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.

On disposal of an investment, the difference between net disposal proceeds and the carrying amount of the investment is recognised in profit or loss.

### 4.5 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.

#### 4.6 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
Furniture and fixture	5 years
Tools, instruments and equipment	3 - 5 years, 20 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.

#### 4.7 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.

#### 4.8 Amortisation of rights to operate completed expressway sectors and amortisation

Rights to operate completed expressway sectors represent the cost of construction of the Second Stage Expressway, the Si Rat - Outer Ring Road Expressway and Bang Pa-In - Pakkret 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 completed expressway sectors is charged to profit or loss and calculated as follows:

$$\text{Annual amortisation} = \text{Net rights to operate completed expressway sectors} \times \text{Percentage of the number of vehicle volume for the year}$$

$$\text{Percentage of the number of vehicle volume for the year} = \frac{\text{Current year's number of actual vehicle volume}}{(\text{Current year's number of actual vehicle volume} + \text{Projected vehicle volume after current year to the remaining years of the agreement})}$$

$$\text{Net rights to operate completed expressway sectors} = \text{Total actual cost of rights to operate completed expressway sectors} - \text{Accumulated amortisation}$$

No amortisation is provided for project costs under construction.

#### 4.9 Rights to use sites for expressway construction and amortisation

The Company initially recorded the rights to use sites for expressway construction 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 construction as an expense in the income statement is 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.

#### 4.10 Intangible assets under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line and amortisation

Intangible assets under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line (the "MRT Blue Line Project") are stated at cost less accumulated amortisation and allowance for loss on impairment (if any).

The Company and its subsidiary 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 under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line based on the following formula:

Amortisation for the year	=	Net intangible assets under concession agreement of the MRTA Initial System Project-Chaloem Ratchamongkhon Line at the beginning of the year x Percentage of passengers for the year
Percentage of Passengers for the year	=	$\frac{\text{Current year's actual passengers}}{(\text{Actual passengers for the current year} + \text{Projected passengers during the remaining concession year})}$
Net intangible assets under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line	=	Total intangible assets under concession agreement of the MRTA Initial System Project-Chaloem Ratchamongkhon Line - Accumulated amortisation

##### Equipment - Other system

Amortisation of intangible assets under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line 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

Amortisation of intangible assets under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line of the Company and its subsidiary is included in profit or loss.

No amortisation is provided on assets under installations.



#### **4.11 Other intangible assets and amortisation**

The Company and its subsidiaries are 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 expense is charged to profit or loss.

The intangible assets with finite useful lives is computer software with 3 years, 5 years and 10 years useful lives.

#### **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 determine income.

#### **4.13 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.

#### **4.14 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.

#### **4.15 Related party transactions**

Related parties comprise individuals or enterprises that control, or are controlled by, the Company and its subsidiaries, whether directly or indirectly, or which are under common control with the Company and its subsidiaries.

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 Company and its subsidiaries, key management personnel, directors and officers with authority in the planning and direction of the Company and its subsidiaries' operations.

#### **4.16 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.

#### **4.17 Foreign currencies**

The consolidated and separate financial statements are presented in Baht, which is also the Company's functional currency.

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.

#### 4.18 Impairment of assets

At the end of each reporting period, the Company and its subsidiaries 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.

An impairment loss is recognised in profit or loss.

#### 4.19 Employee benefits

##### *Short-term employee benefits*

The company and its subsidiaries will recognise salaries, wages, bonuses and contributions to the social security fund as expenses when incurred.

##### *Post-employment benefits*

###### Defined contribution plans

The Company, its subsidiaries and its employees have jointly established a provident fund. The fund is monthly contributed by employees and by the Company and its subsidiaries. The fund's assets are held in a separate trust fund and the contributions of the Company and its subsidiaries are recognised as expenses when incurred.

###### Defined benefit plans

The Company and its subsidiaries have obligations in respect of the severance payments they must make to employees upon retirement under labor law. The Company and its subsidiaries treat 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.

#### 4.20 Provisions

Provisions are recognised when the Company and its subsidiaries have 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 agreement.

#### 4.21 Periodic maintenance

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.

#### 4.22 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 Company and its subsidiaries recognise 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 Company and its subsidiaries review 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 Company and its subsidiaries record deferred tax directly to shareholders' equity if the tax relates to items that are recorded directly to shareholders' equity.



## **4.23 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.

## **4.24 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 Company and its subsidiaries apply 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 Company and its subsidiaries measure 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 Company and its subsidiaries determine 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 under concession agreement of the MRTA Initial System Project Chaloem Ratchamongkhon Line**

In determining amortisation of intangible under concession agreement of the MRTA Initial System Project Chaloem Ratchamongkhon Line, 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.

### **Impairment testing of intangible asset under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line**

Impairment testing of intangible assets under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line at the end of each reporting period requires management to prepare projections of the cash flows expected to be generated by the intangible assets under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line or the cash generating units and to choose a suitable discount rate in order to calculate the present value of those cash flows.

### 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 Company and its subsidiaries have 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 period, the Company and its subsidiaries 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 Company and those related parties.

The relationship between the Company, its subsidiaries and the related parties which have transactions with during the period 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
CK Power Public Company Limited	Associated company
TTW Public Company Limited	Associated company
Krungthai Bank Public Company Limited	Related company by the Company's director has authority in bank
Bangkok Bank Public Company Limited	Related company by the Company's director has authority in bank
Finansa Public Company Limited	Related company by Common directors
Finansa Securities Company Limited	Related company by Common directors
Xayaburi Power Company Limited	Related company by Common directors

Such significant transactions and pricing policy are summarised below.

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statements		Pricing policy
	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015	
<u>Transactions with major shareholders</u>					
Interest income	36	45	36	-	At the rate of 3.67% per annum
Expressway and civil works maintenance expenses	174	19	174	-	Base on contracts
Cost of expressway construction contracts	3,983	8,370	3,983	-	Base on contracts
Cash receipt for the MRT Chalong Ratchadham Line project	104	86	104	-	Base on contracts
Gain from sales of investment	-	1,236	-	-	2,050 Million Shares, Baht 1.79 per share
Office rental and service expenses	7	7	-	-	Base on contracts
<u>Transactions with subsidiaries</u>					
(eliminated from the consolidated financial statements)					
Commercial development revenue	-	-	282	1	Base on contracts
Interest income from long-term loans	-	-	178	1	At the rate of 3.06% - 3.48% and 3.5% per annum (2015: 3.66% per annum)
Project management income	-	-	120	1	Baht 10 million per month
<u>Transactions with associated companies</u>					
Dividend income	-	-	499	-	As declared
<u>Transactions with related companies</u>					
Commercial development revenue	8	8	8	-	Base on contracts
Costs of fare box (Inclusive of VAT)	436	401	436	1	Concession agreement
Costs of commercial development	67	66	67	-	Concession agreement
Consulting fees	-	40	-	-	Base on contracts
Property tax	4	37	4	-	At the rates charged by Bangkok Metropolitan Administration
Financial arrangement fee	14	17	11	-	Base on contracts
Financial fee	95	33	92	2	Base on contracts
Interest expenses on short-term loans	337	78	337	1	At the rates of 2.85% and 3.55% per annum (2015: 3.55% per annum)
Interest expenses on long-term loans	325	449	320	3	At the rates of 4.00%, MLR, MLR + 2.525, 6M FDR + 2 and 6M FDR + 2.66875 per annum

The balances of the accounts as at 31 December 2016 and 2015 between the Company and its subsidiaries and related parties are as follows:

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
<b><u>Trade and other receivables (Note 9)</u></b>				
<b><u>Trade receivables</u></b>				
CH. Karnchang Public Company Limited	12,840	17,120	12,840	17,120
Bangkok Metro Networks Limited	-	-	74,473	52,172
Mass Rapid Transit Authority of Thailand	490,232	-	490,232	-
Total	<u>503,072</u>	<u>17,120</u>	<u>577,545</u>	<u>69,292</u>
<b><u>Other receivables</u></b>				
CH. Karnchang Public Company Limited	1,029,562	-	1,029,562	-
Northern Bangkok Expressway Company Limited	-	-	10,700	10,700
Total	<u>1,029,562</u>	<u>-</u>	<u>1,040,262</u>	<u>10,700</u>
<b><u>Receivable from sales of investment</u></b>				
CH. Karnchang Public Company Limited	769,741	1,369,741	769,741	1,369,741
Less: Deferred interest income	(12,907)	(48,892)	(12,907)	(48,892)
Total	<u>756,834</u>	<u>1,320,849</u>	<u>756,834</u>	<u>1,320,849</u>
Current portion	(756,834)	(564,015)	(756,834)	(564,015)
Long-term portion	<u>-</u>	<u>756,834</u>	<u>-</u>	<u>756,834</u>
<b><u>Prepaid expenses</u></b>				
Krungthai Bank Public Company Limited	<u>6,528</u>	<u>5,312</u>	<u>4,223</u>	<u>3,007</u>
<b><u>Advance payment under service contract</u></b>				
CH. Karnchang Public Company Limited	<u>3,906</u>	<u>3,746</u>	<u>3,906</u>	<u>-</u>
<b><u>Long-term loans to and interest receivable from related parties</u></b>				
Northern Bangkok Expressway Company Limited	-	-	6,120,496	6,854,496
Bangkok Metro Networks Limited	-	-	165,000	-
Total	<u>-</u>	<u>-</u>	<u>6,285,496</u>	<u>6,854,496</u>
Less: Current portion	<u>-</u>	<u>-</u>	<u>(12,000)</u>	<u>-</u>
Long-term loans to and interest receivable from related parties, net of current portion	<u>-</u>	<u>-</u>	<u>6,273,496</u>	<u>6,854,496</u>
<b><u>Advance payment under construction contract</u></b>				
CH. Karnchang Public Company Limited	<u>-</u>	<u>398,250</u>	<u>-</u>	<u>398,250</u>

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
<b><u>Short term loans from financial institution</u></b>				
<b><u>(only principal) (Note 21)</u></b>				
Krungthai Bank Public Company Limited	-	18,410,000	-	18,400,000
<b><u>Trade and other payables (Note 22)</u></b>				
CH. Karnchang Public Company Limited	163,398	1,958,150	161,587	1,957,506
Mass Rapid Transit Authority of Thailand	102,916	103,204	102,916	103,204
Krungthai Bank Public Company Limited	1,192	4,059	1,123	4,059
Bangkok Bank Public Company Limited	871	571	871	571
Finansa Securities Company Limited	-	20,350	-	20,350
Others	1,874	938	-	-
Total	270,251	2,087,272	266,497	2,085,690
<b><u>Long-term loans from financial institutions</u></b>				
<b><u>(only principal) (Note23)</u></b>				
Krungthai Bank Public Company Limited	4,701,378	7,173,319	4,701,378	7,016,633
Bangkok Bank Public Company Limited	4,582,105	2,945,855	4,582,105	2,945,855
Total	9,283,483	10,119,174	9,283,483	9,962,488
<b><u>Retention guarantees</u></b>				
CH. Karnchang Public Company Limited	57,925	152,988	56,646	152,988
<b><u>Unearned revenue from advertising management</u></b>				
<b><u>rights (Note26)</u></b>				
Bangkok Metro Networks Limited	-	-	15,610	16,859



During the current period, movements in long-term loans to and interest receivables from related parties in the separate financial statement were as follows:

(Unit: Thousand Baht)

	1 January 2016	Increase during the period	Decrease during the period	31 December 2016
Northern Bangkok Expressway Company Limited				
Long-term loans	5,673,827	-	(607,586)	5,066,241
Interest receivable	1,180,669	175,833	(302,247)	1,054,255
Total	6,854,496	175,833	(909,833)	6,120,496
Bangkok Metro Networks Limited				
Long-term loans	-	170,000	(5,000)	165,000
Interest receivable	-	2,450	(2,450)	-
Total	-	172,450	(7,450)	165,000
Grand total	6,854,496	348,283	(917,283)	6,285,496

During the current period, movements in short-term loans from financial institution (only principal) were as follow:

(Unit: Thousand Baht)

	Consolidated financial statements			
	1 January 2016	Increase during the period	Decrease during the period	31 December 2016
Krungthai Bank Public Company Limited	18,410,000	7,000,000	(25,410,000)	-

(Unit: Thousand Baht)

	Separate financial statements			
	1 January 2016	Increase during the period	Decrease during the period	31 December 2016
Krungthai Bank Public Company Limited	18,400,000	7,000,000	(25,400,000)	-

During the current period, movement in long-term loans from financial institutions (only principal) were as follow:

(Unit: Thousand Baht)

	Consolidated financial statements			
	Increase		Decrease	
	1 January 2016	during the period	during the period	31 December 2016
Krungthai Bank Public Company Limited	7,173,319	1,829,359	(4,301,299)	4,701,379
Bangkok Bank Public Company Limited	2,945,855	1,636,250	-	4,582,105
Total	10,119,174	3,465,609	(4,301,299)	9,283,484

(Unit: Thousand Baht)

	Separate financial statements			
	Increase		Decrease	
	1 January 2016	during the period	during the period	31 December 2016
Krungthai Bank Public Company Limited	7,016,633	1,829,359	(4,144,613)	4,701,379
Bangkok Bank Public Company Limited	2,945,855	1,636,250	-	4,582,105
Total	9,962,488	3,465,609	(4,144,613)	9,283,484

### Directors and management's remuneration

The Company and its subsidiaries had employee benefit expenses of their directors and management as below.

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	For the year end	For the year end	For the year end	For the period
	31 December	31 December	31 December	as from
	2016	2015	2016	30 December 2015
				to 31 December
				2015
Short-term employee benefits	115,857	215,449	100,582	1,691
Post-employment benefits	5,706	7,957	5,245	36
Total	121,563	223,406	105,827	1,727

## 7. Cash and cash equivalents

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
Cash	43,671	36,185	41,891	34,630
Bank deposits	733,330	4,447,190	687,402	4,424,428
Total	777,001	4,483,375	729,293	4,459,058

The Company pledged its rights to draw bank deposits with outstanding balances as at 31 December 2015 of approximately Baht 107 million to a group of domestic lenders to secure the Company's long-term loans from these lenders. The Company is able to draw from these deposits for its use in normal operation.

In June 2016, the Company repaid the long-term loan in full and released its rights to withdraw funds from the bank deposits.

## 8. Current investments

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
Unit trusts	4,432,102	454,678	4,422,853	437,295
Add: Unrealised gain on changes in value of current investments	57,051	42,679	57,048	42,679
Unit trusts - Fair value	4,489,153	497,357	4,479,901	479,974
Bills of exchange	1,452,197	-	1,452,197	-
Total current investments	5,941,350	497,357	5,932,098	479,974

## 9. Trade and other receivables

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
<u>Trade receivables</u>				
Trade receivables				
- Related parties (Note 6)	503,072	17,120	577,545	69,292
- Unrelated parties	85,155	66,530	-	-
Less: Allowance for doubtful debts	(4,910)	(4,438)	-	-
Total trade receivables - net	<u>583,317</u>	<u>79,212</u>	<u>577,545</u>	<u>69,292</u>
<u>Other receivables</u>				
Other receivables				
- Related parties (Note 6)	1,029,562	-	1,040,262	10,700
- Unrelated parties	1,456	2,129	1,407	2,048
Advances	(54)	273	-	2
Accrued income	282	3,014	282	3,014
Total other receivables	<u>1,031,246</u>	<u>5,416</u>	<u>1,041,951</u>	<u>15,764</u>
Trade and other receivables - net	<u>1,614,563</u>	<u>84,628</u>	<u>1,619,496</u>	<u>85,056</u>

Most of the trade receivables of the Company and its subsidiaries were within their credit terms. As at 31 December 2016, the outstanding balances of trade receivables in the consolidated financial statements that are one year past due amounted to approximately Baht 5 million (31 December 2015: Baht 6 million) (Separate financial statements: Nil). The Company and its subsidiaries assessed the net realisable value of the receivables that were past due and recorded an allowance for doubtful accounts amounting to Baht 5 million in the consolidated financial statements (31 December 2015: Baht 4 million) (Separate financial statements: Nil).





(Unit: Million Baht)

Company's name	Nature of business	Incorporated country	Separate financial statements			
			Shareholding percentage		Cost	
			2016	2015	2016	2015
			(Percent)			
CK Power Public Company Limited	Holding company manufacture and distribution of electricity	Thailand	19.40	19.40	3,223	3,223
TTW Public Company Limited	Production and sales of treated water	Thailand	19.45	19.57	4,277	4,303
					7,500	7,526

### CK Power Public Company Limited

The Company agreed to provide sponsor support to CK Power Public Company Limited, whereby it will provide financial support to a subsidiary of CK Power Public Company Limited in proportion to its shareholding, or a total of not more than Baht 154 million, should that a subsidiary be unable to comply with its obligations under the Financing Documents or default on loan repayment.

In September 2016, the subsidiary signed a long-term loan agreement with a group of domestic lenders for repayment of the original loan and the above obligations have been cancelled.

### TTW Public Company Limited

In March 2016, the Company disposed 4.69 million ordinary shares of TTW Public Company Limited, resulted in the decrease in proportion of shareholding from 19.57% to 19.45%.

## 11.2 Share of comprehensive income and dividend received

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:

Company's name	Consolidated financial statements				Separate financial statements	
	Share of profit from investments in associates during the year		Share of other comprehensive income from investments in associates during the year		Dividend received	
	For the year ended	For the year ended	For the year ended	For the year ended	For the year ended	For the period as from
	31 December	31 December	31 December	31 December	31 December	31 December
	2016	2015	2016	2015	2016	2015
CK Power Public Company Limited	10	80	18	(37)	32	-
TTW Public Company Limited	337	381	5	(9)	467	-
Total	347	461	23	(46)	499	-

### 11.3 Fair value of investments in listed associates

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>2016</u>	<u>2015</u>
CK Power Public Company Limited	5,062 <sup>(1)</sup>	2,803 <sup>(1)</sup>
TTW Public Company Limited	8,304	8,198
<b>Total</b>	<b>13,366</b>	<b>11,001</b>

<sup>(1)</sup> Excluding the fair value of warrants amounting to Baht 189 million (2015: Baht 127 million).

### 11.4 Summarised financial information about material associates

Summarised information about financial position

	(Unit: Million Baht)			
	CK Power Public		TTW Public	
	Company Limited		Company Limited	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
Current assets	7,622	5,196	5,298	7,299
Non-current assets	51,636	49,371	20,461	19,345
Current liabilities	(1,444)	(2,416)	(1,972)	(3,265)
Non-current liabilities	(27,311)	(20,338)	(12,253)	(11,949)
Non-controlling interests of the subsidiaries	(12,760)	(14,058)	(42)	(40)
<b>Net assets</b>	<b>17,743</b>	<b>17,755</b>	<b>11,492</b>	<b>11,390</b>
Shareholding percentage (%)	19.40	19.40	19.45	19.57
<b>Share of net assets</b>	<b>3,442</b>	<b>3,444</b>	<b>2,235</b>	<b>2,229</b>
Elimination entries	(321)	(321)	-	-
Rights to produce and sell treated water	-	-	1,916	2,075
Goodwill	-	-	2,396	2,410
<b>Carrying amounts of associates based on equity method</b>	<b>3,121</b>	<b>3,123</b>	<b>6,547</b>	<b>6,714</b>

## Summarised information about comprehensive income

(Unit: Million Baht)

	For the year ended 31 December			
	CK Power Public Company Limited		TTW Public Company Limited	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
Revenue	6,359	6,851	5,499	5,574
Profit	191	786	2,492	2,698
Other comprehensive income	150	(433)	24	(50)
Total comprehensive income	341	353	2,516	2,648

## 12. Other long-term investments

(Unit: Million Baht)

Company's name	Nature of business	Incorporated country	Consolidated and separate financial statements							
			Registered capital		Paid-up capital		Shareholding percentage		Cost	
			<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
							(Percent)			
Xayaburi Power Company Limited	Manufacture and distribution of electricity	Laos	26,861	26,861	16,505	12,175	7.50	7.50	1,238	913
Total other long-term investments									1,238	913

During the current year, Xayaburi Power Company Limited called up additional parts of the unpaid portion of its shares, totaling Baht 325 million, and the Company made payment for the shares.

Subsequently in December 2016 and January 2017, Xayaburi Power Company Limited called up a further Baht 165 million. The Company made payments of the share capital in January and February 2017.

The 121.9 million ordinary shares of Xayaburi Power Company Limited held by the Company have been pledged to secure long-term loans of that company.

## 13. Investment properties

The fair value of the investment properties as at 31 December 2016 and 2015 stated below:

(Unit: Million Baht)

	Consolidated financial statements		Separate financial statement	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
Land awaiting sales	315	302	315	302

The fair value of above investment properties has been determined based on the valuation performance by an accredited independent valuer, using market approach.

The Company has pledged all investment properties as collateral against credit facilities received from a group of lenders.

#### 14. Building and equipment

(Unit: Thousand Baht)

	Consolidated financial statements				
	Building and construction improvement	Furniture and fixture	Tools, instruments and equipment	Vehicles	Total
<b>Cost:</b>					
1 January 2015	33,896	46,277	146,271	314,025	540,469
Additions	867	2,407	8,869	27,207	39,350
Disposals/Write off	-	(86)	(10,329)	(14,179)	(24,594)
Transfer in (out)	(36)	36	-	-	-
31 December 2015	34,727	48,634	144,811	327,053	555,225
Additions	4,633	6,254	79,171	146,643	236,731
Disposals/Write off	-	(6,183)	(7,745)	(32,741)	(46,669)
Transfer in (out)	-	(45)	45	-	-
31 December 2016	39,390	48,660	216,282	440,955	745,287
<b>Accumulated Depreciation:</b>					
1 January 2015	25,786	38,741	124,626	199,237	388,390
Depreciation for the period	4,435	1,923	10,863	19,819	37,040
Depreciation on disposals/write off	-	(86)	(10,306)	(14,179)	(24,571)
31 December 2015	30,221	40,578	125,183	204,877	400,859
Depreciation for the period	2,376	2,239	16,164	20,536	41,315
Depreciation on disposals/write off	-	(6,079)	(7,671)	(23,870)	(37,620)
31 December 2016	32,597	36,738	133,676	201,543	404,554
<b>Net book value:</b>					
31 December 2015	4,506	8,056	19,628	122,176	154,366
31 December 2016	6,793	11,922	82,606	239,412	340,733
<b>Depreciation for the year (including in selling and administrative expense)</b>					
2015					37,040
2016					41,315

(Unit: Thousand Baht)

	Separate financial statements				
	Building and construction improvement	Furniture and fixture	Tools, instruments and equipment	Vehicles	Total
<b>Cost:</b>					
30 December 2015	34,693	42,529	133,035	316,011	526,268
Additions	-	-	-	4,281	4,281
31 December 2015	34,693	42,529	133,035	320,292	530,549
Additions	4,662	6,097	22,924	142,991	176,674
Disposals/Write off	-	(1,743)	(3,274)	(32,054)	(37,071)
31 December 2016	39,355	46,883	152,685	431,229	670,152
<b>Accumulated depreciation:</b>					
30 December 2015	30,173	35,097	114,833	199,656	379,759
Depreciation for the period	13	10	55	74	152
31 December 2015	30,186	35,107	114,888	199,730	379,911
Depreciation for the period	2,376	2,079	10,353	19,714	34,522
Depreciation on disposals/write off	-	(1,733)	(3,227)	(23,183)	(28,143)
31 December 2016	32,562	35,453	122,014	196,261	386,290
<b>Net book value:</b>					
31 December 2015	4,507	7,422	18,147	120,562	150,638
31 December 2016	6,793	11,430	30,671	234,968	283,862
<b>Depreciation (including in selling and administrative expense)</b>					
For the period as from 30 December 2015 to 31 December 2015					152
For the year ended 31 December 2016					34,522

As at 31 December 2016, the Company and its subsidiaries have certain of building and equipment which have been fully depreciated but are still in use. The original cost, before deducting accumulated depreciation, of those assets amounted to Baht 309 million (2015: Baht 328 million) and the Company only amounted to Baht 300 million (2015: Baht 310 million).



## 15. Project costs under construction

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
Balance at the beginning of the period	19,600,401	10,744,376	19,600,401	19,597,787
Addition during the period	4,544,795	8,862,091	4,544,795	2,614
Transfer to rights to operate				
completed expressway sectors	(24,145,196)	(6,066)	(24,145,196)	-
Balance at the end of the period	-	19,600,401	-	19,600,401

Project costs under construction is expenditures related to the construction of the Si Rat-Outter Ring Road Expressway Project, which has been financed with debentures and long-term loans from financial institutions. Borrowing costs amounting to Baht 285 million were capitalised during the year ended 31 December 2016 (2015: Baht 430 million), with the weighted average rate of 1.4% used to determine the amount of borrowing costs eligible for capitalisation (2015: 2.9%).

In August 2016, the Company transferred such cost of project under construction, amounting to Baht 24,145 million, to right to operate completed expressway sectors.

## 16. Rights to operate completed expressway sectors

The net book value of rights to operate completed expressway sectors are presented below.

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Cost	85,761,545	61,616,349	72,917,255	48,772,059
Less: Accumulated amortisation	(44,209,720)	(41,288,886)	(38,108,262)	(35,702,158)
Net book value	41,551,825	20,327,463	34,808,993	13,069,901

A reconciliation of the net book value of the rights to operate completed expressway sectors are summarised below.

	(Unit: Thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
Net book value at the beginning of the period	20,327,463	23,146,990	13,069,901	13,078,527
Transfer from project cost under construction	24,145,196	7,065	24,145,196	-
Amortisation for the period	(2,920,834)	(2,826,592)	(2,406,104)	(8,626)
Net book value at the end of the period	41,551,825	20,327,463	34,808,993	13,069,901

The Company has transferred its rights in the Second Stage Expressway to secure long-term loans.

In August 2016, the Company transferred project costs in process of the Si Rat - Outer Ring Road Expressway Project amounting to Baht 24,145 million to right to operate completed expressway sectors and started amortisation of this right from the commencement of operations (22 August 2016).

## 17. Rights to use sites for expressway construction

The net book value of rights to use sites for expressway construction are presented below.

	(Unit: Thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
Cost	6,644,790	6,644,790	6,644,790	6,644,790
Less: Accumulated amortisation	(5,624,166)	(5,324,596)	(5,624,166)	(5,324,596)
Net book value	1,020,624	1,320,194	1,020,624	1,320,194

A reconciliation of the net book value of the rights to use sites for expressway construction are summarised below.

	(Unit: Thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
Net book value at the beginning				
of the period	1,320,194	1,611,877	1,320,194	1,321,274
Less: Amortisation for the period	(299,570)	(291,683)	(299,570)	(1,080)
Net book value at the end of the period	1,020,624	1,320,194	1,020,624	1,320,194

The rights to use sites for expressway construction is a part of rights to operate completed expressway sectors.

#### 18. Intangible asset under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line

The net book value of intangible asset under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line is presented below.

	(Unit: Thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
Cost	20,693,035	20,284,392	20,161,745	19,768,880
Less: Accumulated amortisation	(3,733,074)	(3,296,752)	(3,527,094)	(3,114,732)
Net book value	16,959,961	16,987,640	16,634,651	16,654,148

A reconciliation of the net book value of the intangible asset under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line are summarised below.

	(Unit: Thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
Net book value at the beginning				
of the period	16,987,640	17,245,679	16,654,148	16,656,132
Additions	412,616	141,868	393,001	-
Disposals/write-off	(218)	(8)	(118)	-
Amortisation for the period	(440,077)	(399,899)	(412,380)	(1,984)
Net book value at the end of the period	16,959,961	16,987,640	16,634,651	16,654,148

Project cost of intangible asset under concession agreement of the MRTA Initial System Project - Chaloem Ratchamongkhon Line includes the expenditure of M&E System and O&M Services, telecommunication equipment at the stations and advertising equipment.

Project costs consist of M&E equipment, depot building and administration building. They will be transferred to the MRTA at the end of the concession period of 25 years, on an Acquire, Operate and Transfer basis.

The Company pledged M&E equipment, depot building and administration building of the Project with a group of domestic lenders to secure its long-term loans from those lenders. In June 2016, the Company repaid these long-term loans and already released the collateral.

The subsidiary pledged part of its telecommunication equipment with a lender to secure a long-term loan. In July 2016 the subsidiary repaid the long-term loans and already released the collateral.

## 19. Project cost of the MRT Chalong Ratchadham Line

Project cost of the MRT Chalong Ratchadham Line is expenditures related the MRT Chalong Ratchadham Line project, which are amortised on a straight-line basis over the concession period, as from commencement of operations.

The net book value of project cost of the MRT Chalong Ratchadham Line is presented below.

(Unit: Thousand Baht)		
Consolidated and separate financial statements		
	<u>2016</u>	<u>2015</u>
Cost	636,462	271,397
Less: Accumulated amortisation	(9,206)	-
Net book value	<u>627,256</u>	<u>271,397</u>

A reconciliation of the net book value of project cost of the MRT Chalong Ratchadham Line are summarised below.

(Unit: Thousand Baht)				
	Consolidated financial statements		Separate financial statements	
	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
Net book value at the beginning of the period	271,397	136,821	271,397	268,238
Additions	365,065	134,576	365,065	3,159
Amortisation for the period	(9,206)	-	(9,206)	-
Net book value at the end of the period	<u>627,256</u>	<u>271,397</u>	<u>627,256</u>	<u>271,397</u>



## 20. Intangible assets

Net book value of intangible assets which are computer software is presented below.

	(Unit: Thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
Cost	144,582	101,507	137,627	100,086
Less: Accumulated amortisation	(76,353)	(65,270)	(74,130)	(63,921)
Net book value	<u>68,229</u>	<u>36,237</u>	<u>63,497</u>	<u>36,165</u>

A reconciliation of the net book value of intangible assets is presented below.

	(Unit: Thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
Net book value at the beginning of the period	36,237	34,592	36,165	36,207
Acquisition of computer software	43,075	8,771	37,541	-
Amortisation for the period	(11,083)	(7,126)	(10,209)	(42)
Net book value at the end of the period	<u>68,229</u>	<u>36,237</u>	<u>63,497</u>	<u>36,165</u>

## 21. Short-term loans from financial institutions

	Interest rate (Percent per annum)	(Unit: Thousand Baht)			
		Consolidated financial statements		Separate financial statements	
		<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
Short-term loans from financial institutions					
- Related party (Note 6)	3.55 and MOR	-	18,410,000	-	18,400,000
- Unrelated parties	2.75 (2015: 3.10 - 3.20)	4,720,000	4,000,000	4,720,000	4,000,000
Total		4,720,000	22,410,000	4,720,000	22,400,000
Less: Deferred financial fees		(4,225)	-	(4,225)	-
Total		<u>4,715,775</u>	<u>22,410,000</u>	<u>4,715,775</u>	<u>22,400,000</u>

## 22. Trade and other payables

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
Trade payables - related parties (Note 6)	219,023	2,062,292	217,143	2,060,710
Trade payables - unrelated parties	305,491	378,788	263,155	359,687
Accrued interest - related parties (Note 6)	1,651	4,630	1,651	4,630
Accrued interest - unrelated parties	96,397	1,127	96,397	1,067
Accrued expense - related parties (Note 6)	49,577	20,350	47,703	20,350
Accrued expense - unrelated parties	139,959	102,016	120,777	89,803
Unearned revenue from advertising management rights (Note 26)	-	-	1,248	1,248
Other payables	<u>7,316</u>	<u>10,351</u>	<u>1,382</u>	<u>1,464</u>
Total trade and other payables	<u>819,414</u>	<u>2,579,554</u>	<u>749,456</u>	<u>2,538,959</u>

## 23. Long-term loans

	Credit (Million Baht)	Objective	Interest rate	Period of repayment	Consolidated financial statements		(Unit: Thousand Baht) Separate financial statements	
					2016	2015	2016	2015
1. Tranche Gor (Fully drew down)	29,888	Refinance remaining long-term loans	4.0% p.a.	To be repaid in full in July 2019	74,664	74,664	74,664	74,664
2. Tranche Khor (Fully drew down)	4,998	Lending to subsidiary to repay its long-term loans from commercial banks	4.0% p.a.	To be repaid in full in July 2019	9,595	9,595	9,595	9,595
3. Tranche Chor (Fully drew down)	1,000	Working capital	MLR - 2.525% and 6M FDR + 2.66875% p.a.	To be repaid in full in July 2019	1,000,000	1,000,000	1,000,000	1,000,000
4. Tranche Gor (Fully drew down)	5,750	For the construction of expressway system	MLR - 2.525% p.a.	Repayment in monthly installments commencing October 2017 to September 2027	5,750,000	3,536,250	5,750,000	3,536,250
5. Tranche Khor (Fully drew down)	4,250	For the construction of expressway system	6M FDR + 2% p.a.	Repayment in monthly installments commencing October 2017 to September 2027	4,250,000	2,613,750	4,250,000	2,613,750
6. Long-term loan (Fully drew down)	8,000	Working capital	3.18% p.a (contract: 6M THBFX + 1.15% p.a.)	Repayment in monthly installments commencing May 2017 to May 2021	8,000,000	-	8,000,000	-

(Unit: Thousand Baht)									
		Credit (Million Baht)	Objective	Interest rate	Period of repayment	Consolidated financial statements		Separate financial statements	
						2016	2015	2016	2015
7.	Tranche A (Fully drew down)	11,000	For the payment of intangible asset under concession agreement of the MRTA Initial System Project - Chalcoern Ratchamongkhon Line	MLR + 0.25% p.a. (4.75% p.a. from 30 December 2015 to 31 December 2016)	Repayment in quarterly instalments commencing September 2016, with the final instalment due in December 2024	-	9,102,500	-	9,102,500
8.	Tranche F (Fully drew down)	1,500	For the purchase of new rolling stock and to fund capital expenditures	MLR + 0.25% p.a. (4.75% p.a. from 30 December 2015 to 31 December 2016)	Repayment in quarterly instalments commencing September 2016, with the final instalment due in December 2024	-	1,006,000	-	1,006,000
9.	Long-term loan (Fully drew down)	245	Working capital of the subsidiary	MLR p.a.	Repayment in quarterly instalments commencing April 2010, with the final instalment due in January 2018	-	156,686	-	-
Total		66,631				19,084,259	17,499,445	19,084,259	17,342,759
Less: Current portion for long-term loans						(2,066,750)	(118,500)	(2,066,750)	(75,000)
Less: Deferred financial fees						(65,106)	(51,878)	(65,106)	(51,878)
Long-term loans - net of current portion						16,952,403	17,329,067	16,952,403	17,215,881

Detail and movement of long-term loans account are as follows:

	(Unit: Thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
Long-term loans				
- Related parties (Note 6)	9,283,484	10,119,174	9,283,484	9,962,488
- Unrelated parties	9,800,775	7,380,271	9,800,775	7,380,271
Total	19,084,259	17,499,445	19,084,259	17,342,759

	(Unit: Thousand Baht)			
	Consolidated financial statements		Separate financial statements	
	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the year ended 31 December 2015
Balance at beginning of period	17,499,445	12,183,945	17,342,759	17,342,759
Add: Drawdown during the period	12,344,000	5,356,000	12,344,000	-
Less: Repayment during the period	(10,759,186)	(40,500)	(10,602,500)	-
Balance at end of period	19,084,259	17,499,445	19,084,259	17,342,759

#### For the long-term loans number 1 to 5

The long-term loans are secured by assets of the Company such as land and structure thereon, rights under the Expressway Agreement, rights in toll revenues and beneficiary rights under insurance policies.

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, debt to equity ratio, shareholding proportion in subsidiary company, dividend payment and conditions for mandatory prepayment. In this respect, the Company has the total financial expenses of Baht 4.8 million per year payable to the agents of the lenders (2015: Baht 4.8 million).

#### For the long-term loans number 6

In April 2016, the Company signed a credit agreement with a commercial bank, granting facilities of Baht 8,000 million. The Company had fully drawn down these facilities in May 2016. In addition, the Company entered into an interest rate swap contract to change the interest rate from a floating rate of 6M THBFIX + 1.15% per annum to a fixed rate of 3.18% per annum.



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 loan number 7 to 8

The loans are secured by the mortgage of M&E equipment of the project, a depot building and administration building, pledges of the Company's share certificates and the subsidiary's share certificates, the assignment of rights and obligations under the concession agreement and the rights to receive deposits at banks.

The loan agreements include covenants imposed by the lenders concerning, among other things, the percentage shareholdings of the principal shareholders, changes in the Company's management, entering into other loan agreements, entering into any new business or activity which is not related to the MRT Blue line, the maintenance of certain financial ratios.

In June 2016, the Company repaid all long-term loans, together with prepayment fees amounting to Baht 212 million, and this is presented under finance cost. At present, the Company already released the collateral.

#### Long-term loan number 9

The long-term loan from financial institution of the subsidiary is secured by pledges of the subsidiary's share certificates which are held by shareholders other than the Company and the transfer of rights to receive revenue from telecommunication customers, revenue from the Passenger Information Display business (PID), revenue from the Platform Screen Door advertising and revenue from Digital Media, and the pledge of some of the telecommunication equipment to the lender.

The loan agreement includes covenants imposed by the lender concerning, among other things, the percentage shareholding of the principal shareholders, repayment of loans and amounts payable to related companies and/or group companies, dividend payment and the maintenance of certain financial ratios.

In July 2016, the subsidiary made full repayment of the long-term loans, together with prepayment fees of Baht 3 million, and this is presented under finance cost. At present, the subsidiary already released the collateral.

## 24. Debentures

Debentures as at 31 December 2016 and 2015 have the following details:

						(Unit: Thousand Baht)	
						Consolidated and separate	
						financial statements	
Type of debenture	Term	Issuance date	Maturity date	Interest rate		2016	2015
No. 1/2016				(% per annum)			
- 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	-
- Tranche 3	7 years	24 June 2016	24 June 2023	3.00		2,000,000	-
- Tranche 4	10 years	24 June 2016	24 June 2026	3.30		3,335,000	-
- Tranche 5	12 years	24 June 2016	24 June 2028	3.61		2,750,000	-
No. 2/2016	12 years	11 August 2016	24 June 2028	3.61		500,000	-
No. 3/2016							
- Tranche 1	4 years	21 October 2016	21 October 2020	2.62		2,500,000	-
- Tranche 2	9 years	21 October 2016	21 October 2025	3.78		2,500,000	-
- Tranche 3	11 years	21 October 2016	21 October 2027	3.95		3,000,000	-
Total						23,200,000	-
Less: Deferred debenture issuing cost						(32,087)	-
Debentures - net						23,167,913	-

Movements in the debentures account are summarised below.

				(Unit: Thousand Baht)	
		Consolidated		Separate	
		financial statements		financial statements	
		For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
Balance at beginning of period		-	19,400,000	-	-
Add: Issuance of debentures during the period		23,500,000	-	23,500,000	-
Less: Redemption of debentures during the period		(300,000)	(19,400,000)	(300,000)	-
Balance at end of period		23,200,000	-	23,200,000	-

## 25. Provision for compensation for site acquisition costs

(Unit: Thousand Baht)

	Consolidated financial statements		Separate financial statements	
	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
Provision for compensation for site acquisition				
cost as at the beginning of period	5,566,672	6,762,382	5,566,672	5,565,036
Payment during period	(1,500,000)	(1,500,000)	(1,500,000)	-
Interest cost	250,480	304,290	250,480	1,636
Provision for compensation for				
site acquisition cost at the end of period	4,317,152	5,566,672	4,317,152	5,566,672
Less: Current portion	(1,500,000)	(1,500,000)	(1,500,000)	(1,500,000)
Provision for compensation for				
site acquisition cost - net of current portion	2,817,152	4,066,672	2,817,152	4,066,672

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 2016, the Company had already paid Baht 12,100 million of this compensation (2015: Baht 10,600 million).

## 26. Unearned revenue from advertising management rights

The Company entered into a contract granting commercial development rights to the subsidiary, to manage advertising services through the Passenger Information Display System (PID), which is installed in underground stations and on trains. The agreement has started from the date the Company notifies the subsidiary of the commencement of advertising services through the PID (1 January 2010). During the year 2015, the Company extended the contract period from 31 December 2021 to 2 July 2029.

Under this agreement, the Company received remuneration from the subsidiary amounting to Baht 35 million which is presented under the caption of "Unearned revenue from advertising management rights" and amortised throughout the contract period. Moreover, the Company received an additional annual remuneration fee calculated at the contract rates starting from commencement date.

Movements in unearned revenue from advertising management rights account are summarised below.

	(Unit: Thousand Baht)
Balance as at 30 December 2015	16,866
Less: Recognise to revenue during the period	(7)
Balance as at 31 December 2015	16,859
Less: Recognise to revenue during the period	(1,249)
Balance as at 31 December 2016	15,610
Less: Current portion (note 6, 22)	(1,248)
Unearned revenue from advertising management rights - net of current portion	14,362

## 27. Provision for long-term employee benefits

Provision for long-term employee benefits, which is compensations on employees' retirement, was as follows:

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
<b>Defined benefit obligation at beginning of period</b>	237,842	217,143	230,181	230,023
Current service cost	59,308	27,915	57,428	129
Interest cost	9,962	8,429	9,704	44
Actuarial (gain) loss arising from				
- Demographic assumptions changes	46,248	(4,302)	46,248	-
- Financial assumptions changes	92,748	3,811	92,748	-
- Experience adjustments	28,670	(6,517)	28,670	-
Benefits paid during the period	(3,734)	(8,637)	(3,734)	(15)
<b>Provision for long-term employee benefits at end of period</b>	<b>471,044</b>	<b>237,842</b>	<b>461,245</b>	<b>230,181</b>



Long-term employee benefit expenses included in the profit or loss consist of the following:

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
Current service cost	54,360	23,482	52,481	90
Interest cost	8,926	7,441	8,668	38
Past service costs recognised during the period	-	5,880	-	28
<b>Total expenses recognised in profit or loss</b>	<b>63,286</b>	<b>36,803</b>	<b>61,149</b>	<b>156</b>
<b>Line items under which such expenses are included in profit or loss</b>				
Costs of expressway business	14,326	9,992	14,326	54
Costs of rail business	21,047	9,747	21,047	33
Costs of commercial development business	939	594	163	-
Selling expenses	488	204	-	-
Administrative expenses	22,511	14,363	21,896	60
Finance Cost	3,975	1,903	3,717	9

The Company and its subsidiaries expect to pay long-term employee benefits during the next year amounting to Baht 23 million (Separate financial statements: Baht 22 million) (2015: Baht 2 million (Separate financial statements: Baht 2 million)).

As at 31 December 2016, the weighted average duration of the liabilities for long-term employee benefit of the Company and its subsidiaries are 14.45 - 17.69 years (Separate financial statements: 14.45 - 17.69 years (2015: 15.38 - 18.80 years (Separate financial statements: 16.39 - 18.80 years))).

Significant actuarial assumptions are summarised below:

	Consolidated financial statements		Separate financial statements	
	2016	2015	2016	2015
	(% p.a.)	(% p.a.)	(% p.a.)	(% p.a.)
Discount rate	2.4, 2.5, 3.4	3.4, 3.5, 4.2	2.4, 2.5	3.5, 4.2
Future salary increase rate	7.0 - 7.5	6.0 - 8.0	7.5	6.0 - 8.0
Staff turnover rate (depending on age)	2.0 - 17.0	3.0 - 21.0	2.0 - 17.0	3.0 - 21.0

The result of sensitivity analysis for significant assumptions that affect the present value of the long-term employee benefit obligation as at 31 December 2016 and 2015 are summarised below:

(Unit: Million Baht)

	31 December 2016			
	Consolidated financial statements		Separate financial statements	
	Increase 1%	Decrease 1%	Increase 1%	Decrease 1%
Discount rate	(54)	66	(53)	64
Future salary increase rate	62	(53)	60	(52)
Staff turnover rate	(57)	36	(56)	35

(Unit: Million Baht)

	31 December 2015			
	Consolidated financial statements		Separate financial statements	
	Increase 1%	Decrease 1%	Increase 1%	Decrease 1%
Discount rate	(30)	36	(29)	35
Future salary increase rate	34	(29)	33	(28)
Staff turnover rate	(25)	24	(24)	24

## 28. Share capital - the reduction of shares to write-off the retained loss before amalgamation

On 2 April 2015, the Annual General Meeting of the shareholders of Bangkok Metro Public Company Limited for the year 2015 passed a resolution to approve a reduction of the Company's registered and paid-up share capital from Baht 20,500 million (20,500 million ordinary shares of Baht 1 each) to Baht 7,585 million (20,500 million ordinary shares of Baht 0.37 each), by decreasing the par value of each share, in order to write-off the retained losses of Baht 12,915 million as at 30 September 2014.

## **29. Investment before amalgamation**

Investment before amalgamation is the ordinary shares of Bangkok Metro Public Company Limited held by Bangkok Expressway Public Company Limited which have a cost of Baht 2,340 million (2,050 million ordinary shares, or a shareholding of 10 percent).

In July 2015, Bangkok Expressway Public Company Limited sold and transferred all of the 2,050 million ordinary shares that it held in Bangkok Metro Public Company Limited, together with its pledge obligations, to CH. Karnchang Public Company Limited at a price of Baht 1.79 per share, or for a total of Baht 3,670 million. This was in accordance with resolutions approved by the 2015 Annual General Meeting of the shareholders on 2 April 2015. Bangkok Expressway Public Company Limited received Baht 2,000 million on the settlement date and CH. Karnchang Public Company Limited is to complete payment of the remaining amount of Baht 1,670 million within August 2017. Payment is to be made in five, six-monthly installments beginning in August 2015, with the first to the fourth installments amounting to Baht 300 million and the final installment amounting to Baht 470 million. Bangkok Expressway Public Company Limited recognised a gain on the sales of the investment of Baht 1,236 million in the consolidated statement of income for the year ended 31 December 2015, deferred interest income of Baht 94 million in the statement of financial position, netted against receivable from sales of investment.

## **30. 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% of its net income, after deducting accumulated deficit brought forward (if any), until the reserve reaches 10% of the registered share capital. The statutory reserve is not available for dividend distribution.

### 31. Toll revenues

**31.1** Under the Construction and Management of the Second Stage Expressway System (SES) Contract, the Company and the EXAT agreed to share toll revenues receive from the First Stage Expressway System (FES), the Second Stage Expressway System (SES) and the Bang Pa-In - Pakkret Expressway as follows:

	The Company (Percent)	The EXAT (Percent)
<u>Urban Network (FES and SES Sectors A and 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	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	60	40
(b) Period after (a) above until end of contract period	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>The Bang Pa-In - Pakkret Expressway</u>		
From the construction completion date of relevant Sections until end of contract period (26 September 2026)	100	Nil

Effective from 2 September 2002, the ratio for the sharing of toll revenue from urban expressways (the First Stage Expressway System and the Second Stage Expressway System Sectors A and B) between the Company and the EXAT was changed from 60:40 to 50:50, and effective from 1 March 2011, the ratio for the sharing of toll revenue from urban expressway was changed from 50:50 to 40:60.

Further share of toll revenues (derived from the FES only) is due to the Company for the period from the Priority Component Opening Date, as defined by the contract with the EXAT, up to 2 September 1993. However, no such amount has been included in the financial statements because the determination of the Priority Component Opening Date and the applicable rates of toll are still matters of dispute between the Company and the EXAT as discussed in Note 40.1.1.

- 31.2** Under a concession agreement of the Si Rat - Outer Ring Road Expressway Project, the Company and the EXAT agreed to share toll revenues receive from the Si Rat - Outer Ring Road Expressway as follows:

	<u>The Company</u> (Percent)	<u>The EXAT</u> (Percent)
<u>The Si Rat - Outer Ring Road Expressway</u>		
From the construction completion date of relevant Sections		
until end of contract period (15 December 2042)	100	Nil

## **32. Fare box revenue and commercial development revenue**

Under concession agreement of the MRTA Blue Line Project, the Company agrees to apportion revenue to the MRTA, which consist of remuneration from fares, remuneration from commercial development, apportionment of profit calculated from the Return on Equity (ROE) and any benefit derived from the interest rate on a credit agreement being lower than a specified rate in the Concession Agreement.

### **32.1 Remuneration from fares**

#### **a) Annual remuneration**

The Company agrees to apportion revenue from fares to the MRTA on an annual basis, commencing from the 11th year after commencement of the revenue-generating service until the end of the contract period. Total commitments amount to Baht 43,567 million (inclusive of VAT), with annual commitments in the amounts stipulated in the agreement.

#### **b) Percentage remuneration**

The Company agrees to apportion fares revenue to the MRTA in the form of monthly payments, at a percentage of total revenue from fares (inclusive of VAT) from the year it commences the revenue-generating service. The rates are 1 percent for the 1st - 14th years, 2 percent for the 15th year, 5 percent for the 16th-18th years and 15 percent for the 19th-25th years.



## 32.2 Remuneration from commercial development

### a) Annual remuneration

The Company agrees to apportion revenue from commercial development to the MRTA on an annual basis from the year it commences the revenue-generating service until the end of the contract period. Total commitments amount to Baht 930 million (inclusive of VAT) with commitments in the amounts stipulated in the agreement.

### b) Percentage remuneration

The Company agrees to apportion 7 percent of annual revenue from commercial development (inclusive of VAT) to the MRTA in the form of monthly payments, from the year it commences the revenue-generating service until the end of the contract period.

## 33. Expenses by nature

Significant expenses by nature are as follow:

	Consolidated		(Unit: Thousand Baht)	
	financial statements		Separate	
			financial statements	
	For the	For the	For the	For the period
	year ended	year ended	year ended	as from
	31 December	31 December	31 December	30 December
	2016	2015	2016	2015 to
				31 December
				2015
Amortisation and depreciation	3,422,513	3,270,658	2,872,421	10,803
Salaries, wages and other employee benefits				
for the Company's staff and its subsidiaries	1,586,663	1,175,958	1,515,205	9,330
Salary, wages and other benefits of the				
employee of EXAT	735,511	667,376	592,446	1,558
Repair and maintenance expenses	908,857	774,541	815,067	293
Compensation for site acquisition cost	550,050	595,974	550,050	2,716
Utilities expenses	512,585	495,235	482,544	1,984
Remuneration fees under concession				
agreement	503,776	467,182	503,539	1,872
Expenses with respect to facilitation and safety				
on expressway and stations	352,668	228,508	326,883	1,143
Insurance expenses	105,890	104,377	99,237	517

### 34. Income tax

Income tax expenses are made up as follows:

	Consolidated financial statements		(Unit: Thousand Baht) Separate financial statements	
	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
<b>Current income tax:</b>				
Current income tax for the period	252,576	575,464	200,946	2,499
Adjustment in respect of current income tax of previous year	125	(175)	125	-
<b>Deferred tax:</b>				
Relating to origination and reversal of temporary differences	310,227	145,946	310,820	(82)
<b>Income tax expense reported in the statement of comprehensive income</b>	<b>562,928</b>	<b>721,235</b>	<b>511,891</b>	<b>2,417</b>

The amounts of income tax relating to each component of other comprehensive income are as follows:

	Consolidated financial statements		(Unit: Thousand Baht) Separate financial statements	
	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
<b><u>The Company</u></b>				
Deferred tax related to				
- Unrealised loss from cash flow hedges	(3,722)	-	(3,722)	-
- Actuarial gain (loss)	(33,533)	(1,401)	(33,533)	-
Total for the Company	(37,255)	(1,401)	(37,255)	-
<b><u>Associates</u></b>				
Deferred tax related to				
- Unrealised gain from cash flow hedges	5,756	11,626	-	-
Total for associates	5,756	11,626	-	-
Total	(31,499)	10,225	(37,255)	-

The reconciliation between accounting profit and income tax expense is shown below.

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
Accounting profit before tax	3,175,793	3,422,253	3,074,805	12,097
Applicable tax rate	20%	20%	20%	20%
Accounting profit before tax multiplied by applicable tax rate	635,159	684,451	614,961	2,419
Adjustment in respect of income tax of previous year	125	(175)	125	-
Effects of:				
Tax-exempt revenues	(99,509)	(105,771)	(99,509)	-
Loss on investments	32,933	15,874	-	-
Non-deductible expenses	3,628	11,711	2,590	4
Additional expense deductions allowed	(9,296)	(2,093)	(5,883)	-
Unused tax loss	-	117,179	-	-
Others	(112)	59	(393)	(6)
Total	(72,356)	36,959	(103,195)	(2)
Income tax expenses reported in the statement of comprehensive income	562,928	721,235	511,891	2,417

The components of deferred tax assets and deferred tax liabilities as at 31 December 2016 and 2015 are as follows:

	(Unit: Thousand Baht)			
	Consolidated		Separate	
	financial statements		financial statements	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
<b>Deferred tax assets (liabilities)</b>				
Allowance for doubtful accounts	325	231	-	-
Accrued bonus	6,658	5,139	5,597	4,146
Allowance for asset impairment	5,185	10,334	5,185	10,334
Provision for long-term employee benefits	94,209	47,566	92,249	46,036
Provision for compensation for site acquisition cost	863,430	1,113,334	863,430	1,113,334
Accumulated amortisation - Rights to operate completed expressway sectors	(424,200)	(438,946)	(424,200)	(438,946)
Rights to use sites for expressway construction	(204,125)	(264,039)	(204,125)	(264,039)
Deferred of project remuneration	(134,488)	-	(134,488)	-
Unrealised gain from revaluation of investments	(11,410)	(8,536)	(11,410)	(8,536)
Deferred interest income	2,582	9,778	2,582	9,778
Derivative liabilities	3,722	-	3,722	-
Deferred tax assets - net	<u>201,888</u>	<u>474,861</u>	<u>198,542</u>	<u>472,107</u>

### 35. Earnings per share

Basic earnings per share is calculated by dividing profit for the period attributable to equity holders of the Company (excluding other comprehensive income) by the weighted average number of ordinary shares in issue during the period.

Earnings per share are calculated as below:

	Consolidated financial statements		Separate financial statements	
	For the year ended 31 December 2016	For the year ended 31 December 2015	For the year ended 31 December 2016	For the period as from 30 December 2015 to 31 December 2015
Profit for the period (Thousand Baht)	2,605,854	2,649,736	2,562,914	9,679
Weighted average number of ordinary shares (Thousand shares)	15,285,000	15,285,000	15,285,000	15,285,000
Earnings per share (Baht/share)	0.170	0.173	0.168	0.001

For comparative purposes, basic earnings per share for the year ended 31 December 2015 was 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 for 2016, which is the number of ordinary shares held by outside shareholders after amalgamation.

### 36. Dividend payment

Dividend declared for the year ended 31 December 2016 in consolidated financial statements and separate financial statements consisted of the following:

Dividends	Approved by	Total dividends (Million Baht)	Dividend per share (Baht)	Paid on
Dividend for the year 2015	Annual General Meeting of the shareholders on 5 April 2016	1,070	0.07	29 April 2016
Dividend for the first half of the year 2016	Board of Directors' meeting on 31 August 2016	764	0.05	27 September 2016
Total dividends for the year ended 31 December 2016		1,834	0.12	

Dividend payment for the years ended 31 December 2015 were dividends paid in respect of Bangkok Expressway Public Company Limited before the amalgamation, amounting to approximately Baht 1,925 million, respectively. This represents dividends per share, calculated based on the 770 million paid-up shares held by Bangkok Expressway Public Company Limited, of Baht 2.50 per share, respectively.



### 37. Segment information

Operating segment information is reported in a manner consistent with the 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 assets its performance.

Revenue, profit and expenses information the segment of the Company and its subsidiaries for the year ended 31 December 2016 and 2015 are as follows:

	For the year ended 31 December									
	Expressway business segment <sup>1)</sup>		Rail business segment <sup>2)</sup>		Commercial development business segment <sup>3)</sup>		Other segments <sup>4)</sup>		Total segments	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Revenue from external customers	9,301	8,815	3,230	2,374	573	549	-	-	13,104	11,738
Inter-segment revenues	-	-	-	-	282	254	120	90	402	(344)
Total revenues	9,301	8,815	3,230	2,374	855	803	120	90	13,506	12,082
Segment profit	4,484	4,152	461	181	331	310	-	-	5,276	4,643
Unallocated income and expenses:										
Interest income									68	58
Gain from sales of investment before amalgamation									-	1,236
Gain from sales of investment									31	62
Other income									30	11
Share of profit from investments in associates									347	461
Selling expenses									(92)	(79)
Administrative expenses									(1,038)	(1,036)
Finance cost									(1,446)	(1,934)
Income tax expense									(563)	(721)
Non-controlling interests of the subsidiaries									(7)	(51)
Profit for the year									2,606	2,650

<sup>1)</sup> The expressway business segment includes the construction and operation of the expressway

<sup>2)</sup> The rail business segment includes the operation of the rapid transit system.

<sup>3)</sup> The commercial development business segment includes the rental of retail space, and the provision of advertising media services and telecommunication services in underground train stations and expressway.

<sup>4)</sup> The other segments include that the Company is employed to operate Bang Pa-In - Pak Kret expressway.

Transfer prices between business segments are as set out in Note 6 to the financial statements.

### Geographic information

The Company and its subsidiaries operate 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 year ended 2016 and 2015, the Company and its subsidiaries have no major customer with revenue of 10 percent or more of an entity's revenues.

## **38. Provident fund**

The Company, its subsidiaries 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 Company and its subsidiaries 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 2016, the Company and its subsidiaries recognised the contribution of Baht 60 million (2015: Baht 48 million) as expenses and recognised the contribution of Baht 59 million in separate financial statements (For the period ended 30 December 2015 to 31 December 2015: Baht 0.2 million).

## **39. Commitments and contingent liabilities**

### **39.1 Capital commitments**

The Company and its subsidiaries have capital commitments as follows:

	As at 31 December	
	2016	2015
a) Management of Si Rat - Outer Ring Road Expressway Project	-	Baht 3,660 million
b) Performance improvement for farebox collection systems	Baht 18 million and US Dollar 3 million	Baht 24 million and US Dollar 4 million
c) Acquisition of equipment	Baht 49 million	Baht 78 million
d) Renovation of server room at administration building	-	Baht 3 million
e) Improvement of civil works	Baht 65 million	-

### 39.2 Long-term service commitments

The Company and its subsidiaries have 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 Metro Project which were signed in December 2001, November 2013 and November 2015 with three companies. These contracts will expire during 2018 until 2024.

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							
	2016				2015			
	<u>Baht</u>	<u>EUR</u>	<u>SGD</u>	<u>JPY</u>	<u>Baht</u>	<u>EUR</u>	<u>SGD</u>	<u>JPY</u>
Payable:								
In up to 1 year	807	2	1	379	676	4	1	158
In over 1 year and up to 5 years	4,968	12	5	1,518	4,692	13	5	1,518
In over 5 years	2,395	6	6	1,739	3,360	8	7	2,119

### 39.3 Commitments under various service agreements

The Company and its subsidiaries have commitments under various service agreements as follows:

(Unit: Million Baht)

	As at 31 December	
	2016	2015
Payable within:		
In up 1 year	290	95
In over 1 year and up to 4 years	196	68

### 39.4 Operating lease commitments

The Company and its subsidiaries 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	
	2016	2015
Payable:		
In up to 1 year	21	11
In over 1 year and up to 5 years	31	15

### 39.5 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	
	2016	2015
a) Issued to the EXAT in accordance with the operation of the Si Rat - Outer Ring Road Expressway Project agreement	500	500
b) Issued to the MRTA in accordance with the operation of the MRTA Initial System Project - Chaloem Ratchamongkhon Line agreement	150	150
c) Issued to the MRTA in accordance with the Agreement for the MRT Chalong Ratchadham Line project agreement, using the credit line of a related company.	200	700
d) Issued to the MRTA as part of the proposal to invest in the Supply of M&E Systems and O&M services for the MRT Purple Line Project, Tao Poon to Bang Sue Section <sup>1)</sup>	-	31
e) Issued to the Metropolitan Electricity Authority of rail business	67	67
f) Other guarantees	12	12

<sup>1)</sup> During the current period, the MRTA returned guarantee documents to the Company because the Cabinet had passed a resolution to halt the selection process for a private investor for the MRTA Initial System Project and the hire of an operator for the MRT Purple Line Project, Tao Poon station to Bang Sue station which is included in MRT Chaloem Ratchamongkhon Project.

### 39.6 Other commitments

(Unit: Million Baht)		
As at 31 December		
	2016	2015
a) Commitments in respect of the uncalled portion of investments		
Northern Bangkok Expressway Company Limited	750	750
Xayaburi Power Company Limited	776	1,101
b) Commitment in respect of undertaking to provide financial support to CK Power Public Company Limited (as detailed in Note 11.1)	-	154
c) Commitment in respect of Expressway inspection, replacement and improvement agreements (paid within one year)	23	21

### 40. The disputes with Expressway Authority of Thailand (EXAT)

The Company and the subsidiary had a total of 11 disputes with EXAT, which were referred to 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:

#### 40.1 Disputes submitted by the Company and the subsidiary claiming for damages in 8 disputes, with the total amount until the date of submission of the disputes of approximately Baht 28,179.8 million

##### 40.1.1 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.

On 15 December 2008, the Arbitral Tribunal 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 subsequently issued a letter refusing to comply with the arbitral award.

And, on 20 April 2009, EXAT submitted a petition to the Central Administrative Court requesting the Court to revoke the arbitral award or order refusing to enforce compliance with the arbitral award, and on 19 October 2011, the Company submitted a petition to the Central Administrative Court requesting a judgment to enforce compliance with the arbitral award. The interest was calculated 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 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.

The Supreme Administrative Court has determined the end of fact inquisitorial date on 5 January 2017.

At present, it is among processes of appointing of the judges for issuance of the opinion, determining of the first trial date and determining the adjudication date of the case.

#### 40.1.2 Competing road with the Udon Rattaya Expressway

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.

On 27 November 2008, the Arbitral Tribunal rendered its arbitral award on the dispute requiring EXAT to compensate for the deficient revenue with interest under the Agreement as required by the subsidiary. EXAT then issued a letter to the subsidiary refusing to comply with such arbitral award. And, on 3 March 2009, EXAT submitted a petition to the Central Administrative Court requesting the Court to revoke the arbitral award.

On 1 September 2011, 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 3,296.7 million.

On 3 May 2013, the Central Administrative Court adjudged to dismiss EXAT's petition requesting the Court to revoke the arbitral award and the Central Administrative Court also 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.

At present, it is pending the Supreme Administrative Court's consideration.

#### 40.1.3 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).

On 20 October 2013, 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.

On 4 February 2014, EXAT issued a letter refusing to comply with such arbitral award. And, on 26 March 2014, EXAT submitted a petition to the Central Administrative Court requesting the Court to revoke the arbitral award.

The Central Administrative Court has determined the end of fact inquisitorial date on 23 September 2016.

On 21 October 2016, the Company submitted a petition to the Central Administrative Court requesting a judgment to enforce compliance with the arbitral award. At present, it is pending EXAT to submit its statement.

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

On 14 November 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.

On 12 February 2016, the Arbitral Tribunal, 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, including interest under the Agreement.

EXAT then issued a letter refusing to comply with such arbitral award. And, on 30 May 2016, EXAT submitted a petition to the Central Administrative Court requesting the Court to revoke the arbitral award.

On 4 November 2016, the Company submitted its answer to the petition to the Central Administrative Court.

At present, it is pending EXAT to submit its opposition.

40.1.5 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.

At present, it is pending the Parties to submit their closing statement. The Company is required to submit its closing statement within 22 February 2017 and EXAT is required to submit its closing statement within 17 March 2017.

40.1.6 Revision of toll rates of the Chalerm Mahanakorn Expressway and the Si Rat Expressway for the year 2008

On 13 June 2013, the Company submitted a statement of claim to the Thai Arbitration Institute 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, in the total amount of Baht 9,091.8 million, together with interest under the Agreement.

At present, it is pending the required arbitration proceedings of the Thai Arbitration Institute.

40.1.7 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 Thai Arbitration Institute 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, together with interest calculated up to 31 May 2013, in the total amount of Baht 4,062.8 million, including interest under the Agreement.

At present, it is pending the required arbitration proceedings of the Thai Arbitration Institute.

40.1.8 Revision of toll rates of Udon Rattaya Expressway for the year 2003

On 22 October 2013, the subsidiary submitted a statement of claim to the Thai Arbitration Institute requiring EXAT to compensate the subsidiary for damages, caused by the revision of toll rates of the Udon Rattaya 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, it is pending the required arbitration proceedings of the Thai Arbitration Institute.



## **40.2 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**

### **40.2.1 Construction of the Udon Rathaya Expressway, Phase 2**

On 29 January 2016, EXAT submitted a statement of claim to the Thai Arbitration Institute requiring the subsidiary to complete the construction of the Udon Rathaya Expressway, Phase 2, in accordance with Clause 8.5 a. of 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 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. Therefore, the subsidiary acquired its rights to not commence the construction and EXAT is not entitled to claim for indemnity.

At present, it is pending the required arbitration proceedings of the Thai Arbitration Institute.

### **40.2.2 Cost of utilization of the Control Center Building (Bang Phun)**

On 27 February 2009, EXAT submitted a statement of claim to the Thai Arbitration Institute 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, it is pending the required arbitration proceedings of the Thai Arbitration Institute.

### **40.2.3 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.

On 7 May 2014, EXAT submitted a petition for revocation of the arbitral award.

At present, it is pending the Central Administrative Court's consideration.

Since the disputes are pending consideration, the Company and the subsidiary therefore did not record such entries in the financial statements.

#### 41. Fair value hierarchy

As at 31 December 2016 and 2015, the Company and its subsidiaries 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	
	2016	2015	2016	2015	2016	2015	2016	2015
<b>Asset measured at fair value</b>								
Current investment								
Unit trust	-	-	4,489	497	-	-	4,489	497
<b>Liabilities measured at fair value</b>								
Derivative								
Interest rate swap	-	-	19	-	-	-	19	-
<b>Asset for which fair value are disclosed</b>								
Other long-term investment	-	-	-	-	1,130	809	1,130	809
Investment properties	-	-	-	-	315	302	315	302
<b>Liabilities for which fair value are disclosed</b>								
Long-term loans	-	-	-	-	18,984	16,181	18,984	16,181
Debentures	-	-	22,425	-	-	-	22,425	-

(Unit: Million Baht)

Separated financial statements								
	Level 1		Level 2		Level 3		Total	
	2016	2015	2016	2015	2016	2015	2016	2015
<b>Asset measured at fair value</b>								
Current investment								
Unit trust	-	-	4,480	480	-	-	4,480	480
<b>Liabilities measured at fair value</b>								
Derivative								
Interest rate swap	-	-	19	-	-	-	19	-
<b>Asset for which fair value are disclosed</b>								
Other long-term investment	-	-	-	-	1,130	809	1,130	809
Investment properties	-	-	-	-	315	302	315	302
<b>Liabilities for which fair value are disclosed</b>								
Long-term loans	-	-	-	-	18,984	16,181	18,984	16,181
Debentures	-	-	22,425	-	-	-	22,425	-



## **42. Financial instruments**

### **42.1 Financial risk management**

The financial instruments of the Company and its subsidiaries, as defined under Thai Accounting Standard No. 107 “Financial Instruments: Disclosure and Presentations”, principally comprise cash and cash equivalents, current investments trade and other receivables, receivable from sales of investment, long-term loans and interest receivables to related parties short-term loans from financial institution, trade and other payable, long-term loans, debentures and provision for compensation for site acquisition cost. The financial risks associated with these financial instruments and how they are managed is described below.

#### ***Credit risk***

The Company and its subsidiaries are exposed to credit risk primarily with respect to trade and other accounts receivable. The Company and its subsidiaries manage 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 Company and its subsidiaries are exposed to interest rate risk relate primarily to their cash at banks, 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 Company and its subsidiaries bear 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 2016

	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	-	-	-	390	387	777	0.38 - 1.60
Current investments	-	-	-	4,489	-	4,489	0.98 - 2.72
Trade and other receivables	-	-	-	-	1,615	1,615	-
Receivable from sales of investment	757	-	-	-	-	757	Note 6
	757	-	-	4,879	2,002	7,638	
<b>Financial liabilities</b>							
Short-term loans from financial institution	4,716	-	-	-	-	4,716	Note 21
Trade and other payables	-	-	-	-	819	819	-
Long-term loans	2,000	6,066	-	10,953	-	19,019	Note 23
Debentures	-	9,114	14,053	-	-	23,167	Note 24
Provision for compensation for site acquisition cost	1,500	2,817	-	-	-	4,317	4.50
	8,216	17,997	14,053	10,953	819	52,038	

(Unit: Million Baht)

## Consolidated financial statements

As at 31 December 2015

	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	400	-	-	2,119	1,964	4,483	0.38 - 2.80
Current investments	-	-	-	497	-	497	1.10 - 4.47
Trade and other receivables	-	-	-	-	85	85	-
Receivable from sales of investment	564	757	-	-	-	1,321	Note 6
	964	757	-	2,616	2,049	6,386	
<b>Financial liabilities</b>							
Short-term loans from financial institution	22,400	-	-	10	-	22,410	Note 6, 21
Trade and other payables	-	-	-	-	2,580	2,580	-
Long-term loans	10,108	84	-	7,281	-	17,473	Note 23
Provision for compensation for site acquisition cost	1,500	4,067	-	-	-	5,567	4.50
	34,008	4,151	-	7,291	2,580	48,030	

(Unit: Million Baht)

Separated financial statements							
As at 31 December 2016							
	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	-	-	-	353	377	730	0.38 - 1.60
Current investments	-	-	-	4,480	-	4,480	0.98 - 2.72
Trade and other receivables	-	-	-	-	1,609	1,609	-
Receivable from sales of investment	757	-	-	-	-	757	Note 6
Long-term loans and interest receivable from related	-	-	-	5,066	1,054	6,120	Note 6
	757	-	-	9,899	3,040	13,696	
<b>Financial liabilities</b>							
Short-term loans from financial institution	4,716	-	-	-	-	4,716	Note 21
Trade and other payables	-	-	-	-	749	749	-
Long-term loans	2,000	6,066	-	10,953	-	19,019	Note 23
Debentures	-	9,114	14,053	-	-	23,167	Note 24
Provision for compensation for site acquisition cost	1,500	2,817	-	-	-	4,317	4.50
	8,216	17,997	14,053	10,953	749	51,968	

(Unit: Million Baht)

Separated financial statements							
As at 31 December 2015							
	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	400	-	-	2,097	1,962	4,459	0.38 - 2.80
Current investments	-	-	-	480	-	480	1.10 - 4.47
Trade and other receivables	-	-	-	-	85	85	-
Receivable from sales of investment	564	757	-	-	-	1,321	Note 6
Long-term loans and interest receivable from related	-	-	-	5,674	1,180	6,854	Note 6
	964	757	-	8,251	3,227	13,199	
<b>Financial liabilities</b>							
Short-term loans from financial institution	22,400	-	-	-	-	22,400	Note 6, 21
Trade and other payables	-	-	-	-	2,539	2,539	-
Long-term loans	10,108	84	-	7,124	-	17,316	Note 23
Provision for compensation for site acquisition cost	1,500	4,067	-	-	-	5,567	4.50
	34,008	4,151	-	7,124	2,539	47,822	

The Company entered into an interest rate swap contract with a local commercial bank to manage risk associated with some of its long-term loan, carrying interest at a floating rate. As at 31 December 2016, the Company has interest rate swap contract, granting facilities of long-term loan of Baht 8,000 million, to swap a floating interest rate of 6M THBFIX + 1.15 percent per annum to a fixed rate of 3.18 percent per annum. The interest rate swap contract terminates in May 2021.

#### **Foreign currency risk**

The Company has a significant foreign currency risk in respect of construction payable. As at 31 December 2016, the Company has outstanding financial liabilities denominated amounting to JPY 65 million and USD 0.5 million (2015: EUR 0.4 million) which have not yet been hedged against foreign exchange risk (the majority of these liabilities are repayable within 1 year).

## **42.2 Fair values of financial instruments**

Since the majority of the financial instruments of the Company and its subsidiaries 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 and its subsidiaries have assets and liabilities of the type of long-value which the carrying value is different from the fair value.

Set out below is a comparison, by category of carrying amount and fair value, of the financial assets and liabilities as of 31 December 2016 and 2015.

(Unit: Million Baht)

	Consolidated financial statements			
	As at 31 December 2016		As at 31 December 2015	
	Book value	Fair value	Book value	Fair value
<b>Financial assets</b>				
Cash and cash equivalents	777	777	4,483	4,483
Current investments	5,941	5,884	497	455
Trade and other receivables	1,615	1,615	85	85
Receivable from sales of investment	757	757	1,321	1,321
Other long-term investment	1,238	1,130	913	809
Investment properties	120	315	120	302
<b>Financial liabilities</b>				
Short-term loans from financial institutions	4,716	4,682	22,410	22,410
Trade and other payables	819	819	2,580	2,580
Long-term loans from financial institutions	19,019	18,984	17,448	16,181
Debentures	23,168	22,425	-	-

(Unit: Million Baht)

	Separated financial statements			
	As at 31 December 2016		As at 31 December 2015	
	Book value	Fair value	Book value	Fair value
<b>Financial assets</b>				
Cash and cash equivalents	729	729	4,459	4,459
Current investments	5,932	5,875	480	437
Trade and other receivables	1,619	1,619	85	85
Receivable from sales of investment	757	757	1,321	1,321
Long-term loans to related companies	6,273	6,273	6,854	6,854
Other long-term investment	1,238	1,130	913	809
Investment properties	120	315	120	302
<b>Financial liabilities</b>				
Short-term loans from financial institutions	4,716	4,682	22,400	22,400
Trade and other payables	749	749	2,539	2,539
Long-term loans from financial institutions	19,019	18,984	17,291	16,181
Debentures	23,168	22,425	-	-

The fair value of derivatives as at 31 December 2016 is as follow:

	(Unit: Million Baht)	
	As at 31 December 2016	As at 31 December 2015
	Fair Value	Fair Value
	Loss	Gain (Loss)
<b>Derivatives</b>		
Interest rate swap contract	19	-

The Company and its subsidiaries establish fair value of their financial instruments by adopting the following methods and assumptions:

- For equity securities, their fair value is generally derived from quoted market prices, or based on generally accepted pricing models.
- For fixed rate long-term loans and debentures, their fair value is estimated by discounting expected future cash flow by the current market interest rate of the loans with similar terms and conditions.
- For long-term loans carrying interest at the rate approximate to the market rate, the carrying amount in the statements of financial position approximate their fair value.



- d) For derivatives, their fair value has been determined by using a discounted future cash flow model and a valuation model technique. Most of the inputs used for the valuation are observable in the relevant market, such as spot rates of foreign currencies, yield curves of the respective currencies, interest rate yield curves and commodity price yield curves. The Company and its subsidiaries had considered to counterparty credit risk when determining the fair value of derivatives.

During the current period there were no transfer within the hierarchy of the fair value.

#### **43. Capital management**

The primary objective of the Company's capital management is to ensure that it has an appropriate financial structure to preserves 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

#### **44. Events after the reporting period**

##### **44.1 Dividend payment**

On 22 February 2017, a meeting of the Board of Directors passed a resolution to propose a dividend payment of Baht 0.11 per share from the 2016 earnings to the Annual General Meeting of the shareholders. Baht 0.05 per share was paid as an interim dividend on 27 September 2016 and the final dividend payment of Baht 0.06 per share will be paid within May 2017. This dividend payment is subject to the approval of the Annual General Meeting of the shareholders.

##### **44.2 The signing of Agreement to Supply of M&E Systems and O&M Services of the MRT Blue Line Project: Tao Poon Station - Bang Sue Station**

As discussed in Note 1 (B.3) to the financial statements, the Company was selected as operator of the MRT Blue Line Project, Tao Poon station-Bang Sue station and signed the agreement with the MRTA on 16 February 2017.

#### **45. Approval of financial statements**

These financial statements were authorized for issue by the Company's Board of Directors on 22 February 2017.



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