



J.R.W. Utility Public Company Limited

Part 1

Business Operation

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1. Policy and Business Overview

J.R.W. Utility Public Company Limited ("the Company") was established on 2 November 1993 by Mr. Jarun Wiwatjesadawut, with an initial registered capital of 1,000,000 baht, at the par value of 100 baht, to conduct telecommunication-related business. In the beginning, the Company focused on subcontracting works in the construction of transmission line systems, transmission towers, and renovating stations to install telecommunication equipment. Later in 2008, the Company diverted its business nature from towers and cable system installation contractor to labor-intensive, starting with contracts on designing and procurement of comprehensive telecommunication system, for example, designing and procuring equipment for main switching center, contracts on switching center equipment installation, contracts on IP Broadband equipment installation, and contracts on signaling equipment installation, 3G and 4G systems, mobile network, and Wi-Fi network-related contracts, as well as software systems, providing service and managing telecommunication systems, information technology, and other communication systems.

In 2014, the Company saw an opportunity and demand in designing and installing other systems in addition to the telecommunication systems and information technology. To become a system integrator in various businesses, the Company started the electrical system contractor business, with a contractor service for the 115kV substation equipment for the Future Park Rangsit shopping center project. After that, the Company continuously received more electrical contractor projects, including the construction of substations. The first project was a construction project of a 115kV substation in Hi-Tech Industrial Estate, Bang Pa-in, Ayutthaya Province. In addition, the Company also undertook the construction of high-voltage transmission lines to connect to the Electricity Generating Authority (EGAT) and many other Industrial Users (IU) customers.

The Company saw a business opportunity in the demand of government and state enterprises to dismantle the overhead power line system and install underground power lines between 2008-2022 to prepare for being a metropolis of ASEAN. Implementing these projects required coordination with various government and state enterprise organizations to reduce operation redundancy and traffic problems such as in telecommunication cable system and electric train contracts. After preparation to provide a full range of design, procurement, and installation of electrical and telecommunication and information technology systems, the Company signed contracts on related works from equipment installation in electric trains, dismantling telecommunication lines, designing, dismantling overhead powerlines and installation of underground power line system.

The Company's main businesses were contract work in systems installation where most of them were complicated and dangerous, especially on electricity. To work smoothly, the Company put an effort to set working standards for safety. In 2018, the Company was certified by OHSAS 18001:2007 Health and Safety Management System from United Registrar of Systems (Thailand) or URS, which certified by Accreditation

Body: United Kingdom Accreditation Service (UKAS), England, to reduce risks in occupational health and safety, to have an appropriate controlling system, and safety in the workplace. However, the certification of the OHSAS 18001:2007 standard will end on 11 March 2021, and the Company will prepare for ISO 45001:2018 instead. According to the International Organization for Standardization, both standards are similar and the ISO standard will further establish a framework that enhances the level of safety for employees. At present, the Company obtains ISO 45001:2018 on 9 April 2020 and has received another two standards, which are ISO 9001:2015 for the qualified executive system and ISO 14001:2015 for environment management system on 10 December 2020, and 12 December 2020, respectively from the United Registrar of Systems (Thailand) or URS which is certified by Accreditation Body: United Kingdom Accreditation Service (UKAS), England.

1.1 Vision, Mission, Goal

Vision

Engineering Service Partner

Mission

To become a one-stop service provider in a telecommunication business, information technology, data, and energy network by supplying, designing, installing, and maintaining to create and deliver quality, innovative engineering services to our customers.

Goal of Business Operation

- Maintain stability and continuity of significant customer base by focusing on giving customers the best satisfaction from their purchases or receiving services from the Company.
- Expand business for more extensive diversification upon increased expertise and experience of the Company, mitigating the risk of relying on a single major customer. In addition to the design, procurement and installation of telecommunication systems, government telecommunication system developments, and other projects from the private sector, the Company has also expanded its business line to electricity and building infrastructure.
- Look for new business allies that distribute relevant equipment to increase the competitive potential and work opportunities related to telecommunication, information technology, and electrical system.
- Increase operational efficiency by continuously develop knowledge and abilities of the Company's personnel to support the future expansion of business

1.2 Key Changes and Developments

Key developments of the Company in the past are detailed as follows.

1993
<ul style="list-style-type: none"> - The Company was registered and established under the name "J.R.W. Utility Company Limited" on 2 November 1993 with registered capital of 1 million baht, divided into 10,000 ordinary shares with a par value of 100 baht per share, focusing on subcontracting work in transmission line system, fiber cables, copper cables, and towers, which is the Outside Plant (OSP) network, and the station improvement for the telecommunication equipment installation (site preparation).
1994-2003
<ul style="list-style-type: none"> - The Company gradually increased registered capital to 75 million baht by issuing new 750,000 shares with a par value of 100 baht to be used as working capital.
2007
<ul style="list-style-type: none"> - The Company increased registered capital and paid-up capital from 75 million baht to 108 million baht by issuing new 330,000 shares, at the par value of 100 baht each to be used as working capital. - The Company was appointed as Nokia Siemens Networks Oy's dealer of switching center equipment in Thailand. - The Company entered into a joint investment to establish JRW Network Solutions Co., Ltd. to conduct business on designing and installation of telecommunication system with 20 million baht registered capital, dividing into 2,000,000 ordinary shares at a par value of 10 baht. The Company holds 600,000 shares or 30% of the registered and paid-up capital.
2008
<ul style="list-style-type: none"> - The Company gradually diverted its main business from tower and cable installation service and cabling contractor (considered as intensive labor work) by undertaking contracts to design and procurement comprehensive telecommunication systems. - The Company increased its registered capital and paid-up capital from 108 million baht to 159 million baht by issuing 510,000 shares, at the par value of 100 baht to be used as working capital and purchase land in Lamlukka, Pathumthani province. The Company planned to build a warehouse to support business expansion. - End of dealership of Nokia Siemens Networks Oy
2009.
<ul style="list-style-type: none"> - The Company disposed of all investments in JRW Network Solutions Co., Ltd to shareholders of JRW Network Solutions Co., Ltd. Some of the telecommunication network experts were transferred to the Company. - After changing the par value from 100 baht to 1 baht, the Company's registered capital and paid-up capital was 159 million baht, divided into 159,000,000 ordinary shares.

- The Company converted its status from a limited Company to a public Company limited.
2009-2013
- The Company undertook works on design, procurement, installation, testing, and consulting to implement a total solution telecommunication system. The majority of the clients were TOT PCL. and CAT Telecom PCL.
2014
- The Company initiated an electrical system installation service. The first work was a 115kV-substation installation project for Future Park Rangsit Department Store with a project value of 176.50 million baht.
2015
- The Company undertook a contract on dismantling and reinstalling TOT, True, and Royal Thai Air Force cables and a counterparty contract with TOT along the Green Line, between Sapanmai-Khu Kot. The project value was 135 million baht.
- The Company signed a contract for OLT&MSAN equipment installation to dismantling copper cable and fiber optic cable along the Dark Green Line. The project value was 50.85 million baht.
2016
- The Company undertook work for 115kV gas-insulated substation construction in Hi-Tech Industrial Estate, Bangla-In, Ayutthaya. The project value 99.33 million baht.
- The Company signed a contract on construction and installation of a high-voltage 115 kV transmission line, connecting to the Electricity Generating Authority of Thailand. The project valued was 94.45 million baht. Another work was constructing and installing a high-voltage 22kV and 115 kV transmission line, under the contract with two clients, with a total value of 93 million baht.
- The Company undertook work on Feeder Remote Terminal Unit (FRTU) system installation. The project value was 69.95 million baht.
2017
- The Company signed contracts on the dismantling telecommunication system in the Pink Line and Yellow Line projects, with values of 415.00 million baht and 200.00 million baht.
- The Company undertook to design on replacing overhead power line with underground power line along the Pink Line and Yellow Line, with the value of 19.50 and 25.00 million baht respectively.
- The Company undertook another six additional contracts on high-voltage transmission line installation, with a total value of 198.50 million baht.
2018
- The Company obtained OHSAS 18001:2007 certification on Health and Safety Management System from the United Registrar of Systems (Thailand).

- The Company decreased its registered capital from 212,000,000 baht to 159,000,000 baht. Afterward, the Company increased its registered capital from 159,000,000 baht to 180,000,000 baht to use as working capital.
- The Company undertook work on additional dismantling telecommunication lines in the Orange Line project, with the value of 106.16 million baht.
- The Company signed another six additional contracts on high-voltage transmission line installation, with a total value of 60.78 million baht.

2019

- The Company signed a contract on replacing overhead power lines with underground power lines along the Yellow Line, with the value of 2,725.28 billion baht.
- The Company signed two contracts on the construction of 500kV power substations with a total value of 72.07 million baht in Sriracha and Pluakdaeng district, Chonburi.

2020

- The Company obtained ISO 45001: 2018 certification from the International Organization for Standardization on 9 April 2020. The ISO standard additionally determines a framework that enhances the safety of employees.
- The Company undertook work on replacing overhead power lines with underground power lines along the Pink Line, with the value of 3,621.77 million baht.
- The resolution of the Annual General Meeting of Shareholders 2020, held on 17 March 2020, approved the Company's capital increase by 200,000,000 baht from the existing value of 180,000,000 baht, totaling 380,000,000 baht, by issuing new 200,000,000 ordinary shares, at the par value of 1 baht each. Appropriation details are as follows:
 - Total 100,000,000 capital increase ordinary shares offered to existing shareholders with appropriated proportion. As a result, the Company's paid-up capital is 280,000,000 baht.
 - The Company allocated 92,000,000 capital increase shares for public offering.
 - The Company allocated 8,000,000 capital increase shares to directors, executives and employees of the Company at the same price as IPO.
- An extraordinary meeting of shareholders no. 1/2020, held on 19 August 2020, passed a resolution to change the Company's par value from 1 baht to 0.50 baht. As a result, the Company had in total of 760 million issued and paid-up share. After changing per value price, the initial public offering appropriated to directors, executives, and employees would be changed as follows:
 - 184,000,000 capital increase ordinary shares for public offering
 - 16,000,000 capital increase shares to be offered to directors, executives, and employees of the Company at the same price as a public offering.
 - The Company offered new ordinary shares on 20, 23, and 24 November 2020.

- The Company first registered for securities trading on 30 November 2020.
- The Company obtained ISO 9001:2015 certification, a standard of the quality management system, and ISO 14001:2015, a standard of environment management system from the United Registrar of Systems (Thailand) or URS Accreditation Body credits: United Kingdom Accreditation Service (UKAS), England.
- The Company signed a contract on selling the Data Platform system, with 30.08 million baht.
- The Company signed a contract on communication system dismantling in Ladprao-Samrong, with the value of 110.60 million baht.
- The Company signed a contract on replacing overhead power line with underground power line along the Pink Line, with the value of 3,621.77 million baht.
- The Company undertook distribution for CAT L2 Switch 265 sets, with the value of 143.36 million baht.
- The Company undertook a system installation: Substation Thai Oil Clean Fuel Project, with the value of 92.47 million baht.
- The Company undertook the installation of a 115KV GIS substation works system (Mochit Complex), with a value of 163 million baht.
- The Company undertook the distribution of TIBCO Software and Service for Data Governance Platform, with the value of 25.70 million baht.

2. Nature of Business

The Company provides services on turnkey design, procurement, construction and installation of electrical power system and telecommunication and information technology system. The Company also supplies and provides maintenance services on equipment relating to power system and telecommunication and information technology system.

2.1 Revenue Structure

As specified by the nature of business, the Company's revenue can be classified into 3 main groups, namely (1) turnkey projects, maintenance service, and supply selling. The Company's revenue structures of 2018, 2019 and 2020 are as follows:

Product Group	2018		2019		2020	
	million baht	percent	million baht	percent	million baht	percent
Revenue from services	825.23	88.42	540.92	63.84	1,107.67	86.42
Revenue from contracted work of system installation	803.90	86.13	532.05	62.79	1,083.26	84.52
- Electrical system	200.90	21.53	250.05	29.51	945.79	73.79
- Telecommunication and Information Technology System	603.00	64.61	281.99	33.28	137.47	10.73
Revenue from repair and maintenance services	21.33	2.28	8.87	1.05	24.41	1.90
Revenue from equipment sales	98.24	10.52	305.47	36.05	173.44	13.53
Total revenue from sales and services	923.47	98.95	846.39	99.89	1,281.11	99.95
Other income*	9.80	1.05	0.98	0.11	0.70	0.05
Total revenue	933.27	100.00	847.37	100.00	1,281.81	100.00

Note* Other revenue features redeemed fine and commission fee from distributors, etc.

2.2 Details of product or service

Details of product or service of the Company can be classified, in line with the revenue structure, as follows:

2.2.1 Turnkey Project

The Company is capable of providing turnkey system installation service, inclusive of design, procurement, contracting, installation, testing and consulting services for the 2 following types of system:

1. Electrical Power System

The Company comprehensively provides design, procurement and installation services for these following types of electrical power system:

1) High Voltage Transmission Line System Construction

The Company conducts exploration, design and construction operations of 115 kV transmission lines used for the transmission of electrical power from independent power producer (IPP) or small power producer (SPP) to the substations of the Electricity Generating Authority of Thailand (EGAT) and industrial users (IU). Also, the Company provides construction service of 33kV distribution lines that connect between the substation and the IU.

In the first step, the Company will explore the site and examine if the electrical wire installation is practicable in it. The Company then will design and choose the suitable type of electrical wire and equipment for the construction of transmission line. Most of this kind of construction carried out by the Company is to install electrical wire on the existing Metropolitan Electricity Authority's electric posts.

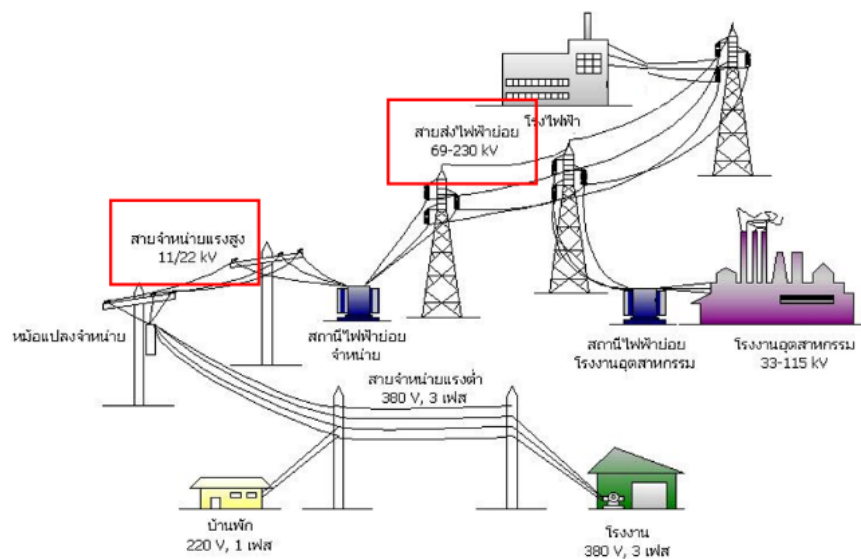


Diagram of Electrical Power Transmission

2) High Voltage Substation Construction and Equipment Installation

The Company comprehensively provides exploration, design, construction and installation services for high-voltage electrical substation (>115kV). Due to the remote location of most of the generating station, voltage drop and power loss highly occur along the transmission and lower amount of power reaches the destination. On the other hand, high-voltage transmission can reduce voltage drop, help to achieve lesser power loss, and increase the amount of received power. The electrical substation can help to change voltage levels between the generating system and consumer via the transmission line and distribution system. It will increase the voltage level for a long-distance transmission, then lower it down when arriving into a city for convenience and ease of use. In addition, substations control and secure the electrical distribution system. It basically serves as a circuit breaker in a residence.

Substation which the Company can provide design and installation services are the following 3 types:

1. Conventional Substation or Air-Insulated Substation (AIS) is the popular type among others due to the inexpensive price of the equipment. However, the installation requires enough space and the right environment. The main equipment is attached to the steel frame, using air as external insulation between each phase's conductor, and between the conductor and the ground. Hence, the design of this Air-Insulated Substation takes into account various equipment arrangements with electrical safety distance.



Air-Insulated Substation (AIS)

2. Gas-Insulated Substation (GIS) is a closed power substation with its device installed inside the metal tube. Sulfur hexafluoride (SF₆) gas is compressed as an insulating gas inside, which therefore reduces electrical safety distance. This results in GIS being a much smaller power station, which can be installed outdoors, indoors, under the ground or inside the tunnels. The advantage of the GIS substation is that it takes up less space, less time to install, and has higher safety in use.



Gas-Insulated Substation (GIS)

3. Container Substation is a substation with new technology of placing a GIS power station in a container. The Company has applied such technology to the installation of power stations along the electric train lines.



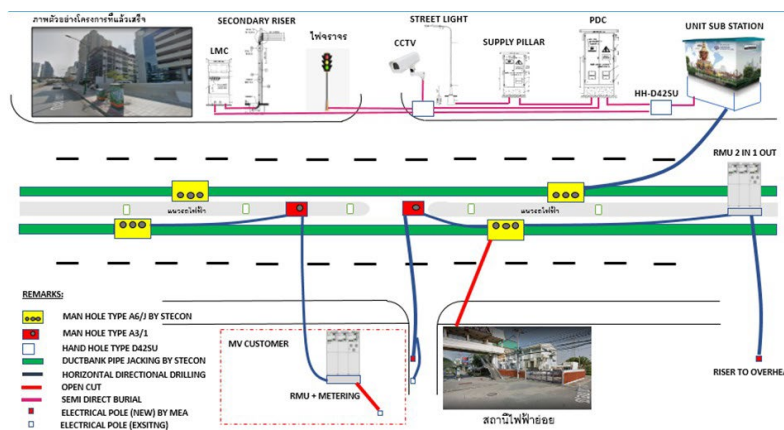
Container Substation

The Company also provides various equipment installation services relating to the substitution operation such as voltage transformers, connecting cables between the power plant and the substation, and electricity transmitting frame to the center pole called Take Off. After the electricity is generated from power plant, it is passed on to the transformer to change the voltage from low to high power in order to be sent to the source power station. Finally, the electricity is sent to the Take Off pole to be further forwarded to EGAT. Most of the equipment used for the substation construction is from global brands such as Mitsubishi Hitachi Power Systems, Hyundai, SIEMENS, ABB and GE etc.

3) The construction for changing the electrical cable to the underground system

The Company realised the business opportunity under governmental and state enterprise plans, namely the 2008-2022 master plan of changing the electrical cable to underground cable system. The plan is divided into 2 phases; the first phase from 2008-2021, with a distance of approximately 119 km.; the second phase of the year 2012-2022, with a distance of 61 km. This includes the plan to change the electrical cable system to an underground power line as a part of becoming an ASEAN metropolis with a distance of 261.6 km. Consequently, the Company has shifted its business focus to the service of survey, design, procurement of equipment, including moving electrical cables to underground power lines. Currently, the Company is providing service of changing the electric cable to underground electric line system along the MRT Yellow Line between Lad Phrao-Thaparak, and the Pink Line between Tiwanon-Chaengwattana. The service covers the underground power grid design, underground electrical contractors, substation construction, reconstruction work, and procurement of equipment used the project.

The design service covers the study of electrical wiring in all area in order to lay an underground cable structure to connect from the main duct placed underground of the traffic islands. After the planning and designing of the wiring, the next stage is the preparation of the pipe jacking, which includes geotechnical assessment to adjust the surface to be ready for work, drill profile to define the appropriate drilling starting and finishing points for the area, pulling calculation, and tooling schedule. The pipe jacking stage uses the horizontal directional drilling (HDD), which is a drilling machine used to pull the pipe and underground wiring, and is considered an effective and environmental-friendly method of drilling. The wires are laid along the footpaths paralleling the electric train lines, and are also connected to the household. Furthermore, the Main Distribution Board (MDB) is also installed along the road for power distribution system. After the pipe drilling and wiring are finished as planned, the Company will run the test and pursue with reconstruction.



Scope of work for changing the electrical cable to the underground electrical cable system along the electric train lines

The examples of the Company's electrical system contract work in 2018, 2019 and 2020

Opinions on the Company's internal control system adequacy	Work Category	Customer	Contract period	Contract Value (THB million)
Changing the electrical cable to the underground cable system project for MRT Pink Line. (Tiwanon-Chaengwattana)	The construction for changing the electrical cable to the underground system	STECON	18/03/2020 – 29/07/2023	3,621.77
Changing the electrical cable to the underground cable system project for MRT Yellow Line. (Lad Prao - Theparak)	The construction for changing the electrical cable to the underground system	STECON	22/11/2019 – 05/11/2022	2,725.28
Electrical Work – Extra High Voltage (EHV) Package Related to Thai Oil Clean Fuel Project, Sriracha Refinery	Substation Construction	PETROFAC – SAMSUNG – SAIPEM Joint Venture (UJV)	07/07/2020 – 11/10/2021	92.47
Electrical & Instrument Work Package 1- Erection of 500kV Gas Insulated Substation (GIS), Transformer & High Voltage Cable for Pluak Daeng Power Plant Project (Gulf Pluakdaeng Power Plant, G407639-0-0)	Substation Construction	STECON	13/09/2019 - 31/07/2023	37.91
Engineering, Procurement, Construction, Test & Commissioning for 115kV and 22kV Transmission Lines from GNRV to IU (GNRV1 Korat - Contract_G386841_0_0 date 9Nov2018)	High Voltage Cable Construction	STECON	16/07/2018 – 01/07/2019	64.76
Engineering, Procurement, Construction, Test &	Substation Construction	TOYO	31/08/2018 – 28/02/2019	3.88

Opinions on the Company's internal control system adequacy	Work Category	Customer	Contract period	Contract Value (THB million)
Commissioning of 22kV & 115kV, GBL-Addition				
115KV GIS Substation works (Mochit Complex) System Installation	Substation Construction	STECON	11/11/2020 – 09/03/2024	163

Remark: STECON means Sino-Thai Engineering and Construction Public Company Limited.

THAI OIL means Thai Oil Public Company Limited.

PETROFAC means PETROFAC SOUTH EAST ASIA PTE. LTD.,

SAMSUNG means SAMSUNG ENGINEERING (THAILAND) CO., LTD.,

SAIPEM means SAIPEM SINGAPORE PTE. LTD.,

TOYO means Toyo Engineering Corporation Ltd.

2. Telecommunication and Information Technology System

The Company provides design, procurement, equipment installation, system set-up, and consultations relating telecommunication system and information technology. Telecommunication system and information technology is our Company's expertise and experienced field, covering survey work, structure designing, including the relevant engineering systems according to the scope of work specified by the customers. The Company is capable of designing the telecommunication systems according to the following technologies and job descriptions:

1) Infrastructure System Planning

The work includes designing, system installation, equipment procurement, construction, wiring of communication devices and various connection equipment, demolition of utilities, and the connection of various systems in the area the ensure an efficient interconnected operation of all systems. The work can be classified in to 2 categories as follows:

1. Wire Network is a communication system that sends and receives data through a cable medium, either copper or fiber optic cable (FOC). The fiber optic cable is a signal cable used to receive and transmit data using the principle of light reflection in data transmission, which means the transmission of data is almost at the speed of light, with low low signal loss and farther length of transmission than other types.

These cables are placed outside the buildings to connect one main network system to another or transmitting data within the same system.

2. Wireless Network is a communication system that transmits data through the air using waves, for example, a microwave device. It is the transmission of information using microwave signals, sending electromagnetic waves into the air along with the information to be transmitted. The stations which send and receive the signals are essentials, and should be installed along the way until the signals reach the last station. This type of transmission medium is suitable for data transmission in far-flung locations. Another alternative is Broadband Wireless Access (BWA), a technology used to access the high-speed wireless Internet, which gives wireless networks the same speed rate as some wired networks. BWA transmits and receives data from the Core Network to users wirelessly.

Infrastructure is the basis for other system implementation, such as main network system, software system, and various applications. Up to date, the Company has been planning the infrastructure system, including the demolition of communication lines, relocation of aerial cables to underground cables, and laying of fiber optic cables etc.



Fiber Optic Cable



Broadband Wireless Network

2) Core Network System

The Company designs, supplies and installs equipment, along with laying out the main network system, which is the main control unit for communication on the telecommunication network and information technology. The main network system acts as a control center that connects all the dots in the network together. There are primary devices or drivers, such as switching network devices, mobile core network devices, and broadband network devices, which are devices used to control, operate, and link networks together. Moreover, there is also a soft switch network, a new technology that allows the central control devices to work based on software to sync data to different points.

The main core networks which the Company provides system construction are:

1. IP Network is a network of devices that act as the center for managing all package data in use nowadays. The Company is experienced in designing, installing and maintaining large international systems and systems within large organizations such as IP Router, IP Access Switch, and Software Define Network (SDN) devices.
2. Fiber to the X (FTTX) and Multi Service Access Node (MSAN) system are exchange devices designed to provide fixed line number, public telephone, high speed internet via ADSL copper cable, and high speed communication circuit via Optical Fiber FTTX cable. Due to the increasing number of internet users every year, service providers have to invest in centralized equipment to compete in expanding their services. FTTX and MSAN systems are technologies that can meet Broadband Internet and Voice Over IP demand seamlessly.
3. Switching system is a device in the system that connects other devices together. The system will receive, process and send data to the destination such as the Core Mobile Network and Core Fixed-line Network etc.
4. The Synchronous Digital Hierarchy (SDH) system has been a longtime data communication system, using copper wires or telephone lines to transmit and receive data from the exchange for the users. This is a stable and safe system, but only supports up to 10-Gbps data transmission.
5. The Dense Wavelength Division Multiplexing (DWDM) system is a device used to transmit data over multiple optical fiber cable wavelength range, which increases the ability to transmit large amount of information at once. This makes it possible to support data transmission up to 3200 Gbps, with the length of data transmission as far as 200 km.
6. Supervisory Control and Data Acquisition (SCADA) system is a real-time data monitoring and analysis used to monitor and control the operation of various industrial

and engineering control systems. With this system, users are aware of the incident and therefore are capable of fixing the problem in a timely manner, resulting in work efficiency.



The Installation of MSAN System and Equipment

3) Software and Application System Construction

The Company provides systems and installs software and applications according to the needs of customers. The systems and software are parts of the solution which work alongside the core network to provide a variety of services to the customers and users. The process starts from receiving customers' requirements and providing software and applications that meet customer needs, such as Network Management System (NMS), Operating Support System Software (OSS), and Business Support System (OSS) etc. In addition, the Company also seeks for new software and applications that can meet the needs of users more widely to present to the customers. The Company realizes that the business opportunity can grow much more according to the growing needs of various users. The Company currently provides system implementation of NMS software, OSS software, SIM Management system, Fraud Management system and ERP system.

4) System Implementation of Other Equipment

This is the installation of equipment relating telecommunication, such as CCTV cameras installation, Feeder Remote Terminal Unit (FRTU) with Radio installation, a device that allows remote control, including Internet of Thing (IOT) devices that can be operated and controlled via the internet for turning on and off home appliances by connecting control devices, for instance.



FRTU System Installation

Example of the Company's telecommunication system and information technology contract work in 2018, 2019 and 2020

Opinions on the Company's internal control system adequacy	Work Category	Customer	Contract period	Contract Value (THB million)
Removal of telecommunication system for station construction and road expansion work between Ladprao and Samrong	Infrastructure System Planning	STECON	25/02/2020 – 25/12/2020	110.61
Contract for the underground cable system replacement to support ASEAN Metropolis Route 35, Chaengwattana Road (Nonthaburi Province side, Pak Kret Intersection - Klong Prapa)	Infrastructure System Planning	STECON	04/02/2020 – 01/08/2020	28.88
Dismantling and Relocation of Communication System for Station Entrance and Structure Construction (G396224-0-0 Yellow Line)	Infrastructure System Planning	STECON	01/04/2019 – 31/01/2020	147.99
Subcontracting of replacement of aerial cable system to underground cable Route 12 Charansanitwong Road (Blue) CAT / HDD Route 12 (CAT / HDD Route 12)	Infrastructure System Planning	CAT	29/12/2018- 23/12/2019	114.00

Opinions on the Company's internal control system adequacy	Work Category	Customer	Contract period	Contract Value (THB million)
Fraud Management System Contract (A02/3160020774/2561)	Software and Application Implementation	TOT	05/04/2018 – 31/12/2018	39.45
SIM Management System Expansion Contract	Software and Application Implementation	TOT	05/02/2018 – 31/08/2018	39.35
The Moving of Communication System of MRT Orange Line	Infrastructure System Planning	ITD	05/02/2018 – 31/08/2018	38.69
Removal of Telecommunication Lines at Muang Thong Thani Entrance Spur Line	Infrastructure System Planning	STECON	08/10/2020 – 31/01/2021	20.53

Remark: STECON means Sino-Thai Engineering and Construction Public Company Limited.

CAT means CAT Transport Public Company Limited

TOT means TOT Public Company Limited.

ITD means Italian-Thai Development Public Company Limited.

2.2.2 Maintenance Business

This is the service of electrical system equipment repair and maintenance, including telecommunication and information technology systems. Most of the clients are existing customers of the Company who continue to use our service after the 2-year warranty period has expired. Once the warranty has ended, the customers would contact for contract renewal. The sales and the solution teams work together to formulate a proposal according to requirements from the customer. The maintenance services can be divided into 2 types which are: 1) corrective maintenance work which the Company provides maintenance service for the damage of any equipment and 2) preventive maintenance work, to examine the current condition of the equipment or test some of the equipment which has not been utilized for a long period of time, making sure it still functions properly to prevent or reduce the risk of system damage. The Company does not provide maintenance services to new customers with no existing system installation with the Company. The Company provides all types of system maintenance, whether telecommunication and system installation, information technology in the main network system, software systems and applications, and other equipment systems including electrical system which the Company has installed for the customers in the past.

The Company has a team of engineers and experts who are experienced with the system installation, certified with competence in service from the product companies. The team is ready for inquiries and problem solving and/or provide system inspection and maintenance services on a scheduled timing, including repair services.

Examples of Maintenance Work in 2018, 2019 and 2020

Opinions on the Company's internal control system adequacy	Customer	Contract period	Contract Value (THB million)
Fraud Management System Maintenance Contract	TOT	01/01/2020 – 31/12/2020	4.60
Maintenance Contract for SDH Communication System for SCADA/EMS	LOXLEY	14/05/2020 – 13/05/2021	14.00
Maintenance Contract for SDH Communication System	MEA	29/10/2017 – 28/10/2018	9.82
Maintenance Contract for SIM Management	TOT	01/10/2017 – 30/09/2018	10.75

Remark: TOT means TOT Public Company Limited.

LOXLEY means LOXLEY Public Company Limited.

MEA means the Metropolitan Electricity Authority

2.2.3 Supply Business

The Company sells equipment related to electrical systems and all types of telecommunication and information technology systems. Most of the equipment are for telecommunication systems and information technology systems, which customers buy to keep for replacement and maintenance when the used equipment is damaged, deteriorated, as well as equipment purchase operational ability improvement to keep up with the changing technology. The customers can install or change the equipment by themselves or hire the Company to install in the event that installation expertise is required. Once the Company receives an equipment purchase order, the customer will contact the seller to come and offer various technologies for selection, which the Company later presents to the customers. The equipment has a 2-year warranty according to the condition obtained from the manufacturer. If the customers wish to extend the warranty period, the Company will purchase additional warranties from the manufacturer in order to provide the service specified by the customers.

Example of the Company's equipment sales in 2018, 2019 and 2020

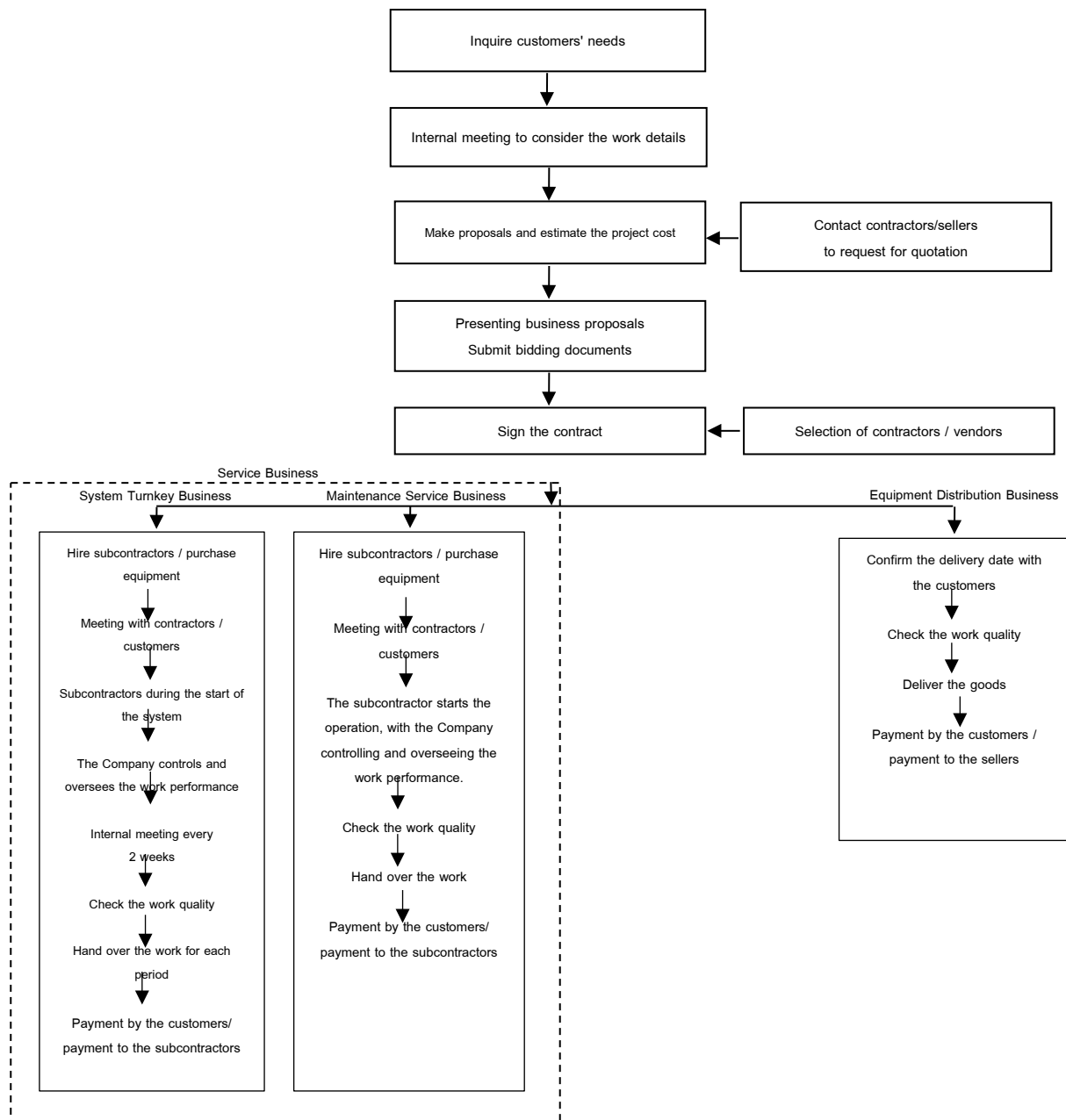
Opinions on the Company's internal control system adequacy	Customer	Contract period	Contract Value (THB million)
265 sets of L2 Switch devices sold	CAT	26/06/2020 – 24/10/2020	153.39
TIBCO Software Purchase Agreement	C Inspire	21/02/2020 – 02/08/2020	32.19
CAT-THIX Peering Bangrak - Nonthaburi Purchase Contract (one system)	CAT	28/12/2018 – 28/03/2019	116.63
Expansion Density P Router for PE Dual Home (Expansion Density P Router) Equipment Purchase Contract	CAT	01/11/2017 – 31/03/2018	90.80
TIBCO Software and Service for Data Governance Platform Project	C Inspire	30/11/2020 – 30/05/2024	25.70

Remark: CAT means CAT Transport Public Company Limited

C Inspire means C Inspire Co., Ltd.

Service Procedure of the Company

The Company's sales department contact customers and follow up on procurement announcements of government agencies and contact private companies for their upcoming projects in the future and present the Company's services. Once the Company receives requirements from the customers, the sales, commerce and solutions Departments will study the customers' needs in detail for an internal meeting to summarize the time of action, personnel in charge, subcontractors/sellers of products and bring the information obtained to design, select and present the suitable products, systems or services that meet the needs of each customer. The Commerce and Solutions departments are responsible for contacting subcontractors /suppliers for the project based on the expertise required. Once the contract with the customer is signed, the Company will hire a subcontractor and purchase various equipment to start the operation. The Company's operation department oversees the operation closely throughout the project, including subcontractors' work, before the work is delivered from the subcontractors. Regarding the payment from the customers or the payments for subcontractors, the payment depends on the credit term of each contract, with exception for the relocation of electrical cable to underground system of MRT yellow and pink lines. Due to the milestones project nature which requires many subcontractors to operate, the work delivery period is every month-end. The Company invites the customers to witness the delivery of the subcontractors' work before making the payment to the subcontractors under the contract.



2.3 Marketing and Competition

2.3.1 Competitive Strategy

1. Business Partnership with Customers and Partners

The Company puts an emphasis on business relationship building or Business Partnership with both clients and partners in order to maintain good relationships and mutually promote business potential. With more than 26 years of experiences and performance, the Company possess a strong partner network. Especially the relationship with customers, the Company pays attentions to every details and puts endless effort on understanding customers' needs and deliver good quality of work. This results in hiring continuity and trust from the clients. Regarding the business partners, both contractors and sellers, the Company tries to maintain the relationship which mutually benefit all parties, with sustainable and strong business strategy. The Company's strength in business partnership leads to the continuous growth of the Company.

2. Executives and personnel who are knowledgeable, experienced, and reliable.

The electricity and telecommunication and information technology system service which the Company provides requires knowledge, experience and expertise. Due to more than 26-year experiences of Mr. Jarun Wiwatjesadawut the Company's CEO and most of the management team, they possess deep knowledge and understanding of the business. Other personnel of the Company, whether it is the sales department, solutions department, or the project operations department, are all knowledgeable personnel with expertise. As of December 31, 2020, approximately 43% of the Company's management and employees are engineers who are capable of providing efficient services that meet the clients' needs and build confidence among customers. especially regarding electrical system which an error in the system implementation could result in danger. (at present, the Company has 7 engineers with a license to practice in the control engineering profession for electrical engineering as general Engineer, and 9 associates) The existing work experience and past performance truly serve as a measure of the customer trust in the Company and its team.

3. Variety of Services

The Company started working as a subcontractor in transmission line system and various transmission towers construction which required intensive labor work, and gradually accumulated and expanded its work experiences, knowledge and expertise in t a variety of scope. At present, the Company is capable work relating telecommunication systems and information technology, such as the installation of utilities related to the wiring, wired and wireless communication systems, main network system, software system and electrical system applications, whether it is the construction of high voltage lines, substation construction, or relocation of electrical cables into underground, and maintenance service, as well as selling various equipment products related to both systems. The Company plans to expand to the business continuously and constantly upgrades its ability to provide services in order to maintain as a System Integrator

in a variety of businesses. This results in the Company's capability in providing a wide range of services that can fully meet the needs of the customers.

4. Maintaining Quality Standards of Work

The Company puts an emphasis on delivering quality work to customers. With the Company's long-standing experience in construction of both electrical and telecommunication systems and information technology, and strong business partner relationships whether with the contractors or sellers, the Company is capable of selecting products and contractors that suit the needs of each customer. In addition, the Company's project operation department will be overseeing each step of the process and follow up on the performance regularly throughout the construction period until the work delivery. With concise work plan in previous projects, the Company was able to deliver quality work within a specified timeframe, and consequently has been receiving new work inquiries from the customers continuously.

2.3.2 Distribution Channels and Target Customers

The target customer groups of the Company is electrical services and large telecommunication and information technology systems providers ,both in public and private sectors. The Company can provide services directly to the customers and through business partners who are the main contractors.

1. Direct product distribution and services to the customers

The Company's sales department is in charge of contacting the customer in order to offer the service directly. The sales department will follow up on procurement announcements of government agencies that have demand for services related to power system work. and telecommunication systems and information technology, which is the Company's expertise, to join the bidding or make an offer for private entities. The sales department will be in contact with various organisations to find out about their upcoming projects in order to propose the Company's services. The customers in this group are TOT Public Company Limited (TOT), CAT Telecom Public Company Limited (CAT), Rangsit Plaza Company Limited, and State Railway of Thailand (SRT). The Company focuses on increasing more direct contacts with the customers by having the sales department actively contact and reach out to new customers.

2. Sales of products and services through business partners who are main contractors

Customers who are the Company's business partners are the main contractors who hire the Company as a subcontractor to operate in various jobs according to the Company's expertise. Due to the Company's long-standing nature of business as a contractor of electrical, telecommunication, and information technology systems, and having worked with numerous companies with proven track record in the industry,

the Company has gained its' business partners' trust in expertise and knowledge credibility. Hence, the Company has been hired by the main contractors and many customers as a subcontractor for various projects. The examples of the customers in this group are Sino-Thai Engineering and Construction Public Company Limited, Toyo Engineering Corporation Company Limited, Unique Engineering and Construction Public Company Limited, and Italian-Thai Development Public Company Limited. The Company's sales department is constantly in contact with these main contractors to be aware of the upcoming projects in the future.

Share of the Company's revenue from sales and services. categorized by distribution channels in 2018, 2019 and 2020

Service Category	2018		2019		2020	
	million baht	percent	million baht	percent	million baht	percent
Direct product distribution and services to the customers	204.10	22.10	343.93	40.63	183.42	14.32
Product distribution and services through business alliance	719.38	77.90	502.46	59.37	1,097.69	85.68
Total	923.47	100.00	846.39	100.00	1,281.11	100.00

2.3.3Pricing Policy

1. Turnkey Projects

The Company sets the price based on the project contract costs including equipment and subcontracting fees in a cost-plus pricing manner. The price is also determined by taking in the account the subcontractors and the purchase of additional equipment which is reasonable in price and technicality, both for the present and in the future. The competitive environment of the project and the customer's budget play a vital role in the pricing. The price offered to customers must be competitive, nevertheless, the quality of the equipment is also essential, in order to gain the trust and credibility for the Company.

2. Maintenance Business

The pricing is based on the work details, system complexity, area for maintenance. The study of each area's risks is conducted for this purpose.

3. Equipment Distribution Business

The Company sets the price based on the cost of equipment plus a cost-plus pricing before raising or lowering the price, according to the equipment quantity and terms of payment, delivery time, warranty period etc.

2.3.4 Industrial Conditions

The Company's main business is to provide electrical contractor service and telecommunication and information technology in turnkey operations. Hence, the industrial conditions related to the power system and telecommunication and information technology are crucial and directly affect the Company's business operations.

2.3.4.1 Industry Related to Power System

Power Generation Business

Power generation business data by the Bank of Ayudhya Research Center, June 2018 issue. 2019 Thai electricity generating business structure is an Enhanced Single Buyer Model by the Electricity Generating Authority of Thailand (EGAT), who is an electricity generator, an independent power producer (IPP), and a small power producer (SPP), as well as a monopoly on power transmission lines. The Metropolitan Electricity Authority (MEA) and the Provincial Electricity Authority (PEA) distribute electricity, with some electricity purchased from very small private power producers (VSPP).

The direction of power generating business growth depends on 1) the country's electricity demand, most of which varies according to economic conditions. On average, the growth of electricity demand is approximately 0.9-1.1 times of gross domestic product (GDP) growth. In 2018, it was found that industrial, business, household and other sectors accounted for 47%, 25% and 4% of the total electricity consumption in the country respectively. 2) governmental policies such as the National Power Development Plan (PDP) and the Alternative Energy Development Plan (AEDP) which define the country's power generation capacity for each type of power plant, price Policy for purchasing electricity produced from renewable energy (due to higher production cost of electricity from renewable energy than fossil fuels electricity production such as natural gas, coal and oil) which is currently under the Feed-in Tariff (FiT) system from the original Adder system. This also includes Transmission Network Development Plan to support the increased power generation capacity, especially from renewable energy power plants.

Looking at previous years, Thailand's electricity consumption in 2018 stood at 187,832 gigawatt-hours, which expanded by 1.5% from 1.2% in 2017, in line with the recovery of Thailand's economy and tourism sector. The government's electricity saving measures resulted in a slight increase in electricity consumption overall. The electricity consumption in business and industrial sectors grew by 1.3% compared to 2017, where household electricity usage grew by 1.9% from the previous year. Electricity generation in 2018 was 204,428 gigawatt-hours, an increase of 1.6% compared to an expansion of only 0.8% in 2017.

In 2019-2021, the private power generation business is expected to continue growing, with supporting factors such as certain markets on the demand side, and the government's investment support policy on the supply side as follows:

1. Domestic electricity demand continued to grow in line with the economic conditions and the gradual increase of investment in business and industrial sectors, which bolsters the demand for electricity in the country (referred to the Thailand Electricity Capacity Development Plan B.E. 2554). 2018-2037 (PDP 2018) by the Energy Policy and Planning Office Ministry of Energy, which has projected the domestic electricity consumption to expand 3.6% in 2019-2020 and 3.2% in 2021 under assumptions. Gross domestic product (GDP) will grow by an average of 3.8% per year.

2. The National Electricity Capacity Development Plan, B.E. 2018-2037 (PDP2018), the total electricity generating capacity will be 77,211 MW in 2037, an increase of 9% from the PDP2015 plan to 56,431 MW, a new capacity during 2018-2037, including the renewal of the project contract of Electrical SPP Cogeneration System.

Generation Capacity	PDP2015 (MW)	Generation Capacity	PDP2018 (MW)
Generation Capacity until December 2014	37,612	Generation Capacity until December 2017	46,090
Total increased generation capacity during 2015-2036	57,459	Total increased capacity during the years 2018 - 2037	56,431
Power plants that were removed from the system in 2015-2036	-24,736	Power plants that were removed from the system in 2018-2037	-25,310
Total net electricity capacity at 2036 year-end	70,335	Total net electricity capacity at 2037 year-end	77,211

Source: National Electricity Capacity Development Plan, B.E. 2561 - 2580 by the Energy Policy and Planning Office, Ministry of Energy

The aforementioned supporting factors will benefit the new investment of the 3 parts of power plants as follows:

1. Large power plants (IPPs) are expected to be auctioned off in the next 3-5 years to replace large-scale natural gas-fired power plants that will have expired and shut down from 2025 to 2027 around 8,300 Megawatts

2. Small power plants (SPPs) are expected to expand production capacity and invest more in the construction of new power plants, especially in the natural gas fuel power plant of cogeneration system which will expire in 2016-2025. The electricity generation and / or construction of new power plants can be done in the same area, and the electricity can be sold to industrial estates and industrial parks. This includes the

investment in renewable energy power generation projects in the form of fuel mix, known as the SPP Hybrid Firm, which has more and more support from the government.

3. Investment in electricity generation from renewable energy projects can be classified as

3.1) Power plants with ongoing investment, firstly the solar power generation project, a result of the electricity production liberalization on the roof of the public sector that the government agrees to purchase 100 megawatts per year for 10 years from 2019. Secondly, the projects with potential on cost and raw materials sourcing competitiveness such as power generation from waste biomass and biogas projects respectively.

3.2) The power plant group which investments may have to hold until after 2021 is wind and hydroelectric power generation projects. This is because most of the potential areas are park areas where permission is difficult to obtain and the transmission system is complicated. New investment opportunities may have to wait until 2021 after the Electricity Generating Authority of Thailand (EGAT) constructs the power transmission line.

Nevertheless, due to the plan to support competitive bidding from the private sector under the condition that electricity generation cost must not be higher than the retail electricity price according to PDP2018 plan, small private companies (SPPs) with cost competitiveness are expected to expand their investment, especially in renewable energy fuels which will have a sustained purchasing demand according to the government's plans.

Master plan of the relocation of electrical cables to underground cable system in 2008-2022

According to the master plan of relocation of electrical cables to underground cable system in 2008-2022 by the Metropolitan Electricity Authority (MEA), MEA has begun to focus on the quality of the power supply and the reliability of the power system since the 7th amendment and expansion of the power distribution system plan, which indicates the establishment of projects relating the relocation of cable system to an underground feeder system in critical areas such as Chitralada project, Silom project, and Pathumwan project. During the implementation of the 9th plan, 3 more areas were selected, namely Phaholyothin Road, Phayathai Road, and Sukhumvit Road. Each plan has set 1-3 projects to convert air to underground electric cables, to meet the with the manpower ability of MEA. These projects are expected to take several decades to complete the relocation of cables relocation to cover most areas with demands from consumers who want quality and reliable power systems to comply with a better quality of life in a developed country, and also for a beautiful city landscape.

Moreover, the relocation could help reduce car crash to electric poles which often cause power outages and traffic congestion. The better image can attract more tourists and investors into Thailand. Therefore, the government plans to change the infrastructure projects that are above the air to be underground. MEA has therefore formulated a masterplan for the project to change the cable system to the underground system in 2008-2022 (15 years), focusing on operations in the business district and areas with













heavy demand for electricity. The total distance is approximately 180 km., some of which must be operated along with the MRT project, with total investment budget of 77,678 million baht, divided into 2 phases

1. The first phase, 2008-2021, distance approximately 119 km., with investment budget of 43,775 million baht (including roads that MEA declares as an underground cable area).
2. The second phase, 2012-2022, distance of 61 km., with investment budget of 25,059 million baht.

Plan to change cable system to underground cable system to support being an ASEAN metropolis.

After implementing a part of the master plan regarding the relocation of the air cable to an underground power line, which consists of Silom project, Chitralada project, Pathumwan project, The Phaholyothin project, Phayathai project, and the Sukhumvit project (partly), a total distance of more than 35 km. have been completed. In addition, the following projects are under the process of working: Sukhumvit (the rest), Nonsee, Rama III, Pathumwan, Chitralada and Phayathai projects, including some parts of the Ratchadaphisek-Asoke project and the Ratchadaphisek-Rama 9 project, totalling more than 53.3 km. Regarding the aforementioned projects, MEA has coordinated with other state enterprises to pursue their operations along the way with the projects to reduce operation duplication and traffic problems. Then, MEA has reviewed the 2008-2022 Master Plan to comply with the strategy to continuously improve the quality of electricity and electricity distribution system development to become a leading ASEAN metropolis, proudly stepping into the ASEAN Economic Community. Therefore, a project to relocate the aerial electrical wiring system to underground power lines has been established to support Bangkok in becoming an ASEAN metropolis, with the distance of 261.6 km. and an investment budget of 143,092 million baht, operated for 10 years from 2016-2025. The Cabinet has agreed to this matter in the meeting on September 1, 2015 to implement the project in the areas suitable for operation by using the investment budget according to the plan, total amount of 48,717.2 million baht.

The plan to relocate cable wiring to underground power lines to support Bangkok in becoming an ASEAN metropolis

Sub-project		Distance (Km.)	Expected Completion Date
No.	Details		
1	 Chitralada Project	7.1	2019
2	 Project with MRT Blue Line (MRTA)  Project with MRT Light Green Line (MRTA)  Project with Road Expansion Work (BKK)	35.9	2022
3	 Project with MRT Dark Green Line Saphan Mai - Khu Khot (MRTA)  Project with MRT Orange Line (MRTA)  Project with MRT South Purple Line Bang Sue - Rat Burana (MRTA)  Project with MRT Pink Line (MRTA)	37.3	2023
4	 Project with MRT Light Green Line Samut Prakan - Bang Pu (MRTA)  Project with MRT Yellow Line (MRTA)  Project with Road Expansion Work (BKK)	24.4	2024
5	 No projects with other agencies	22.6	2025

Source: The plan to relocate cable wiring to underground power lines to support Bangkok in becoming an ASEAN metropolis.

Enterprise Plan of fiscal year 2017-2022, fiscal year 2020 revised version

Mass Rapid Transit Authority of Thailand (MRTA) has set goals for the opening of various train lines within Bangkok and the surrounding areas, specified in the main operation objectives under the Enterprise Plan fiscal year 2017-2022, revised version of fiscal year 2020 that must be achieved within fiscal year 2022 or other years as follows:

1. Fiscal year 2019 to start service operation of blue line Hua Lamphong - Bang Khae
2. Fiscal year 2020 to start service operation of blue line Bang Sue - Tha Phra, green line Mo Chit - Saphan Mai - Khu Khot
3. Fiscal year 2022 to start service operation of pink line Khae Rai - Minburi and yellow line Lad Phrao - Samrong
4. Fiscal year 2024 to start service operation of orange line Cultural Center - Min Buri
5. Fiscal year 2026 to start service operation of orange line Bang Khun Non - Cultural Center and purple line Tao Poon - Ring Road Kanchanaphisek

The details of the electric train projects related to the Enterprise Plan fiscal year 2017-2022 of the Mass Rapid Transit Authority of Thailand can be summarized by the following electric train lines as follows:

1. MRT Blue Line

At present, all stations are open for service. (Tha Phra - Lak Song) with a total distance of 47 km. The extended lines of Hua Lamphong - Lak Song and Bang Sue-Tha Phra were opened in 2019, and the extension service (Tao Poon-Tha Phra) was officially in operation from March 30, 2020. Regarding the extension from Lak Song to Phutthamonthon Sai 4, the project is under consideration.

2. MRT Green Line

Currently, the service is available from Samut Prakan Housing - Kasetsart University, with a distance of about 39 km. This line is the first and main electric train route of Bangkok, running through the heart of the city and key central areas. The line is under construction for the extension of Mo Chit - Saphan Mai - Khu Khot (Kasetsart University Station - Khu Khot), which is expected to open for service in 2020.

3. MRT Pink Line

The MRT Pink Line from Khae Rai - Min Buri is currently under construction. The train model is monorail, with a distance of approximately 36 km., and connection points with the Red Line, Green Line, Grey Line and Orange Line, scheduled to be completed in 2021.

4. MRT Yellow Line

MRT Yellow Line, Lat Phrao - Samrong route is currently under construction, with a distance of about 30 km. in a monorail format. The starting point is from Ratchada-Lat Phrao intersection, with intersections with the Orange Line at Lam Sali Station Airport Link at Hua Mak, and Green Line train at Samrong Station. The construction is scheduled to be completed around 2021. Regarding the extension from Ratchada-Lat Phrao intersection through the criminal court heading to Ratchayothin is still under consideration.

5. MRT Orange Line

At the moment, the MRT Orange Line Cultural Center - Min Buri route is under construction, with a distance of 22 km.. This route will intersect with Blue Line at Thailand Cultural Center Station and also connects to the Yellow Line and Brown Line at Lam Sali Station. It is an underground and overground route, which is expected to open for service around 2023 and open the Bang Khun Non - Cultural Center route in 2026.

6. MRT Purple Line

The MRT Purple Line is now open for service at Tao Poon - Khlong Bang Phai Station. The distance is about 23 km., which connects to the Blue Line at Tao Poon Station. Soon this line is going to be extended from Tao Poon to Rat Burana, with additional distance of approximately 23.6 km.. The extension construction is expected to commence in 2020 and the Tao Poon-Kanchanaphisek Ring Road route will be ready for service by 2026.

MRTA has set the expenses of various electric train projects as follows:

Projects	Time Frame (when the MRTA starts the operation)	Expenses (million baht)	
		The Whole Project	Fiscal year 2017- 2022
MRT Blue Line - Hua Lamphong - Bang Khae - Bang Sue - Tha Phra	13 years 5 months	81,608.06	34,774.99
MRT Green Line - Bearing range - Samut Prakan - Mo Chit - Saphan Mai - Khu Khot	MRTA Signed an MOU to transfer the project to Bangkok. On December 3, 2018		
MRT Pink Line - Khae Rai - Min Buri	11 years 1 month	50,340.12	50,317.32
MRT Yellow Line - Lad Phrao – Sam Rong	10 years	47,558.13	47,468.09
MRT Orange Line - Thailand Cultural Center - Min Buri	12 years 11 months	108,823.74	85,790.65
MRT Orange Line - Bang Khunnon period - Cultural Center	15 years 5 months	122,067.27	44,312.26
MRT Purple Line - Tao Poon - Golden Jubilee Ring Road	15 years 5 months	124,958.62	40,128.65

Source: Enterprise Plan Fiscal Year 2017-2022, Revised Fiscal Year 2020, Mass Rapid Transit Authority of Thailand

Gathering from the aforementioned information, it is evident that the electrical industry is likely to grow continuously. From the Company's experience in construction of substations and high voltage transmission lines, there is a high chance the Company would get more opportunities for such jobs from the growth of the power generation business. In addition, with the Company's expertise in the relocation of power lines to underground cable system for both electrical and communication cables, the Company is expected to benefit from MEA's cables relocation plan. including MRTA's plan to start the operation of various MRT lines.

2.3.4.2 Industry Relating Telecommunication System and Information Technology

Information and Communication Technology (ICT) Market

According to the report of the National Science and Technology Development Agency (NSTDA), Thailand's information and communication technology market (ICT) consists of 5 sub-groups: (1) computer hardware market (2) software and software market (3) communication market (4) computer services market and (5) TV tuner market. Among these, the market that affects the Company's business operations is the communication market, which is the largest of all the ICT markets.

Thailand Communication Market

The communication market in Thailand can be divided into two main groups; the communication device and communication services market, with a total market value of 619,143 million baht in 2019 and a growth rate of 0.9% from 2018. The main market value was from the communication service market which accounted for 57.5% or equivalent to 356,438 million baht, while the communication equipment market contributed another 42.4% or 262,705 million baht. In 2020, the market value is projected to decrease by 2.3% or 605,108 million baht from 2019.

Category	2018 (THB million)	2019 (THB million)	2020F (THB million)	Growth Rate	
				2018-2019	2019-2020F
1. Communication Equipment Market	256,914	262,705	250,021	2.3	(4.8)
2. Communication Service Market	357,006	356,438	355,087	(0.2)	(0.4)
Total Market Value	613,920	619,143	605,108	0.9	(2.3)

Source: Office of the Broadcasting Commission Television business And the National Telecommunications Commission (NBTC)

Communication Equipment Market

The communication equipment market in 2019 has a total value of 262,705 million baht, an increase of 256,914 million baht or 2.3% from 2018. In 2018, the telephone market had a value of 118,976 million baht, with only 2.1% growth or an equivalent to 121,462 million baht due to the slowdown of the country's economy. As a result, investment in the communications equipment market in 2019 has grown in a positive direction. Another factor is the main network equipment market, which in 2019 has a total value of 76,446 million baht compared to 2018 at 73,780 million baht, an increase of 3.6% due to the investment in main network efficiency improvement despite the slowdown of the economy.

In 2020, the communication equipment market is predicted to be valued at 250,021 million baht, a 4.8% decrease from 2019, with main contribution coming from the telephone handset market which decreased from 2019 by 8.1% to a market value of 111,650 million baht. Another factor is the decline in the main network

equipment market from 2019 by 4.2%, totalling at 73,245 million baht. This also includes the decline in cable communication device market which decreased by 0.8% from 2019, with total market value of 18,348 million baht, due to the COVID-19 outbreak which delayed the operation plan than usual. Consequently, it is expected that the investment value in 2020 will drop.

Communication Equipment Market	2018 (THB million)	2019 (THB million)	2020F (THB million)	Growth Rate	
				2018-2019	2019-2020F
1. Phone devices	118,976	121,462	111,650	2.1%	(8.1%)
2. Main network equipment	73,780	76,446	73,245	3.6%	(4.2)
3. Wired communication equipment	18,468	18,489	18,348	0.1%	(0.8%)
4. wireless communication devices	45,690	46,308	46,778	1.4%	1%
Total market value	256,914	262,705	250,021	2.3%	(4.8%)

Source: Office of the Broadcasting Commission Television business And the National Telecommunications Commission (NBTC)

Communication Service Market

In 2019, Thailand's communication service market had a total market value of 356,438 million baht, a decrease of 0.2% from 357,006 million baht in 2018. The decline was a result of fixed-line phone market whose value has decreased from 2018 by 15.8% or equivalent to 8,008 million baht. Another factor came from the Internet services market, which fell by 4.8% from 2018 to a value of 71,791 million baht, including the international phone service market, which decreased by 35.4% from 5,413 million baht in In 2018 to 3,497 million baht in 2019.

Thailand communication service market outlook for 2020 is expected to decline by 0.4%, to a value of 355,087 million baht. The COVID-19 outbreak which causes a decline in overseas travel, resulting in a decrease in roaming usage with customers shifting to less expensive communication channels.

Communication Service Market	2018 (THB million)	2019 (THB million)	2020F (THB million)	Growth Rate	
				2018-2019	2019-2020F
1. Fixed phone service	9,516	8,008	7,087	(15.8)	(11.5)
2. Mobile phone service	251,214	257,106	254,278	2.3	(1.1)
3. Internet service	75,391	71,791	75,381	(4.8)	5.0
4. International phone service	5,413	3,497	2,064	(35.4)	(41)

Communication Service Market	2018 (THB million)	2019 (THB million)	2020F (THB million)	Growth Rate	
				2018-2019	2019-2020F
5. Data communication service	15,445	16,306	16,227	3.8	1.5
Total Market Value	357,006	356,438	355,087	(0.2)	(0.4)

Source: Office of the Broadcasting Commission Television business And the National Telecommunications Commission (NBTC)

Digital Development Plan for Economy and Society

The government is well aware of the urgent need to utilize digital technology as an important tool in transforming Thailand towards stability and sustainability. The Cabinet has therefore assigned the Ministry of Digital Economy and Society together with the Ministry of Science and Technology to prepare a Digital Development Plan for Economy and Society. The plan will serve as an implementation framework of the government's Digital Economy and Society Policy by bringing digital technology implementation to change the business conduct, people's lifestyle, and government operations, which will result in economic prosperity and the social security of the country.

Thailand Digital Landscape

Economic and Digital Social Development in Thailand focuses on sustainable long-term development to be in line with the 20-year National Strategy of 2018 - 2037 prepared by the Office of the National Economic and Social Development Council Under the 2017 Constitution. Nevertheless, as digital technology is rapidly changing, the digital landscape or the direction and goals of development has been defined in 4 phases as follows:

1. Phase 1: Digital Foundation (1 year 6 months) Thailand invests and builds the foundation for digital economic and social development with investments in broadband internet nationwide and a high-speed telecommunication network to connect with other countries in the region.

2. Phase 2: Digital Thailand Inclusion (5 years) All sectors in Thailand take part in the development of digital economy and society, in line with the civil state that people should have access to high-speed internet network and basic public services through digital media. Furthermore, people should bring digital technology to implement for various dimensions of development, especially in the field of education, agricultural, industrial, and service sectors so they can grow by leveraging digital and data-driven technologies and prepare to develop the production process and business conduct to be digitalized and modern with automation.

3. Phase 3: Full Transformation (10 years) Thailand becomes "Digital Thailand" that drives and make the mot of digital innovation to its full potential. The country will have an up-to-date digital infrastructure on par with developed countries, and the main telecommunication network will be connecting with foreign countries with various technologies to support the increasing amount of demand with no limitations. Moreover, Thailand

will become a digital trading and investment center where the industrial sector is able to adopt digital technology to improve the work efficiency.

4. Phase 4: Global Digital Leadership (10 - 20 years) Thailand will become one of the developed countries who is able to utilize digital technology to create sustainable economic and social value. All of Thai citizen will automatically have access to digital technology as the human's fifth requisite. As for the economy, Thailand will be connected with the world economy through digital technology, be it trade, production, investment or employment. As a result, Thailand will transcend the middle-income trap and become a country with high income on par with other developed countries.

Strategy for Digital Development for Economy and Society

In order to drive Thailand's digital development in accordance with the 4 phases of the Thailand Digital Landscape vision, 6 development strategies have been established to monitor and assess the development progress with the following work plans:



Source: Thailand Digital Economy and Society Development Plan by Pansak Siriruchatapong 2016

Strategy 1: Develop high-performance digital infrastructure throughout the country, with the development of high-speed internet infrastructure covering various areas in the country to meet the needs of all sectors. Telecom infrastructure and other facilities are prepared and organized, as well as the revision of relevant laws to attract large-scale data center investments and become an incubator of business and digital innovation, supporting the digital economy both within the country and abroad.

Strategy 2: Driving the economy through digital technology by supporting SME businesses and community enterprises, conduct business through digital media, and And integrate digital technology with agriculture in various aspects such as farmer registration for each farmland, farm management, and

accounting systems etc. To drive the digital economy, digital technology business acceleration plays a vital part, such as the support of ecosystem that contributes to the growth of technology businesses, funding, and providing a One Stop Service business facilities etc.

Strategy 3: Build an inclusive and equal quality society with digital technology. Various technology is integrated to support and facilitate the disabled, and increase digital technology skills among the elderly, disabled and disadvantaged people through training at the digital community center. The community is also encouraged to create digital learning resources for lifelong learning that people can easily access through various channels. Moreover, digital technology will be applied to the medical field to increase the likelihood of equality in medical service access.

Strategy 4: Transform and digitize the government by providing Smart Service that transforms old-model government services into digital services which users can use via a variety of devices. Automated Public Services will also be developed to link various government agencies together for the information integration within and across departments as if it was a single organization (One Government). In addition, the Government Service Platform will be established to support new applications or services development for basic services of all government agencies.

Strategy 5: Develop manpower to prepare for the digital economy and society by providing the development of digital technology skills through Massive Open Online Course (MOOC) to meet the needs and benefit various groups of people ranging from working-age to those who are interested in general. Development of skills and specialization is promoted to support future new technologies for personnel in the digital technology field both in the public and private sectors. The state's chief executives must also join the development to understand and be able to implement digital technology to drive and develop their own organizations.

Strategy 6: Boost confidence in the use of digital technology by providing appropriate digital business facilities to acquire users' confidence. Revise the laws relating digital economy and society to be up-to-date and in line with the social context. Furthermore, security in digital technology and online transactions will gain more trust from the users , such as providing a secure and responsive payment system etc.

Internet of Things

Internet of Things (IoT) is when various electronic devices can link or send data to each other via the internet without having to enter the data. This link allows us to control numerous electronic devices through the internet network, including connection of various electronic equipment applications via internet network, which is different from the past where electronic devices were only a medium for data sending and display.

There are many aspects to the IoT applications, from collecting data for agricultural sector, machinery communication and control in industrial sector, vehicle communication and control, of traffic systems in the transportation and logistics management sector, health data collection and processing in public health sector, as well as online transactions of financial technology (Fintech) system in the banking sector.

Thai governance has prepared and developed a plan to support domestic IoT technology by reinforcing the development of telecommunication infrastructure to cover more areas throughout the country, which is evident in the Internet Village project, the development of technology and innovation using IoT technologies such as Smart Farming, drones for logistics and telemedicine systems, the study of cyber security to determine regulatory measures and prepare a draft announcement by the Broadcasting Commission Television Business and the National Telecommunications Commission (NBTC) who defines the standards and technical characteristics to support the interoperability of IoT devices, the study of numbering and identification to keep up with the rapidly growing number of IoT devices, as well as establishing guidelines for supervision and consideration of network business licenses of related service providers.

5G Technology

5G technology is the fifth generation of wireless communication with different objectives from the 1G-4G era in meeting the Machine-Centric Communication needs in various sectors of the economy, which is considered as a full step into the digital society. Regarding the industry trends, connection between devices and tools, also known as the Internet of Things, will become important to human life and promote the development of capacity and efficiency in both economic and social aspects.

With 5G technology that will help develop data transmission rates, ability to get information, connection density caused by the number of devices in the area, network energy efficiency and spectrum utilization, and reduce the latency of the system. This will consequently affect the economy in various fields from online banking, machine labor in the industrial sector, agricultural production management system, unmanned vehicles in the transportation and logistics sectors, internet telemedicine in the medical and public health sectors, online trading in the retail sector, media and advertising transmission in the television and media industry, as well as utilities management system.

Therefore, 5G technology is more than just broadband with only data transmission, it also creates a number of new services, be it Smart Car, eHealth, Connected House, Smart Grids and other services. 5G will help increase competitiveness and economic value, help manage resources Industrial system in both government and private sectors, saving more budget but achieving higher efficiency.

And in order to fully benefit Thai economy, the Office of NBTC As a frequency allocation agency which is an extremely necessary resource for 5G technology, the agency must carry out additional spectrum allocation to support various activities, including effective management of frequency spectrum use that supports 5G technology to achieve the goal smart digital economy development under Thailand 4.0. On February 16, 2020, NBTC has organized a spectrum auction for 5G technology in Thailand, divided into 3 spectrums; 700 MHz, 2600 MHz and 26 GHz with 5 bidders; AIS, CAT, dtac, TOT and TrueMove H. The bidding results can be summarized as follows:

Frequency	The Numbers Open for Auction	Bidders	Winning Bidder
700 MHz	3 sets	AIS, CAT, Truemove H	- CAT 2 sets, total 10 MHz - AIS 1 set, total 5 MHz
2600 MHz	19 sets	AIS, CAT, Truemove H	- AIS 10 sets, total 100 MHz - Truemove H 9 sets, total 90 MHz
26 GHz	27 Sets	AIS, dtac, TOT, TrueMove H	- AIS 12 sets, total 1200 MHz - Truemove H 8 sets, total 80 MHz - TOT 4 sets, total 40 MHz - dtac 2 sets, total 20 MHz

From the information provided, it is evident that the expansion of the communication market in Thailand, which reflects the telecommunication industry and information technology, is likely to continue to grow in the future. The amount of mobile phone users, the use of high-speed internet, an expansion in data transmission service, as well as changes in consumer behavior make it clear that the development of telecommunication systems and information technology is essential to Thailand. The development includes infrastructure, equipment, systems and system maintenance of communication service providers to support the expansion of the market. Moreover, the government policy that focuses on technology development creates the need to replace existing equipment with new technologies. This is a business opportunity for the Company because of the long history of experience in turnkey projects of integrated telecommunication and information technology systems, such as communication system infrastructure, fiber optic cable installation, software and application system implementation, as well as equipment procurement and installation. In addition, the customer which the Company has been serving for a long time was the winning bidder for 5G technology. With a long-standing good relationship the Company has with the said customer, the Company is expect to benefit from the aforementioned auction.

2.3.5 Industry Competition

Under various national development policies from government, state enterprises, and investment from the private sector as a response to efficient economic growth, the demand for design, procurement, construction and installation services for infrastructure systems such as projects that involving electrical system and telecommunication and information technology systems, has expanded.

Industry related to power system

Due to the power development plan of Thailand 2018-2037 by the Energy Policy and Planning Office Ministry of Energy, the Master Plan of the Transition Antenna System to Underground Program in 2008-2022, the relocation of power cables to underground system in order to support Bangkok inbecoming an ASEAN metropolis between 2016-2025 by the Electrical System Planning Department of Metropolitan Electricity Authority, as well as the Enterprise Plan fiscal year 2017-2022 revised fiscal year 2020 by the Mass Rapid Transit Authority of Thailand, the public and private investments in power systems in relating industries resulted in the rising demand for service providers of various power system. This type of service requires knowledge, expertise, and work experience in utility power system due to its high level of complexity and danger. Therefore, the service providers are mostly large companies with a strong financial position and capable of direct job bidding from the government sector or handling jobs from a private sector relating the power generation system. Those companies are Sino-Thai Engineering and Construction Public Company Limited, Chor Karnchang Public Company Limited, Italian-Thai Development Public Company Limited and Unique Engineering and Construction Public Company Limited etc. Some of the providers are medium-sized companies such as Demco Public Company Limited, Toyo Engineering Company Limited, Burapha Technical

Engineering Public Company Limited, United Engineer Company Limited, Teda Company Limited, Larch and Laurel Company Limited, and Sri U Thong Company Limited etc.

Currently, the Company is considered a medium-sized Company in this business because it has been working as a subcontract under other large companies, such as subcontractor of high voltage transmission lines construction, substation construction and equipment installation, and relocation of power lines to underground system. The Company's performance in the past has gained the Company both credibility and portfolio for the expertise in the service. Moreover, the Company's management team are personnel with over 26 years of experience in this business who possess strong relationships with both clients and subcontractors, as well as being an alliance with large companies. These factors has enabled the Company to continuously undertake projects from large companies successfully. However, the Company's recent jobs of power lines relocation to underground system along the MRT Yellow Line and Pink Line, totalling over 6,300 million baht, shows that the Company has the potential to work directly from customers in the future.

Telecommunication and Information Technology Industry

The trend of communication market expansion, Digital Development Plan for Economy and Society by the Ministry of Technology and Communication, and innovative communication technology have been emerging, which indicates more demand for service providers in the field relating to the Company. There is a large number of service providers for the the work in telecommunication systems and information technology, form design, construction, communication wiring, system installation, and equipment procurement and installation. Most of the Company's competitors are listed companies and are alliance with foreign manufacturers who provide complete range of equipment procurement with strong financial position and capability to participate in bidding for large projects, such as Advance Information Technology Public Company Limited, Samart Telcom Public Company Limited, the Practical Solution Public Company Limited, Sky ICT Company Public Company Limited and Interlink Telecom Public Company Limited etc.

Nevertheless, the Company has been in this industry for more than 26 years, working in system installation of infrastructure, main network system, software systems and applications, as well as various equipment systems installation. The Company is well experienced with large projects from both the public and private sectors, as shown in Company's track record, which demonstrates that the Company only chooses to work in specific projects where the Company is proficient and experienced, especially those projects which utilize the products the Company possess good understanding of the equipment system, such as Huawei CISCO etc. The aforementioned factors provides the Company competitive advantages within this industry. Furthermore, the Company's management also has strong relationships with both the product providers, distributors and customers, as well as large corporate partners, which enables the Company the opportunity and capability to work directly for customers or large companies.

In addition, as a contractor of electrical system and integrated telecommunication and information technology systems, the Company is expected to benefit from the Eastern Economic Corridor (EEC) development project that builds on the success of the development of the Eastern Seaboard area. The development of the Special Economic Zone in the Eastern Region is one of the driving tools for the 20-year development strategy for the Thai Industry 4.0 (2017 - 2036), in which the first phase will be to upgrade and enhance 3 provinces namely Chonburi, Rayong, and Chachoengsao, the main industrial zones of Thailand, to achieve concrete investment. The enhancement includes investment in infrastructure and utilities to increase the potential for future investments, and the development of economic activities and facilitation in the area, particularly major transport infrastructure development projects such as a rail system to link between airports, deep sea port development, railway network development to connect with ports, and the development of an integrated transport management system for seamless railways and ports (Seamless Operation).

2.4 Products and Services Procurement

2.4.1 Purchasing of the Company's Equipment and Products

The Company procures equipment and products from its trade partners upon receipt of an order or a contract with a customer. When the sales department has carefully studied the needs of customers, they will coordinate with solutions and commerce department to design the system, along with studying various technical requirements and equipment quantity that is suitable for the project before presenting to customers. As of December 31, 2020, the Company has a total of 112 approved contractors and distributors for electrical system work and telecommunication and information technology work from the 142 companies in Approved Vendor List. The equipment the Company provides can only be used for the specific project specified in the Term of Reference (TOR). The Company will consider purchasing products based on the technical specifications of the equipment, quality, delivery time, price, credit terms and accepted standards, which can be divided into 2 types according to the nature of the equipment as follows:

1. The project's main equipment

The Company has to purchase main equipment which meets the requirements specified in the contract or the employer's requirements, and the Bill of Quantities. Most of the time, the Company purchases products and equipment related to telecommunication system and information technology of Huawei, CISCO or HPE, while purchasing equipment related to the electrical system from SIEMENS, ABB or Utah. The purchases are made directly with the product providers or through the distributors appointed in Thailand.

Due to the good relationship the Company has with the owners of the said products, it has been receiving support from the manufacturer or distributor regarding the knowledge of new technologies and products that will be launched to the market. For example, the Company is certified by Huawei as a Gold

Partner, who will be provided both pre-sales and after-sales service techniques and marketing support. Standard trainings are also provided to develop potential and technological expertise, including the update of new equipment. In general, the Company receives about 30-60 days of term credit.

2. Other equipment and products used in the project

For the purchase of equipment and other products used in the project such as fiber optic cables, electrical cables, pipes, connectors, connection cables, equipment cabinets, switches, gears, batteries, cables and software etc., the Company procures such equipment from local distributors. In general, the Company receives a credit term of about 30-60 days.

2.4.2 Subcontractor Remuneration

For electrical, telecommunication and information technology systems contractor service, the Company hires subcontractors who possess the expertise according to customer requirements to do be in charge of the job. The operation department of the Company closely supervises the subcontractor throughout the system implementation or maintenance.

In hiring a subcontractor, the Company will start with a detailed study of the project requirements, both the project format, operational period, conditions, performance guarantee, and other various technical features. The study helps with the selection of subcontractors who have been registered on the Company's Approved Vendor List (AVL). The Company considers several aspects when choosing the subcontractors, such as performance, experience, and financial strength. The Company allows approximately 3 subcontractors to submit their bidding. The Company will take into account the quality and ability of the subcontractor, the price offered, and the term credit in selecting the right subcontractor.

The Company tends to choose subcontractors who have previously worked for the project owner before, due to their familiarity with the requirements and regulations of the project owner. Another factor is the price comparison during the bidding. In addition, the Company also allows subcontractors to submit manpower plans and various working schedules to the Company in order to make sure the subcontractor has enough manpower to work for the Company and meet the scheduled delivery.

Value and proportion of products procurement and services during 2018, 2019 and 2020

Procurement type	2018		2019		2020	
	million baht	percent	million baht	percent	million baht	percent
Products and equipment	312.32	43.15	356.00	54.25	196.22	19.32
Subcontractor remuneration*	411.51	56.85	300.26	45.75	819.55	80.68
Total purchase value	723.84	100.00	656.26	100.00	1,015.77	100.00

Remark: * Subcontractor remuneration is not equal to service cost as the service cost includes other expenses such as staff for project management, operating expenses etc.

2.5 Undelivered work

As of December 31, 2020, the Company has turnkey projects with orders from clients but not yet delivered to customers in the amount of 6,212.07 million baht, with the delivery schedule as follows:

Unit: Million baht

Revenue Category	Revenue expected to be recognized in				Total
	2021	2522	2023	2024	
Revenue from contracted work of system installation	2,506.65	2,413.45	1,179.13	106.64	6,205.87
- Electrical system	2,249.61	2,386.99	1,179.13	106.64	5,922.37
- Telecommunication systems and technology information	257.04	26.46	-	-	283.5
Revenue from equipment sales	-	-	-	-	-
Revenue from repair and maintenance services	6.20	-	-	-	6.20
Total	2,512.85	2,413.45	1,179.13	106.64	6,212.07

Remark : The residual contract value expected to be recognized as income for each period is subject to change from that stated due to the changes in contract value or delayed work delivery

3. Risk Factors

Investors should thoroughly consider risk factors, including other detailed information that appears in this document before making the decision to invest in the Company's securities. As determined in this document, risk factors may negatively affect the Company's business operation and the Company's share price. However, such is not all existing risks. There might be other unpredicted risks and risk factors, including risk factors from the Company's normal business operations, which do not significantly affect the Company's current situation but may become future significant risk factors.

3.1 Risk from dependent on major customers and government projects

In 2018, 2019 and 2020, the Company earned revenue mainly from 2 major customers, representing 73.27 percent, 97.92 percent, and 93.16 percent of total revenue from sales of goods and services. One of the customers is the project's direct owner (its revenue accounted for 9.83 percent, 39.59 percent, and 11.75 percent of total revenue from sales of goods and services accordingly). Another customer is the first-ranked contractor, the Company's business partner (revenue from this customer was 63.44 percent, 58.33 percent, and 81.42 percent of total sales and services revenue). In the future, if the Company cannot get a project from these two significant customers - who are the direct owner of the project, may postpone the investment or reduce the budget in the project. Another situation is when the customers who are the Company's business partner may not accept further work or will not hire the Company, it could have a direct impact on revenue and profit of the Company significantly. Furthermore, most of the Company's business, project owners, or end users are from the government sector, including power systems and telecommunication and information technology business. In 2018, 2019, and 2020, the Company's revenue from state projects was 81.09 percent, 83.12 percent, and 91.05 percent from total sales of goods and services revenue. Hence, the variation in the government's investment policy or delay in investment will have direct impact on the Company's revenue significantly.

The majority of revenue is from the two main customers, and most of the Company's project is from the government sector. According to the industry outlook data in Article 2.3.4, the government sector currently focuses on infrastructure development in electrical systems, telecommunication, and information technology systems. For instance, the government has prepared several plans and policies, for example, converting overhead lines to underground to support the ASEAN metropolis and Digital Development for the National Economic and Social Development Plan. Such a plan ensures that the Company will derive benefits from rendering services related to government sector projects. The two major customers have a significant role in

driving several projects. Therefore, by building a relationship and trust from them regularly plus the Company's experiences and expertise in administration, selecting suitable materials and equipment with competitive costs and ability to deliver work on time, outstanding after-sales service, the Company is confident it will receive more projects. Nevertheless, the Company has the policy to extend its customer base both in the government and private sectors, including diversity of work scope. The Company also periodically follows up on the government sector's policy and investment plan from news and information from business partners to assess investment direction and investment trend from the government sector, allowing the Company to prepare business plan more effectively.

3.2 Risk from depending on the executives

Mr. Jarun Wiwatjesadawut established J. R. W. Utility Public Company Limited; currently, the Chief Executive Officer, holding a wide range of experiences and expertise in electrical systems and telecommunication and information technology systems for over 26 years. The Company has maintained a good relationship with customers in both government and private sectors, including domestic and international suppliers. As a result, the Company is exposed to risk from depending on key executives in which the change in key executives could affect the Company's management.

However, since Mr. Jarun Wiwatjesadawut is still the Company's major shareholder, holding 33.36 percent of registered and paid-up capital of the Company after this initial public offering (including all shareholding portion of related parties), it is considered a motivation for the management to continue operating the Company. Mr. Jarun Wiwatjesadawut established J.R.W. Utility Public Company Limited, currently the Chief Executive Officer, who had experience and expertise in the electrical system and telecommunication and information technology system than 26 years. He also built a good relationship with customers in both government and private sectors, including domestic and international suppliers, for an extended time. As a result, the Company is exposed to risk from depending on key executives in administration. In preparation, the Company has the policy to provide training for employees and executives from various departments to enhance their knowledge and skill, assisting the leading executives in managements. The Company also determines a succession plan for a high-rank executive officer to ensure business operation continuity.

3.3 Risk from depending on personnel

The Company's business involved electrical systems and telecommunication and information technology systems, which are considered complex and dangerous. Therefore, it is necessary to have experienced and skilled engineers, including a satisfactory marketing operation, to meet the customers' needs, to determine the volume and type of materials and equipment used for operation, including system design, work control, and testing before delivering work that fits the customers' needs. The Company currently has 41 engineers or counted as 42.70 percent of the total number of employees as of 31 December 2020. If the Company cannot provide and maintain a group of engineers who are experienced and expertise in the Company's business, it could affect the Company's competitiveness in the market.

The Company realizes the importance of personnel and prevents such risk quantitatively and qualitatively by delegating team administration and assigning job rotation among each team on a regular basis. The executive effectively oversees the overall operation, continuously provides services to customers in case of engineer resignation. The Company also has a continuous recruitment process to seek an appropriate person to perform the tasks to support business growth. Furthermore, the Company's human resource management guideline tends to enhance the good relationship among employees within the organization, establishing suitable compensation and benefits policies and ongoing employees' knowledge and development training.

3.4 Risk from depending on contractors

According to the Company's turnkey service on system installation, equipment installation, electrical and telecommunication maintenance, and information technology systems, the Company hires contractors for several projects. The cost of hiring contractors between 2018, 2019, and 2020 were 54.34 percent, 42.99 percent, and 74.86 percent of the total cost of sales of goods and services, respectively. When the Company cannot find contractors or such contractors fails to perform the task to meet required standards or delays, or cannot serve as stated in the agreement, it could affect the Company's reputation and operation.

Nevertheless, the Company has approved 72 contractors from electrical and telecommunication, and information technology system fields from a total of 142 approved vendor lists (as of 31 December 2020). The Company selects contractors by several qualifications such as work quality, related experiences, expertise, teamwork and personnel, financial status, including familiarity with customers and work types. The Company selects three bidders for each project. Based on the Company's robust financial status, which is considered the Company's strength, many contractors are interested in undertaking the job. For this reason, the Company has various choices to seek the best and highest potential. The Company will appoint a Project Manager who

is the engineer with skill and experience to examine the contractor's work on a regular basis to control quality, acknowledge progress, and layout proper preventive guidelines and resolution. Additionally, the Company requests from contractors the guarantee in the same approach as the main contractor or customer requests from the Company.

3.5 Risk from depending on major suppliers

The Company has to buy good quality tools from abroad or directly from a manufacturer or authorized distributors in Thailand for system contract business. Between the years 2018, 2019, and 2020, the Company ordered products and services from one distributor amounted to 89.05 million baht, 274.92 million baht, and 129.02 million baht, respectively, which accounted for 12.30 percent, 41.89 percent, and 12.70 percent of total product and service procurement respectively. In the event when these suppliers will not be able to distribute the necessary tools to the Company or unable to deliver the ordered products within the scheduled time, the Company could receive an adverse effect on its business operation.

The Company realizes such risk and hence always maintains a relationship with other product distributors who can provide similar or equal quality products. In addition, the Company also has the policy to maintain a good relationship with many business partners who are the world-leading manufacturers to reduce risk from excessively depending on a single manufacturer. Before signing on the agreement with customers, the Company will consult and discuss with distributors about their procuring and delivery performance. This helps the Company to manage the procurement process effectively.

3.6 Risk from the inconsistency of revenue

The Company provides services for turnkey electrical and telecommunication and technology system installation. Scope of work includes consulting, designing, procuring, installing, testing, and maintaining tasks for customers who wish to build, expand, improve, or repair electrical systems or telecommunication and information technology systems. The Company revenue from a turnkey project between 2018, 2019 and 2020 was 87.05 percent, 62.86 percent, and 84.56 percent from revenue from sales of goods and services, respectively. However, such revenue is unstabilized depending on customers' investment plans from the government and private sectors. However, such a situation depends on opportunity and the Company's ability to continue its operation.

However, according to the Industry Outlook in Article 2.3.4, the government policy indicates the necessity to develop electrical systems and telecommunication and information technology systems, which are national infrastructure. As a result, many projects related to the Company's primary business in the next few years. In addition, the Company's experience and expertise in giving effective and punctual turnkey electrical system and telecommunication and information technology system helps to maintain a good relationship with customers. For this reason, the Company is confident in the continued trust from customers. As of 31 December 2020, the Company had undelivered work valued at 6,212.07 million baht. Meanwhile, the Company continues to enlarge its work scope by offering new services and products to existing and new customers.

3.7 Risk from advance payment to the contractor before receiving payment from the employer

In some projects or during a specific period, the Company hires sub-contractors and, from time to time, needs to make advance payments to subcontractors before collecting money from customers. This could mean the Company's liquidity and capital flow.

Normally, the Company will arrange the employer's acceptance certification on its work, including subcontractor's work, before the Company's acceptance certification of the work from subcontractor and eventually, make payment to subcontractor according to the agreement. Such procedures do not apply in the project changing of overhead cable to underground cable for the Yellow and Pink Line. For the Yellow and Pink Line Project, the Company delivers work according to the milestones achieved. One of the major works in each milestone could contain minor works performed by several sub-contractors. The timeframe for each subcontractor's work delivery is at the month-end period. To proceed with the contract's payment, the Company invites the employer to witness work delivery. From such procedure, the Company is confident that it can collect money from every project.

Additionally, the Company will prepare a cash flow statement for every project to get the most effective project management for each project. Commerce Department always coordinates with Finance and Accounting Department to assess financial status and liquidity. Furthermore, the Company also has a loan agreement with banks to withdraw loans for the operation. Therefore, the Company's liquidity is sufficient for its business operation. Moreover, most customers are also big entities from government and private sectors, with solid financial status and a specific budget.

3.8 Risk for the delay in delivery of work/penalty charges

Since most of the work is contracted system installation where the Company has to hire sub-contractors, the Company cannot control sub-contractors' work to meet standards and timely delivery schedule or cannot comply with the condition as agreed in the agreement. The Company is liable for penalty and such could affect its reputation and operation result.

The Company consistently maintains to deliver work that meets customers' required standards and schedules in the past. Between the year 2018-2019, the Company paid for work penalty of 3.11 million baht, divided into 0.08 million baht and 3.03 million baht, respectively. There was no penalty charge in 2020. Such figures represent 0.008 percent and 0.35 percent from total sales of goods and services during 2018-2019, respectively. Furthermore, the total penalty charges claimed from the project owner or collected from sub-contractors was 3.03 million baht. Most of the delays were due to force majeure, which is an external factor and is beyond control. For example, the state enterprise's delay in applying for permission of access delays procedures in several entities. Regarding such delays, since it is not the Company's fault, the penalty can be canceled or reduced upon discussion with customers. Nevertheless, the Company needs to coordinate with customers, subcontractors, and manufacturers or material suppliers to plan for project implementation in advance to avoid delay of work.

3.9 Risk of having major shareholders who hold more than or equal to 25 percent of total shares.

After a recent capital increase IPO, Mr. Jarun Wiwatjesadawut will be the Company's major shareholder, holding a position as Chief Executive Officer and Director. Included related parties, he will have 33.36 percent of issued shares after the IPO. As a result, the major shareholders can exercise their right to vote against important agenda in the shareholder's meeting, which, according to the law or the Company's articles of association, requires three-thirds of the total votes of attending shareholders voting rights. For instance, acquisition or disposal of assets, related transactions, increase or reduction of share capital and merging.

However, the Company has appointed the Audit Committee to review, consider and discreet to prevent any transactions which could cause a conflict of interest in the future and to ensure transparent operations. The Board of Directors comprises four independent directors (including the chairman of the board) out of seven directors. Such structure balances the voting of the meeting agenda and maintains appropriate and effective management.

3.10 Risk from competitive market

Currently, the businesses of telecommunication and information technology systems and power systems are more competitive since the market has been developed continuously. There are various service providers in the industry with different price ranges and services.

However, the Company is aware of the mentioned risk and set its achievement to maintain the customer base and customer satisfaction from the Company's service. At the same time, the Company also initiates the oil and gas business to enlarge the business performance.

4. Operating Assets

4.1 Details of the Operating Assets

As of 31 December 2020, JRW has operating assets as follows:

Type/character of the assets	Ownership	Obligation	Value as in net account (THB million)
Land	Company's ownership	Under loan guarantee with the commercial bank	5.92
Building	Company's ownership	-	0.44
	Company's ownership	Under loan guarantee with the commercial bank	8.33
Building improvement	Company's ownership	Under loan guarantee with the commercial bank	2.50
Vehicles	Hire-purchase	Financial lease	0.26
Office equipment	Company's ownership	-	5.46
	Hire-purchase	Financial lease	0.69
Office decorations	Company's ownership	-	0.76
Space utilization under a lease contract	Hire-purchase	Financial lease	2.34
Total			26.70

4.2 Important contracts related to business operation

4.2.1 Lease Agreement

Name of contract	:	Land lease contract (for storage)
Contractual party	:	Mr.Phantuch Anancharnchai ("Lessor") and the Company ("Lessee")
Contract term	:	Contract term is 1 year, from 1 July 2019 to 30 June 2020 (renewed for 1 year from 1 July 2020 to 30 June 2021)
Rent	:	8,000 baht monthly (96,000 baht per year)
Materiality of the contract	:	<ul style="list-style-type: none"> ● A Lessor agrees to lease the land under the title deeds no. 72724, Jorakhehua sub-district, Bang Kapi district, Bangkok in the land no. 3098. Total area is approximately 101 square wah. ● The Lessee cannot transfer or sub-let or change type of the lease unless receiving a written consent from the Lessor.
Name of contract	:	Land lease contract (for storage)
Contractual party	:	Mrs. Wilada Kanharattanachai ("Lessor") and the Company ("Lessee")
Contract term	:	1 year from 1 November 2019 to 31 October 2020
Rent	:	5,000 baht monthly (60,000 baht per year)
Materiality of the contract	:	<ul style="list-style-type: none"> ● A Lessor agrees to lease the land under the title deeds no. 72723, Jorakhehua sub-district, Bang Kapi district, Bangkok in the land no. 30978. Total area is approximately 101 square wah. ● The Lessee cannot transfer or sub-let or change type of the lease unless receiving a written consent from the Lessor.
Name of contract	:	Land lease contract (parking facilities)
Contractual party	:	Mrs. Weeraphon Suwannanan ("Lessor") and the Company ("Lessee")
Contract term	:	1 year from 1 November 2016 to 31 October 2021
Rent	:	8,000 baht monthly (96,000 baht per year)
Materiality of the contract	:	<ul style="list-style-type: none"> ● A Lessor agrees to lease the land under the title deeds no. 53102, land no. 1596 located at Ramindra road, Soi 65, Tha Rang sub-district, Bang Khen district, Bangkok. Total area is approximately 400 square meters. ● Lessee cannot sub-let the land to other person or proceed any legal transaction with any other person in which may cause encumbrance to the land whether directly or by default. Lessee cannot allow any other person to reside in the land unless receiving a written notice from Lessor.

Name of contract : Lease contract for temporary office space

Contractual party : Siam Proud Cooperation ("Lessor") and the Company ("Lessee")

Contract term : 20 years from 1 March 2020 to 31 October 2021

Rent : 80,000 baht monthly (960,000 baht per year)

Materiality of the contract : ● The Lessor agrees to let partial space of 120 square meters within the Office Building of the Underground Cable Project (pipe jacking method) along the Yellow Line. The building is located on the land title deed no. 258101 and no. 258102, Klongchan sub-district, Bang Kapi district, Bangkok.

Name of contract : Lease contract for temporary office space

Contractual party : Gen C Inspire Corporation Co., Ltd. ("Lessor") and the Company ("Lessee")

Contract term : 3 years from 1 July 2020 to 30 June 2023

Rent : 60,000 baht monthly (720,000 baht per year)

Materiality of the contract : ● The Lessor agrees to let venue for the Underground Cable Project along the Pink Line. The venue is located at no. 288/12-13, village no. 5, Taradee Biz Town Project, Tiwanont Road, Pakkret district, Nonthaburi province including decorations and furniture.

Name of contract : Warehouse Lease Contract

Contractual party : Damrongchai Bang Bo Palace Company Limited ("Lessor") and the Company ("Lessee")

Contract term : One year, from 1 March 2021 to 1 March 2022

Rent : 95,040 baht monthly (1,425,600 baht per year included the 3-month security money)

Materiality of the contract : - Lessor agrees to let the warehouse no. 22/21, village no. 5, Theparak road, Bangpli Yai sub-district, Bangpli district, Samut Prakan province.
- For storage of cables and equipment of Conversion Yellow

Name of contract	:	Warehouse Lease Contract
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Contractual party : Barakat Bedding Company Limited ("Lessor") and the Company
("Lessee")

Contract term : Six months from 1 February 2021 to 31 July 2021.

Rent : 60,000 baht monthly (2 installments)

Materiality of the contract :

- Lessor agrees to let the warehouse no. 155, Pattana Chonnabot road, Klong Song Ton Noon sub-district, Lat Krabang district, Bangkok
- For storage of communication equipment only.

4.3 Loan contract

As of 31 December 2020, JRW has loan balance from 3 commercial banks in Thailand as follows:

4.3.1 Commercial bank 1

Type/purpose	Sum	Interest rate/fee	Guarantee	Other conditions
<u>Sum 1</u> The loan for Underground Cable Project along the Yellow Line	Sum 1,316.91 million baht divided into 1. Advance payment bond 291.60 million baht (deposit the advance payment to account made with the same bank) 2. Performance bond 291.60 million baht 3. Retention bond 291.60 million baht 4. P/N sum 50.00 million baht 5. D L/C sum, T/R sum 392.10 million baht	● MLR- 2.00% per year / 1.00- 1.25% per year	● Pledge of right in regular saving - 10% ● Authorization for project payment ● Right in the saving account in the same bank ● Right of claim on the debtor of right/trade receivables as specified by the bank	-None-
<u>Sum 2</u> The loan for Underground Cable Project along the Pink Line	Sum 1,105.06 million baht divided into 1. Advance payment bond 387.53 million baht (deposit the advance	● MLR- 2.00% per year / 1.00- 1.25% per year	● Pledge of right in regular saving - 10% ● Authorization for project payment ● Right in the saving account in the same bank	-None-

	<p>payment to account made with the same bank)</p> <p>2. Performance bond 2387.53 million baht</p> <p>3. Merchandising Purchasing Bond 30.00 million baht</p> <p>4. P/N sum 50.00 million baht</p> <p>5. Work discounting P/N sum 250.00 million baht</p>		<ul style="list-style-type: none"> ● Right of claim on the debtor of right/trade receivables as specified by the bank 	
<p>Sum 3</p> <p>Combined credit line (Combined Credit Line)</p>	<p>Total loan sum 365.00 million baht</p>	<ul style="list-style-type: none"> ● Interest rate as specified by the bank under the loan type 	<ul style="list-style-type: none"> ● Register the pledge for title deed no. 96180, 96181, 96182, 54887 Khu Kot sub-district, Lam Luk Ka district, Pathum Thani province including other building on the land. ● 	-None-
<p>Sum 4</p> <p>Sum requested the bank for issuance of bank guarantee (advance payment)</p>	<p>Sum 44.41 million baht</p>	<ul style="list-style-type: none"> ● as specified by the bank 	<ul style="list-style-type: none"> ● Authorized the bank to receive the payment via the channel as specified by the bank ● Right of the regular deposit account made with the bank 	<ul style="list-style-type: none"> ● In case of project value reduction or the employer provides advance payment or

<p>Sum 5</p> <p>Sum requested the bank for issuance of bank guarantee (advance payment)</p>	<p>Sum 21.40 million baht</p>	<ul style="list-style-type: none"> ● as specified by the bank 	<ul style="list-style-type: none"> ● Right of claim on the debtor of right/trade receivables as specified by the bank 	<p>makes a payment prior authorization to receive the payment for the bank, loaner may reduce the value authorized to the bank pro rata.</p> <ul style="list-style-type: none"> ● The loaner agrees to allocate an advance payment from employer as a suretyship at 10% of the loan sum to the bank for issuance of the bank guarantee (advance payment).
<p>Sum 6</p> <p>Sum requested the bank for issuance of bank guarantee (performance bond)</p>	<p>Sum 22.21 million baht</p>	<ul style="list-style-type: none"> ● as specified by the bank 	<ul style="list-style-type: none"> ● Authorized the bank to receive the payment via the channel as specified by the bank ● Right of claim on the debtor of right/trade receivables as specified by the bank 	<ul style="list-style-type: none"> ● In case of project value reduction or the employer provides advance payment or makes a payment prior authorization to
<p>Sum 7</p> <p>Sum requested the bank for issuance of</p>	<p>Sum 10.70 million baht</p>	<ul style="list-style-type: none"> ● as specified by the bank 		

bank guarantee (performance bond)				receive the payment for the bank, loaner may reduce the value authorized to the bank pro rata.
Sum 8 Sum requested the bank for issuance of bank guarantee (retention bond)	Sum 22.21 million baht	● as specified by the bank		
Sum 9 Sum requested the bank for issuance of bank guarantee (retention bond)	Sum 10.70 million baht	● as specified by the bank		

4.3.2 Commercial bank 2

Type/purpose	Sum	Interest rate/fee	Guarantee	Other conditions
Sum 1 Operating loan sum	Total loan sum 423.00 million baht	● as specified by the bank	<ul style="list-style-type: none"> ● Total guarantee sum 378 million baht ● Guarantee / pledge in total 30 million baht by J.R.W. Utility PCL. 	-None-
Sum 2 Loan sum assigned as a working capital in procurement, construction, testing commissioning of 115KV Transmission	Total loan sum 80.00 million baht	● as specified by the bank	<ul style="list-style-type: none"> ● Guarantee, pledge the land with office building 32/288-290 	

Line to IUs for the Wang Tha Phin Power Plant project (GVTP), Tha Sit Power Plant 1 Project (GTS1) and Tha Sit Power Plant 2 Project (GTS2).				
<p>Sum 3</p> <p>Loan sum assigned as a working capital in Engineering, Procurement,</p> <p>Construction, Testing & Commissioning of 22KV & 115KV Transmission Line to Industrial Users.</p>	Total loan sum 72.00 million baht	●as specified by the bank		

4.3.1 Commercial bank 3

Type/purpose	Sum	Interest rate/fee	Guarantee	Other conditions
Sum 1 Loan sum for the financial support contract	Sum 305.00 million baht, divided into 1. O/D 5.00 million baht 2. P/N 50.00 million baht 3. LG 250.00 million baht	● as specified by the bank / 0.75-1.125% per year	● Right to receive the payment as hiring note issued by the Company's customers ● Right in the deposit including interest and benefits under the capital sum 20 million baht.	-None-
Sum 2 Loan sum for financial support contract to assign as a working capital in performing the subcontract agreement made with Sino-Thai Engineering and Construction Public Company Limited.	Sum 53.79 million baht divided into 1. P/N 33.00 million baht 2. LG 6.93 million baht 3. LG 6.93 million baht 4. LG 6.93 million baht	● MLR – 2.90% per year / 1.25-1.50% per year	● Right to receive the payment as hiring note issued by the Company's customers	-None-

5. Legal dispute

-None-

6. General Information and Other Important Information

6.1 General Information

6.1.1 The Company

Company Name:	: J.R.W. Utility Public Company Limited
Name in English	: J.R.W. Utility Public Company Limited
Type of business	: The Company provides services on turnkey design, procurement, construction, and installation of the electrical power system and telecommunication and information technology system. The Company also supplies and provides maintenance services on equipment relating to power systems and telecommunication and information technology systems.
Head Office	: 32/288-290, village no. 8, Ramindra Road, Tha Rang sub-district, Bang Khen district, Bangkok
Registration no.	: 0107552000154
Telephone	: 0-2509-7000-2
Fax	: 0-2945-7381
Website	: www.jrw.co.th
Registered capital	: 380,000,000 baht (as of 31 December 2020)
Paid-up capital	: 380,000,000 baht (as of 31 December 2020)

6.1.2 Securities registrar

Company Name:	: Thailand Securities Depository Co., Ltd.
Head Office	: 93 Ratchadapisek Road, Din Daeng sub-district, Din Daeng district, Bangkok 10400
Telephone	: 0-2900-9000
Fax	: 0-2900-9991
Website	: www.set.or.th/tsd

6.1.3 Auditor

Company Name:	: EY Office Company Limited
Head Office	: Lake Ratchada No. 193/136-137, 33 Floor, Ratchadapisek Road, Klongtoey district, Bangkok 10110
Telephone	: 0-2264-0777
Fax	: 0-2264-0789-90
Website	: www.ey.com/th/en/home/ey-thailand

6.1.4 Internal Auditor

Company Name: : P&L Corporation Company Limited
Head Office : 281/157 The Fifth Avenue, Building B, 2nd Floor, Krungthep-
Nonthaburi Road, Bang Khen sub-district, Mueang district,
Nonthaburi province 11000
Telephone : 0-2526-6100
Website : www.plcorporation.com

6.1.5 Financial Advisor

Company Name: : Finansia Syrus Securities Public Company Limited
Head Office : 18th, 25th Floor, The Office Case at Central World
No. 999/9, Rama 1 Road, Pathumwan sub-district, Pathumwan
district, Bangkok 10330
Telephone : 0-2646-9999
Fax : 0-2646-9993
Website : <http://www.fnsyrus.com/th/home/>

6.2 Other important information

-None-