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## **Part 1 Business Operations**

### **1. Business Policy and Overview**

Bangkok Expressway and Metro Public Company Limited (the “Company”) was incorporated from the amalgamation, pursuant to the Public Limited Company Act, between Bangkok Expressway Public Company Limited (“BECL”) and Bangkok Metro Public Company Limited (“BMCL”) on December 30, 2015, and the Company has assumed all assets, rights, duties and responsibilities of both companies by operation of law. As at December 31, 2017, the Company’s registered and paid-up capital amounted to Baht 15,285,000,000, divided into a total of 15,285,000,000 ordinary shares, at the par value of Baht 1 per share.

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

#### **1.1 Vision, Mission, Goals, Business Strategies and Overview of Business Operations**

##### **Vision**

The Company’s vision is:

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

##### **Mission**

The Company is committed to:

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

##### **Goals and Business Strategies**

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

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

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## **Business Overview of the Company**

The Company is committed to being a leading, fully-integrated transportation service provider, which builds up good journey for a better living. The Company's businesses comprise the provision of the expressway and metro services, including commercial development directly related to the main businesses. The Company's business overview is divided into 4 main businesses, as follows:

### **1.1.1 Expressway Business**

The Company and one of its subsidiaries, namely, Northern Bangkok Expressway Company Limited ("NECL"), have been granted concessions for construction and operation of a total of four expressways, comprising:

#### **1) The Si Rat Expressway**

The Si Rat Expressway (Second Stage Expressway) under the Second Stage Expressway Agreement with the Expressway Authority of Thailand ("EXAT") for a concession period of 30 years from March 1, 1990; and the Si Rat Expressway, Sector D, under the Agreement for the Extension of the Second Stage Expressway System, Sector D, with EXAT for a period of 30 years from April 22, 1997.

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

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

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

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

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

The project is an elevated expressway with six traffic lanes, for a distance of 16.7 kilometers, with 10 toll plazas. The route starts from the Outer Ring Road (Kanjapisek Road around Mahasawat Water Treatment Plant) heading eastbound along the right of way of the existing Southern railway, crossing the Chao Phraya River around the Rama VII Bridge, ending around Bang Sue Grand Station (Chatuchak), connecting with the Si Rat Expressway around the Bus Terminal (Mo Chit 2), and running down to at-grade level around Kamphaeng Phet 2 Road.

In management of this project, the Company is responsible to collect tolls and shall have the right to receive all toll revenue and other revenues (if any) throughout the concession period, whereby the toll rates and revisions shall be agreed upon in the Agreement. This expressway was opened for service on August 22, 2016.

### 3) The Udon Rattaya Expressway

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

NECL constructs and operates the Udon Rattaya Expressway, comprising 2 Stages, namely, Stage 1, Chaeng Watthana - Chiang Rak, and Stage 2, Chiang Rak - Bang Sai, connecting to the Si Rat Expressway around Chaeng Watthana Road, covering a total distance of 32 kilometers. As for the inbound route, expressway users shall pay tolls at the booths around the on-ramps of the expressway while in respect of the outbound route, expressway users shall pay tolls at the off-ramps. EXAT is responsible to collect and deliver all tolls to NECL. All toll revenue in respect of the Udon Rattaya Expressway shall belong to NECL.

## 1.1.2 Rail Business

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

- 1) The MRT Blue Line Project, comprising the M.R.T. Chaloem Ratchamongkhon Line Project (Hua Lamphong Station - Bang Sue Station), which is the first underground metro project of Thailand, covering a total distance of 20 kilometers, with 18 underground stations, opened for train operation service on July 3, 2004; and the MRT Blue Line Extension Project (Hua Lamphong - Lak Song and Bang Sue - Tha Phra Sections), covering a total distance of 27 kilometers, comprising 5-kilometer underground track and approximately 22-kilometer elevated track, with 20 stations, 4 of which are underground stations and 16 of which are elevated stations, with a connection to the M.R.T. Chaloem Ratchamongkhon Line Project at Bang Sue Station and Hua Lamphong Station, and a connection to the MRT Purple Line Project at Tao Poon Station.

As for the MRT Blue Line Extension Project, the operations during supply and installation of the M&E Equipment for opening for service are divided into 3 phases, namely, Phase 1: Bang Sue Station - Tao Poon Station, was opened for service on August 11, 2017; Phase 2: Hua Lamphong Station - Lak Song Station, by September 2019; and Phase 3: Tao Poon Station - Tha Phra Station, by March 2020.

The Company is entitled to fare box revenue and undertake activities and commercial development, including advertising, leasing space and telecommunications services in the metro stations and in the trains of the MRT Blue Line Project, for a period of 30 years from the date of opening for service of the whole route; and

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

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

### 1.1.3 Commercial Development Business

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

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

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

### 1.1.4 Investment in Other Companies

The Company invests in the companies operating the public utility businesses, as follows:

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

## 1.2 Significant Changes and Developments

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

### Significant Changes and Developments prior to the Amalgamation

- BECL registered its incorporation on December 23, 1987 and was listed on the Stock Exchange of Thailand (“Stock Exchange”) since August 31, 1995. Prior to the amalgamation, BECL’s registered and paid-up capital amounted to Baht 7,700,000,000, divided into 770,000,000 ordinary shares, at the par value of Baht 10 per share.
- On December 22, 1988, BECL entered into the Second Stage Expressway Agreement with the Expressway Authority of Thailand (EXAT) for construction and operation of the Si Rat Expressway for a concession period of 30 years from the construction commencement date, namely, March 1, 1990.
- On September 25, 1996, BECL established Northern Bangkok Expressway Company Limited (NECL), whereby NECL entered into the agreement with EXAT for construction and operation of the Udon Rattaya Expressway (Bang Pa-in - Pak Kret Expressway) for a period of 30 years from the execution date of the agreement, namely, September 27, 1996.
- On April 17, 1997, BECL entered into the Agreement for the Extension of the Second Stage Expressway System, Sector D, for construction and operation of the Si Rat Expressway, Sector D, with EXAT for a period of 30 years from the construction commencement date, namely, April 22, 1997.
- On September 14, 2012, BECL entered into the Concession Agreement for Investment, Design, Construction, Operation, Service and Maintenance of the Si Rat - Outer Ring Road Expressway Project with EXAT for a concession period of 30 years from the date of EXAT’s Notice to Proceed, namely, December 15, 2012.

- BMCL registered its incorporation on February 18, 1998, and was listed on the Stock Exchange since September 21, 2006. Prior to the amalgamation, BMCL's registered and paid-up capital amounted to Baht 7,585,000,000, divided into 20,500,000,000 ordinary shares, at the par value of Baht 0.37 per share.
- BMCL entered into the Agreement for the M.R.T. Chaloem Ratchamongkhon Line Project with MRTA on an AOT (Acquire, Operate and Transfer), PPP Net Cost basis, whereby BMCL was entitled to fare box revenue and undertaking activities and commercial development, including advertising, leasing space and telecommunications services in the metro stations and in the trains for a period of 25 years, from July 2, 2004 to July 1, 2029. Under such Agreement, BMCL was obliged to make payment of remuneration from fares and commercial development to MRTA at the rates as mentioned in the Agreement.
- On February 25, 2009, BMCL established Bangkok Metro Networks Limited (BMN) for operating the commercial development business, by the amalgamation of three companies, namely, BMCL Network Limited, Metro Mall Development Limited, and Triads Networks Co., Ltd. BMN accepted the transfer of all three companies' businesses, as well as all rights, duties, assets, liabilities and staff.
- On September 4, 2013, BMCL entered into the Agreement for the MRT Purple Line Project with MRTA for a period of 30 years on an ATO (Acquire, Transfer and Operate), PPP Gross Cost basis, namely, MRTA invested in all civil works and BMCL invested in the M&E Systems and the rolling stocks, provided that MRTA shall make a gradual repayment of the M&E Equipment to BMCL, and BMCL shall provide the O&M services in accordance with the service provision standards as specified in the Agreement. In this regard, MRTA is entitled to all fare box revenue and commercial development revenue from the utilization of the civil infrastructure and the railway systems and MRTA shall make payment to BMCL in the form of service fee for the O&M Services from the date of BMCL's operation service until the end of the Concession Agreement.

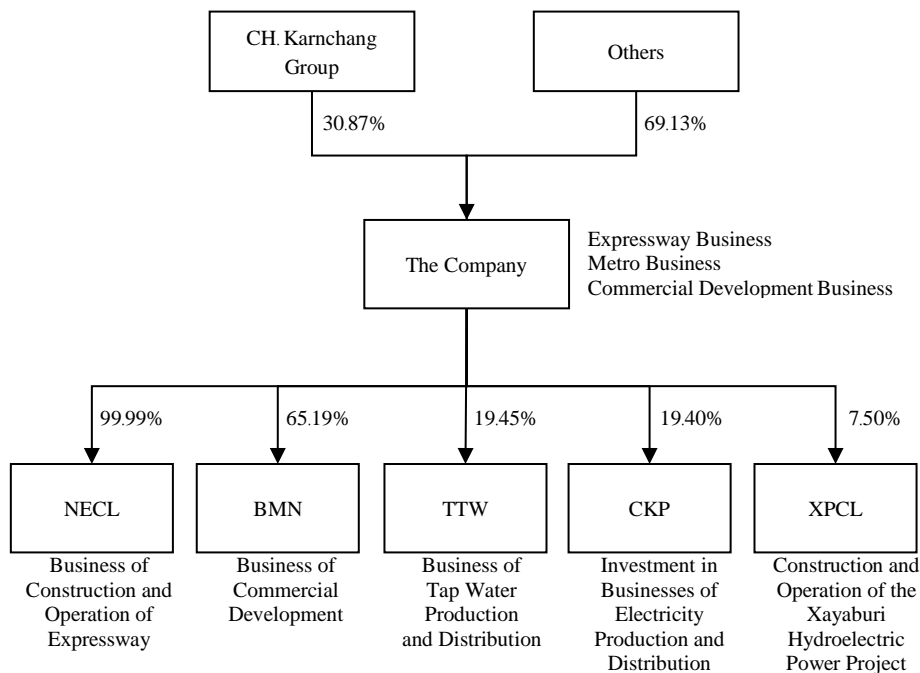
**Significant Changes and Developments of the Company in 2017**

February 27, 2017	The Company was granted the Issuer of the Year 2016 Award by the Thai Bond Market Association as the outstanding private-sector debenture issuer in the bond market fund raising in 2016, which met the demands of the Company and investors in an appropriate time, with operations pursuant to the good corporate governance principles, ensuring confidence of both debenture holders and shareholders.
March 31, 2017	<p>The Company entered into the Concession Agreement for the MRT Blue Line Project with MRTA, for a period of 33 years, on a PPP Net Cost basis, divided into 2 phases, as follows:</p> <p>Phase 1: Supply, installation, and testing of the M&amp;E Equipment for the MRT Blue Line Extension Project, for a period of 3 years;</p> <p>Phase 2: Provision of train operation service for the M.R.T. Chaloem Ratchamongkhon Line Project and the MRT Blue Line Extension Project as Through Operation, for a period of 30 years.</p> <p>The MRT Blue Line Project comprises the M.R.T. Chaloem Ratchamongkhon Line Project (Hua Lamphong Station - Bang Sue Station), currently in service; and the MRT Blue Line Extension Project (Hua Lamphong Station - Lak Song Station and Bang Sue Station - Tha Phra Station), for a total distance of 47 kilometers, with 38 stations, whereby the Company is entitled to fare box revenue and to commercial development throughout the concession period.</p>
June 21, 2017	The Company received a credit rating at "A", with "Stable" outlook from TRIS Rating Co., Ltd.

July 19, 2017	The Company executed the Amendment (No. 2) to the Concession Agreement for the Si Rat - Outer Ring Road Expressway Project with EXAT for construction of a connection between the Si Rat - Outer Ring Road Expressway and the northern part of the Si Rat Expressway (heading to Chaeng Watthana), with the value of Baht 275,000,000, for a construction period of 18 months, commencing in August 2017.
August 11, 2017	The Company opened the MRT Blue Line Extension Project for service, Tao Poon Station - Bang Sue Station, under the concept of “Come Together to Integrate Happiness for People”, linking the train operation among the M.R.T. Chaloem Ratchamongkhon Line (the existing MRT Blue Line), the MRT Blue Line Extension, and the M.R.T. Chalong Ratchadham Line (the MRT Purple Line) as a through operation, in order to ensure more rapid, convenient and safe commute between Bangkok and its surrounding provinces, whereby this linked route covers a distance of 1.2 kilometers.
September 7, 2017	The Company issued and offered the debentures No. 1/2017, with a maturity of 5-7 years, in the amount of Baht 5,000 Million, at the fixed interest rates of 2.65 percent to 3.10 percent per annum, for use in project investment and for use as working capital.
October 11, 2017	The Company was announced by the Stock Exchange to be in a group of the listed companies that sustainability operate their businesses by taking into account with Environmental, Social and Governance (ESG) or Thailand Sustainability Investment of the group of listed companies on the Stock Exchange with market capitalization of more than Baht 100,000 Million.
November 28, 2017	The Company was granted the Best Deal of the Year Award for 2017 by the Stock Exchange and Money & Banking Magazine in the “SET Award 2017” event, as a result of the amalgamation between BECL and BMCL.

**1.3 Shareholding Structure of Company Group**

**Chart of Shareholding Structure and the Company’s Shareholding Percentage as at December 31, 2017**



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



### 1.3.1 Investment in Subsidiaries and Other Companies

The Company has a policy on investment in businesses of infrastructure or businesses supporting the Company's operations and creating opportunity and long-term yields to the Company. The Company's investment as at December 31, 2017 was as follows:

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

Unit: Million Baht

Names of Companies	Nature of Business	Registered Capital	Paid-up Capital	Shareholding Percentage	Investment Value at Cost
<b>Subsidiaries</b>					
Northern Bangkok Expressway Company Limited	Construction and operation of the Udon Rattaya Expressway	6,000	5,250	99.99%	2,604
Bangkok Metro Networks Limited	Operation of the commercial development business	254	254	65.19%	166
<b>Other Companies</b>					
CK Power Public Company Limited	Investment by holding shares in other companies (Holding Company) operating a business of electricity production and distribution	9,240	7,370	19.40%	3,223
TTW Public Company Limited	Tap water production and distribution	3,990	3,990	19.45%	4,277
Xayaburi Power Company Limited	Construction and operation of the Xayaburi Hydroelectric Power Project	26,861	22,065	7.50%	1,238

#### (2) Details of Companies Invested by the Company

##### Expressway Business

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

NECL's registered capital amounts to Baht 6,000 Million, divided into 294 million ordinary shares and 306 million preferred shares, at the par value of Baht 10 per share, with the paid-up capital of Baht 5,250 Million. As at December 31, 2017, the Company's shareholding was 99.99 percent of its registered capital. NECL entered into the Agreement with EXAT for construction and operation of the Udon Rattaya Expressway for a period of 30 years from September 27, 1996. The Udon Rattaya Expressway is northbound and continues from the Si Rat Expressway around Chaeng Watthana Road and passes Bang Phun, Chiang Rak and ends at Bang Sai.

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## Commercial Development Business

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

BMN has a total registered capital of Baht 254 Million, divided into 25.4 million ordinary shares, at the par value of Baht 10 per share, with the paid-up capital of Baht 254 Million. As at December 31, 2017, the Company’s shareholding in BMN was 65.19 percent of its registered capital.

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

BMN currently operates the business of procurement and production of advertising media of various forms in the metro stations and trains, lease of retail spaces in stations of the M.R.T. Chaloem Ratchamongkhon Line Project and at the basement level of the park and ride facility at the Lat Phrao Station, as well as providing service and maintenance of telecommunications system equipment in the stations and tunnels.

## Other Infrastructure Businesses

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

CKP is a listed company on the Stock Exchange, operating its main business by investing in other companies (Holding Company) which operate the business of electricity production and distribution. CKP has a total registered capital of Baht 9,240 Million, divided into 9,240 million ordinary shares, at the par value of Baht 1 per share, with the paid-up capital of Baht 7,370 Million. As at December 31, 2017, the Company’s shareholding was 19.40 percent of its registered capital. CKP invests in companies operating the business of electricity production and distribution from three types of energy, namely, hydropower business, by investing in SouthEast Asia Energy Limited and Xayaburi Power Company Limited; thermal power business (cogeneration system), by investing in Bangpa-in Cogeneration Limited; and solar power business, by investing in Bangkhenchai Company Limited, Nakhon Ratchasima Solar Limited, and Chiangrai Solar Limited.

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

TTW is a listed company on the Stock Exchange, having a total registered capital of Baht 3,990 Million, divided into 3,990 million ordinary shares, at the par value of Baht 1 per share, with the paid-up capital of Baht 3,990 Million. As at December 31, 2017, the Company’s shareholding was 19.45 percent of its registered capital. TTW operates the business of production and distribution of tap water to the Provincial Waterworks Authority in the areas of Nakhon Pathom Province and Samut Sakhon Province, under the Water Purchase and Sale Agreement with the Provincial Waterworks Authority for a period of 30 years from July 21, 2004. In addition, TTW invests in Pathum Thani Water Co., Ltd., representing 98 percent of its registered capital, which operates the business of tap water production and distribution in the areas of Pathum Thani and Rangsit, under the Water Purchase and Sale Agreement with the Provincial Waterworks Authority for a period of 25 years from October 15, 1998, and also invests in Thai Water Operations Company Limited, which operates the business of management and operation of tap water production and distribution systems and water treatment system, as well as invests in the energy business by holding shares in CKP representing 25 percent of its registered capital.

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

XPCL’s total registered capital is Baht 26,861 Million (at the exchange rate of USD 1 to Baht 34), with the paid-up capital of Baht 22,065 Million. As at December 31, 2017, the Company’s shareholding was 7.50 percent of its registered capital. XPCL’s main business is to operate the Xayaburi Hydroelectric Power Project, located on the Mekong River. The Xayaburi Hydroelectric Power Project is a run-of-river hydroelectric project, without water diversion from the Mekong River and without water impounding like other reservoir dams.



**1.3.2 Relationship with Business Alliance of Major Shareholder**

CH. Karnchang Plc. is the Company’s major shareholder. As at December 31, 2017, CH. Karnchang Plc. was holding 4,582,121,829 shares in the Company, representing 29.98 percent of the Company’s paid-up capital. From the past until the present, the Company engaged CH. Karnchang Plc. for construction and operation of various projects, as CH. Karnchang Plc. is a large construction company in Thailand, with potential, knowledge and expertise, and is familiar with the civil infrastructure of the expressway and metro projects, as well as M&E Equipment. In addition, CH. Karnchang Plc. has experience in the operation on a Lump Sum Turnkey basis, which enables it to deliver quality works timely, and is also the Company’s strategic investment partner, and as a result, CH. Karnchang Plc. has responsibility and commitment to operating the projects with success. Therefore, in the future, it is possible that the Company will engage CH. Karnchang Plc. for project construction or management. However, in the execution of transactions with CH. Karnchang Plc., which may have a conflict of interests, the Company will comply with its policy on execution of connected transactions per details as disclosed in Item 12. Connected Transactions.

**Chart of Relationship with Business Alliance of Major Shareholder**

