

wastewater to meet the standards as required by law, as well as minimizing the contamination of chemicals prior to emission to the public drain.

For the purpose of safety, the Company has introduced the remote lighting control system for installation on the Expressways to ensure more safety for motorists in case of bad weather, such as, heavy fog and while the automatic lighting system has not yet activated, the lighting system can be controlled remotely from the Second Stage Expressway Control Center as necessary.

In 2009, the Company has continued to provide training for staff, as well as executives, on knowledge and techniques for environmental management in accordance with the ISO 14001:2004 Environmental Management System, as well as arranging for various activities to raise an awareness of environmental protection in our organization and participating in social contributions with the communities nearby.

## 4 Research and Development

Bangkok Expressway Public Company Limited, as a private company providing the Expressway services, has given priority to the continued study, survey and improvement of expressway routes, under the concept that traveling by the Expressways is part of motorists' daily life. It is thus necessary to improve and develop its services and study the project developments, in support of the Company's investment decision to satisfy the needs of all customer groups, in order to facilitate and accommodate motorists' traveling needs to the utmost satisfaction and benefits.

With such intention in mind, the Company has allocated resources and budget for our research and development team, comprising specialists in the fields of traffic engineering, marketing and finance, to conduct study on new projects, both in respect of return on investment and potential impact, by having a special unit responsible to conduct project feasibility study, follow up on movement of traffic volume, as well as conducting assessment of its investment status in various projects, so as to increase the efficiency of its services and generate more revenue to the Company, such as, construction of new expressway, construction of additional on- and off-ramps, and improvement of on- and off-ramps, etc. Moreover, the Company also engaged external specialists to conduct various studies, such as, traffic and construction for each respective project, in order to ensure that the study would be more appropriate and correct and minimize investment risk.

At present, projects which the Company is conducting the feasibility study are:

1. Si Rat - Outer Bangkok Ring Road Expressway Project; and
2. Srinagarindra - Bang Na - Samut Prakan Expressway Project.

## 5 Property Used in Business Operations

### 5.1 Right to Operate Completed Expressway Sectors as at 31 December 2009

Class of Assets	Net Book Value (Million Baht)
Si Rat Expressway, Sectors A, B and C	19,063.99
Si Rat Expressway, Sector D	6,251.99
Udon Rattaya Expressway	10,027.06
<b>Total</b>	<b>35,343.04</b>

Given that the Expressway Agreements of the two Projects are on a BTO (Build, Transfer and Operate) basis, the title to all Expressways, including various permanent constructions in relation to or used in connection with the Expressway Systems, shall be vested in the Expressway Authority of Thailand immediately upon completion of construction and opening for service. The Company is entitled to utilize such property with the duty to keep such property maintained throughout the term of the Agreements. The Second Stage Expressway Agreement (Si Rat Expressway) has a term of 30 years from 1 March 1990 and may be renewed for two times of 10 years each, subject to the conditions to be agreed upon between the Company and the

Expressway Authority of Thailand. The Agreement for the Extension of Second Stage Expressway System, Sector D, has a term of 30 years from 17 April 1997. The Bang Pa-in - Pak Kret Expressway Project Agreement (Udon Rattaya Expressway) has a term of 30 years from 27 September 1996 and may be renewed for two times of 10 years each. These Agreements require the Company and the Subsidiary to be responsible for costs of traffic management and rescue operation on the Expressways, including expenses of toll collection, on the Si Rat Expressway and the Udon Rattaya Expressway which shall be paid to EXAT, including the costs of maintenance of the Expressways throughout the term of the respective Agreements.

## 5.2 Policies on Investment

The Company has policies to invest in the public utilities or related business in support of the Company's operations and providing opportunities and long-term yields to the Company. As at 31 December 2009, the Company has invested in the following companies:

Company	Type of business	Registered capital	Paid-up capital	Shareholding percentage	Cost of investment
Northern Bangkok Expressway Company Limited	Construction and management of the Udon Rattaya Expressway	6,000	5,160	53.33%	2,360
Bangkok Metro Public Company Limited	Concession from the Mass Rapid Transit Authority of Thailand	11,950	11,950	11.88%	1,764
SouthEast Asia Energy Limited	Construction and operation of a hydroelectric power plant	6,607	5,709	16.67%	951
Thai Tap Water Supply Public Company Limited	Production and distribution of tap water	3,990	3,990	9.24%	1,137

1. The Company invested in the establishment of Northern Bangkok Expressway Company Limited (Subsidiary) in the year 1996, by holding 99.99 percent of shares in the Subsidiary. The benefits to be derived by the Company shall be in the form of dividend from investment in shares of the Subsidiary and the Udon Rattaya Expressway would help increase the traffic volume on the Chalerm Mahanakorn and the Si Rat Expressway Projects, resulting in revenue and profits to both companies in the long run.

Due to the impact on the Subsidiary from the government policy for construction of the competing road, the Subsidiary's revenue did not meet its projection. In this regard, the Subsidiary's operational results continued to sustain loss to the extent that the accumulated loss exceeded its capital, resulting in shareholders' deficit. In 2003, the Subsidiary therefore increased its registered capital by Baht 3,000 Million to become the registered capital of Baht 6,000 Million, of which 25 percent was paid up by the existing shareholders. Until 2009, the Subsidiary called for share payment of 72 percent of the increased registered capital of Baht 3,000 Million. As at 31 December 2009, the Subsidiary has the paid-up registered capital in the amount of Baht 5,160 Million. At present, the Company holds shares in the Subsidiary, representing 53.33 percent of its registered capital.

Since the Company provided the large amount of loans to the Subsidiary and also is the only creditor of the Subsidiary, the Company has therefore assigned its seven executives to be members of the Subsidiary's board of directors, from a total of eight directors of the Subsidiary. In case the Subsidiary would take any actions which may significantly affect the Company, the Subsidiary would be required to seek prior approval from the Company's Board of Directors. Furthermore, the Company is also the contractor for all works of the Subsidiary.

2. The Company invested in Bangkok Metro Public Company Limited (BMCL), a company awarded concession from the Mass Rapid Transit Authority of Thailand (MRTA), to invest in the M&E Equipment, together with providing a train operation service, repair and maintenance of the MRTA Initial System, throughout the 25-year concession period, with the right to receive fare revenue and take various activities to derive revenue from the commercial development at the stations. The benefits to be derived by the Company shall be in the form of dividend from such investment.

BMCL's securities were listed on the Stock Exchange of Thailand on 21 September 2006. As at the end of 2009, the Company holds shares in BMCL, representing 11.88 percent of its registered capital.

The Company, in the capacity as a shareholder, sent one representative to be a member of the board of directors of BMCL.

The 220 million ordinary shares of Bangkok Metro Public Company Limited which the Company purchased from a shareholder have been pledged as security of long-term loan of Bangkok Metro Public Company Limited.

The 238 million ordinary shares of Bangkok Metro Public Company Limited were under the silent period, which were released in September 2009.

BMCL has a plan to expand its services from an extension in the purple line project which connected with the blue line at Bang Sue station, currently operated by BMCL, including other extension lines in the future.

3. The Company invested in SouthEast Asia Energy Limited (SEAN), a company which invested in Nam Ngum 2 Power Company Limited and was awarded concession from the government of the Lao People's Democratic Republic to carry out design, development, construction and operation of the Nam Ngum 2 Hydroelectric Power Project, with a 25-year concession period from the date of commencement of the operation. The benefits to be derived by the Company shall be in the form of dividend from such investment. With respect to the shareholding percentage in Nam Ngum 2 Power Company Limited, 75 percent of shares are held by SEAN, and the remaining 25 percent are held by Electricité du Laos.

During 2009, SEAN called for additional share payment of 43.70 percent of shares held by the Company which have not been fully paid-up, whereby the Company made such share payment in the amount of Baht 262.69 Million. As at the end of 2009, the Company holds shares in SEAN, representing 16.67 percent of its registered capital.

The Company, in the capacity as a shareholder, sent one representative to be a member of the board of directors of SEAN.

Currently, SEAN is conducting a feasibility study to develop Hydroelectric Power Project in Nam Bak 1 and Nam Bak 2 projects.

4. The Company invested in Thai Tap Water Supply Public Company Limited (TTW), which operates the business of production and distribution of tap water to the Provincial Waterworks Authority in the vicinity of Nakhon Pathom Province and Samut Sakhon Province, under the Water Purchase and Sale Agreement with the Provincial Waterworks Authority with a 30-year contract term from 21 July 2004. The benefits to be derived by the Company shall be in the form of dividend from such investment.

TTW's securities were listed as listed securities on the Stock Exchange of Thailand on 22 May 2008. As at the end of 2009, the Company holds shares in TTW, representing 9.24 percent of its registered capital. In 2009, the Company received dividend from TTW at the rate of Baht 0.20 per share for the operational results for 2008; and at the rate of Baht 0.11 per share for the operational results for the first half of 2009, totaling Baht 114.31 Million.

The Company, in the capacity as a shareholder, sent one representative to be a member of the board of directors of TTW.

The Company has pledged 325 million ordinary shares of Thai Tap Water Supply Public Company Limited with the group of lenders to secure the Company's long-term loan.

The 288.18 million ordinary shares of Thai Tap Water Supply Public Company Limited were under the silent period, which were released in May 2009.

TTW expanded its business by producing and selling tap water and providing water treatment service for industrial areas. In 2009, TTW started its operation to produce and sell tap water and provide water treatment service to customers in Bang Pa-in industrial area. Furthermore, TTW is conducting feasibility studies for operating in other industrial areas.

### 5.3 Book Value of Property, Plant and Equipment as at 31 December 2009

#### 5.3.1 Bangkok Expressway Public Company Limited

Class of Assets	Net Book Value (Million Baht)
Land (126 rai 2 ngarn 84 square wah)	169.29
Building and construction improvement	2.51
Furniture and fixture	0.83
Tools, instrument and equipment	11.90
Motor vehicles	61.27
<b>Total</b>	<b>245.80</b>

The foregoing land is located at Bang Pa-in Industrial Estate, Amphoe Bang Pa-in, Phra Nakhon Si Ayutthaya Province, which is used as the site of the precasting yard for finished concrete segments during the construction of the Expressways. The Company's head office is located at the Second Stage Expressway Control Center Building, which is part of the Second Stage Expressway Project. Despite the fact that the title to such Building is owned by the Expressway Authority of Thailand, the Company is granted the right to use such Building to operate the Second Stage Expressway Project under the conditions as specified in the Agreement.

The Company used the land and building at a net book value as at 31 December 2009 in the amount of Baht 169.29 Million to secure credit facilities extended by the group of lenders.

#### 5.3.2 Northern Bangkok Expressway Company Limited

Class of Assets	Net Book Value (Million Baht)
Motor vehicles	155.28
<b>Total</b>	<b>155.28</b>

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

## 6 Future Projects

In respect of projects for construction of the extension of the Second Stage Expressway Agreement, the Company is entitled to first be considered if there will be any construction or arrangements in respect of any extension of the Second Stage Expressway System, provided that such arrangements shall provide no less favorable benefits to the Expressway Authority of Thailand than others.

Extension projects comprise:

1. Extension of Sector B+ as a route connecting Sector B1 at Urupong Intersection heading the West to Buddha Monthon and Nakhon Chaisi. However, the said project had affected several communities, and would pass through such areas adjacent to the Rattanakosin Island. The Office of Transport and Traffic Policy and Planning (OTP) therefore conducted study and designed the Phayathai - Buddha Monthon Expressway instead in the State Railway of Thailand area, at Bang Sue - Rama VI route with 6 traffic lanes for a total distance of approximately 17 kilometers.
2. Extension of Sector D+ (Srinagarindra - Bang Na - Samut Prakan Expressway) as a route connecting Sector D at Srinagarindra Road towards the South, passing Bang Na - Trad Road, and ending at Samut Prakan by connecting the Bang Pli - Suksawad Expressway Project for a total distance of approximately 13.8 kilometers.

At present, the Expressway Authority of Thailand has not yet opened any bidding for the aforesaid projects.