

(Translation)

Independent Financial Advisor's Opinion Report on the Disposition of Assets, Acquisition of
Assets and Related Transaction on Execution of Entire
Business Transfer Transaction of Thai Oil Public Company Limited

Reporting to

The Shareholders of Thai Oil Public Company Limited



Prepared by

Avantgarde Capital Company Limited



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Subject Notification of Resolutions of the Board of Directors' Meeting regarding Restructure of Shareholding in the Company's Power Business by way of Disposal of Shares Directly Held by the Company in Global Power Synergy Public Company Limited to PTT Public Company Limited and Acceptance of the Entire Business Transfer of Thai Oil Power Company Limited, which are Acquisition and Disposition of Assets Transactions and Connected Transaction, Appointment of Independent Financial Advisor, and Call for the Extraordinary General Meeting of Shareholders No. 1/2020

To President of The Stock Exchange of Thailand

Thai Oil Public Company Limited (the "**Company**") hereby informs that the Board of Directors' Meeting No. 8/2020, which was held on August 20, 2020, has passed material resolutions as follows

1. Approve to restructure the Company's shareholding in power business (the "**Restructuring Plan**"), and to enter into relevant contracts and agreements. The purpose of the Restructuring Plan is to reduce the complexity of the shareholding structure in the power business of the Company in order to increase transparency, flexibility and efficiency in managing and driving the business forward. In addition, the completion of the Restructuring Plan will increase net cash flow, working capital and liquidity of the Company, and will strengthen the Company's financial position and serve as funds for the Company's future investment projects. The Company expects that it will be able to meet its former target of profits from the power business.

Prior to the Restructuring Plan, the Company holds the effective shareholding in GPSC through its direct shareholding and its shareholding in Thai Oil Power Company Limited ("**TP**") totaling approximately 24.3 percent of all issued shares of Global Power Synergy Public Company Limited ("**GPSC**"). After the Restructuring Plan, the Company's effective shareholding in GPSC through its direct shareholding will reduce to approximately 20.8 percent of all issued shares of GPSC. In this regard, the Restructuring Plan consists of

- Step 1 Approve the disposal of all ordinary shares directly held by the Company in GPSC to PTT Public Company Limited ("**PTT**") in the amount of 251,173,540 shares with a par value of Baht 10 each, representing approximately 8.9 percent of all issued shares of GPSC at the total price of approximately Baht 16,882 million, before deduction of dividend paid after June 30, 2020 and before completion of the acquisition of shares in GPSC (the "**Share Disposal Transaction**")

The Share Disposal Transaction is a connected transaction under the Notification of the Capital Market Supervisory Board No. TorChor. 21/2551 Re: Rules on Connected Transactions, and the Notification of the Board of Governors of the Stock Exchange of Thailand Re: Disclosure of Information and Other Acts of Listed Companies Concerning the Connected Transactions B.E. 2546 (A.D. 2003) (as amended) (collectively, the "**Notifications on Connected Transactions**") since PTT, as the buyer, is the Company's major shareholder. The size of the transaction is equal to 17.0 percent of the net tangible assets (NTA) of the Company and its subsidiaries (based on the Company's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020), which is regarded as

a connected transaction under the Notifications on Connected Transactions having the aggregate transaction value exceeding Baht 20 million, and having the aggregate transaction size exceeding 3 percent of the net tangible assets (NTA) of the Company and its subsidiaries. Therefore, the Share Disposal Transaction is required to be approved by the shareholders' meeting before execution of such transaction. In this regard, the Company and PTT or PTT's related persons have not entered into any connected transactions under the Notifications on Connected Transactions during the past six months.

Step 2 Approve the acceptance of the entire business transfer from TP, the Company's subsidiary in which the Company holds 74.0 percent of all shares of TP and PTT holds the remaining 26.0 percent of all shares of TP, at the total price of approximately Baht 26,773 million (which is subject to an adjustment according to the market price thereof as of the date of entire business transfer appraised by an independent appraiser) (the "**EBT Transaction**") whereby the Company agrees to accept the transfer of all assets, liabilities, rights, duties and obligations of TP existing on the day prior to the date of the EBT, including contracts and licenses related to and used in the business operations of TP to enable the Company to continue the business operations of TP.

In this connection, after the EBT of TP to the Company, TP will pay dividend, cease its business operations, undergo dissolution and start the liquidation process within the same fiscal year in which the EBT occurs. After the completion of the liquidation, TP will distribute its assets to the Company and PTT as TP's shareholders in proportion to their respective shareholding in TP.

The EBT Transaction is a connected transaction under the Notifications on Connected Transactions since PTT, as the Company's major shareholder, holds shares representing over 10 percent of all shares in TP, the business transferor. The size of the transaction is equal to 7.0 percent of the net tangible assets (NTA) of the Company and its subsidiaries (based on the Company's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020), which is regarded as a connected transaction under the Notifications on Connected Transactions having the aggregate transaction value exceeding Baht 20 million, and having the aggregate transaction size exceeding 3 percent of the net tangible assets (NTA) of the Company and its subsidiaries. Therefore, the EBT Transaction is required to be approved by the shareholders' meeting before execution of such transaction. In this regard, the Company and TP or TP's related parties have not entered into any connected transactions under the Notifications on Connected Transactions during the past six months. In addition, the EBT Transaction is also regarded as an acceptance of transfer of the entire business by a public company pursuant to Section 107 of the Public Limited Companies Act B.E. 2535 (A.D. 1992) (as amended) (the "**Public Limited Companies Act**"), therefore, the EBT Transaction is required to be approved by the shareholders' meeting before execution of such transaction.

The Share Disposal Transaction is regarded as a disposition of assets by the Company under the Notification of the Capital Market Supervisory Board No. TorChor. 20/2551 Re: Rules on Entering into Material Transactions Deemed as Acquisition or Disposition of Assets and the Notification of the Board of Governors of the Stock Exchange of Thailand Re: Disclosure of Information and Other Acts of Listed Companies Concerning the Acquisition or Disposition of Assets B.E. 2547 (A.D. 2004) (as amended) (collectively, the "**Notifications on Acquisition or Disposition of Assets**"). In addition, the EBT Transaction is also regarded

as an acquisition of assets by the Company under the Notifications on Acquisition or Disposition of Assets. The size of each of such transactions is lower than 15 percent. Therefore, the Company is not required to disclose information or take any actions under the Notifications on Acquisition or Disposition of Assets. However, the Company's board of directors viewed that as the Share Disposal Transaction and the EBT Transaction form an integral part of the Company's Restructuring Plan, and the Company will call the Extraordinary General Meeting of Shareholders of the Company No. 1/2020 to consider approving both transactions under the Notifications on Connected Transactions and to consider approving the EBT Transaction under Section 107 of the Public Limited Companies Act, it was thus deemed appropriate to also propose both transactions to the Shareholders' Meeting for consideration and approval under the Notifications on Acquisition or Disposition of Assets accordingly.

Therefore, for the purpose of execution of the Share Disposal Transaction and the EBT Transaction under the Company's Restructuring Plan, the Company has the obligations under the Notifications on Connected Transactions and the Notifications on Acquisition or Disposition of Assets as follows

- (1) To convene a board of directors' meeting to consider approving the Share Disposal Transaction and the EBT Transaction;
- (2) To prepare and submit a report and disclose information memorandum on the Share Disposal Transaction and the EBT Transaction to the Stock Exchange of Thailand ("SET");
- (3) To engage an independent financial advisor to provide opinions on the Share Disposal Transaction and the EBT Transaction and submit such opinions to the Office of the Securities and Exchange Commission ("SEC"), SET and the Company's shareholders;
- (4) To convene a shareholders' meeting of the Company by delivering the invitation letter for the shareholders' meeting at least 14 days prior to the date of the shareholders' meeting, and obtain approval from the shareholders' meeting of the Company with not less than three-fourths of all votes of the shareholders present at the meeting and entitled to vote, excluding such votes of the interested shareholders.

Furthermore, the board of directors' meeting of the Company deemed it appropriate to propose the shareholders' meeting to consider authorizing the chief executive officer and president to take any actions necessary for and in connection with the Share Disposal Transaction and the EBT Transaction, including but not limited to (a) sign, negotiate, change and amend any agreements and documents relating to the Share Disposal Transaction and the EBT Transaction; (b) sign, change and amend the applications for permission, including any other documents and evidence necessary for and in connection with the Share Disposal Transaction and the EBT Transaction, including to contact with, submit, give statement and explanation to any authorities and/or regulatory bodies and/or any persons or organizations necessary for and in relation to the successful completion of the Share Disposal Transaction and the EBT Transaction, and to appoint any employee of the Company's group of companies to be substitute(s) having the scope of authority as the Company's chief executive officer and president may deem appropriate.

2. Approve to appoint Avantgarde Capital Co., Ltd., which is a financial advisor on the list approved by the SEC Office, as the independent financial advisor (IFA) to provide its opinions on the Share Disposal

Transaction and the EBT Transaction to be submitted to the SEC Office, the SET and the Company's shareholders.

3. Approve to convene the Extraordinary General Meeting of Shareholders No. 1/2020 on Wednesday, October 28, 2020 at 10.00 hours at Bangkok Convention Centre, 5th Floor, Central Plaza Ladprao located at No. 1695 Phahonyothin Road, Chatuchak Sub-district, Chatuchak District, Bangkok 10900 and set the record date to determine the list of shareholders entitled to attend the meeting to be September 8, 2020, with the agenda items as follows: Agenda Item No. 1: To consider approving the restructure of the Company's shareholding in power business, comprising a disposal of all shares directly held by the Company in Global Power Synergy Public Company Limited to PTT Public Company Limited; and an acceptance of the entire business transfer from Thai Oil Power Company Limited, which are the connected transaction and the acquisition and disposition of assets of listed company and Agenda Item No. 2: Other matters (if any)

Glossary

"Announcement on Acquisition or Disposition of Assets"	Notification of the Capital Market Supervisory Board Tor Chor. Notification of the Board of Governors of the Stock Exchange of Thailand Re: Disclosure of Information and Operations of Listed Companies in Acquisition or Disposition of Assets, B.E.
"Announcement of the connected transaction"	Notification of the Capital Market Supervisory Board No. Tor Chor. 21/2551 Re: Rules on Connected Transactions dated August 31, 2008 (and as amended) and the Notification of the Board of Governors of the Stock Exchange of Thailand on Disclosure and Operation Of listed companies in the connected transaction B.E. 2546 dated November 19, 2003 (and as amended)
"AP"	Availability Payment
"APR1"	Compensation rate that EGAT pays for factory construction including loan obligations and returns
"APR2"	Compensation rate that EGAT pays for fixed costs of operation and maintenance (Fixed O&M)
"BIC-1"	Bang Pa-In Cogeneration Company Limited Phase 1
"BIC-2"	Bang Pa-In Cogeneration Company Limited Phase 2
"Bulb water turbine"	It is divided into a deriaz turbine, a type of turbine that flows water in the diagonal direction to the axis. This type of turbine is used when there is a high head. The impeller part will move when water flows. And Kaplan Turbine, which is a propeller-style turbine that flows through the blades in a direction parallel to the axis of the turbine. Used for applications with low water head The blade of a kaplan turbine is an impeller that can be adjusted to the angle of the spokes automatically according to the pressure or water qj. In relation to the strength at the water jets
"CADR"	Compound Annual Decline Rate
"CAGR"	Compound Annual Growth Rate
"CCE"	Chonburi Clean Energy Company Limited
"CHPP"	Combined Heat and Power Producing Company Limited located
"Cogeneration"	Combined heat and steam power plant
"Contracted Heat Rate"	The rate of heat consumption as specified in the contract
"Central Utility Plant: CUP"	Central Utility Plants
"Central Utility Plant 1: CUP-1"	Central Utility Plants 1
"Central Utility Plant 2: CUP-2"	Central Utility Plants 2
"Central Utility Plant 3: CUP-3"	Central Utility Plants 3
"Central Utility Plant 4 Phase 1: CUP-4 PH1"	Central Utility Plants 4 Phase 1
"CRESCO"	Chubu Ratchaburi Electric Services
"DCF"	Discounted Cash Flow
"EBT"	Entire business transfer of Thai Oil Power Company Limited
"EDL"	Electricite Du Laos

"EEC"	Eastern Economic Corridor
"EGAT"	Electricity Generating authority
"EP"	Energy Payment
"ERC"	Energy Regulatory Commission
"ERU"	Energy Recovery Unit Company Limited
"EV/EBITDA"	Enterprise Value/Earnings before interest, tax, depreciation and amortization
"Energy Payment"	Electric energy cost
"FCFF"	Free Cash Flow to Firm
"FiT"	Feed in Tariff
"GGC"	Global Green Chemical Public Company Limited
"GPSC"	Global Power Synergy Public Company Limited
"GHECO-1"	GHECO-1
"GIPP"	Glow IPP Power Plant
"GLOW"	Glow Energy Public Company Limited
"GLOW CFB3"	GLOW CFB3
"GLOW Energy Phase 1"	Glow Energy Phase 1
"GLOW Energy Phase 2"	Glow Energy Phase 2
"GLOW Energy Phase 4"	Glow Energy Phase 4
"GLOW Energy Phase 5"	Glow Energy Phase 5
"GLOW IPP"	Glow IPP Company Limited
"GLOW SPP 1"	GLOW SPP 1
"GLOW SPP 2"	GLOW SPP 2
"GLOW SPP 3"	GLOW SPP 3
"GLOW SPP 11 Phase 1"	GLOW SPP 11 Phase 1
"GLOW SPP 11 Phase 2"	GLOW SPP 11 Phase 2
"GLOW SPP 11 Phase 3"	GLOW SPP 11 Phase 3
"GLOW SPP 11 Phase 3 Expansion"	GLOW SPP 11 Phase 3 Expansion
"GRP"	Global Renewable Power Company Limited
"HHPC"	Huay Ho Company Limited
"IFA"	Avantgarde Capital Company Limited
"IFA report"	IFA report on Acquisition and Disposition of Assets Transactions and Connected Transaction of Thai Oil Public Company Limited
"ISP1"	Ichinoseki Solar Power Company Limited

"IPP"	Independent Power Producer
"IRPC-CP Phase 1"	IRPC Clean Power Company Limited Phase 1
"IRPC-CP Phase 2"	IRPC Clean Power Company Limited Phase 2
"Kd"	Cost of Debt
"Ke"	Cost of Equity
"LABIX"	Labix Company Limited
"LAO PDR"	Lao People's Democratic Republic
"LF"	Load Factor
"MEA"	Metropolitan Electricity authority
"MW"	Megawatt
"NL1PC"	Nam Lik 1 Power Company Limited
"NNEG"	Nava Nakorn Electricity Generating Company Limited
"NSC"	Natee Synergy Company Limited
"NTA"	Net Tangible Assets
"O&M"	Operation and Maintenance
"P/BV"	Price to Book Value Ratio
"P/E"	Price to Earning Ratio
"PEA"	Provincial Electricity Authority
"PTT"	PTT Public Company Limited
"PTTES"	PTT Energy Solutions Company Limited
"PTTEP"	PTT Exploration and Production Public Company Limited
"PTTGC"	PTT Global Chemical Public Company Limited
"PTTOR"	PTT Oil and Retail Business Public Company Limited
"RDF"	Refused Derived Fuel
"RPCL"	Ratchaburi Power Company Limited
"SAKC"	Sak Chaisidhi Company Limited
"SEC"	Securities and Exchange Commission
"SET"	Stock Exchange of Thailand
"Share Disposal Transaction"	Disposal and acceptance of transfer of all ordinary shares to PTT Public Company Limited
"SPSE"	Sarn Palang Social Enterprise Company Limited
"SPP"	Small Power Producer
"SSE 1"	Siam Solar energy 1 Company Limited

"Tdc1"	Fines for transportation through pipes
"TES"	Thai Oil Energy Services Company Limited
"TET"	Thai oil Ethanol Company Limited
"TLB"	Thai Lube Base Public Company Limited
"TM"	Thai Oil Marine Company Limited
"TOP"	Thai Oil Public Company Limited
"TOP SPP"	TOP SPP Company Limited
"TOS"	Thai Oil Solvent Company Limited
"TP"	Thai Oil Power Company Limited
"TPX"	Thai Paraxylene Co., Ltd.
"TS"	TOP Solvent Company Limited
"TSR"	Thai Solar Renewable Company Limited
"VWAP"	Volume Weighted Average Price
"VSPP"	Very Small Power Producer
"WACC"	Weighted Average Cost of Capital
"Wd"	Weight of Debt
"We"	Weight of Equity
"WTE"	Rayong Waste to Energy
"XPCL"	Xayaburi Power Company Limited

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1. Executive Summary

1.1 Overview and Objective of the Transaction

As the Company resolved to approve the restructuring of the Company's shareholding in power business (the Restructuring Plan) The Restructuring Plan consists of Step 1 a disposal of all ordinary shares directly held by the Company in GPSC that the Company hold approximately 8.9 percent of all issued shares of GPSC to PTT; and Step 2 an acceptance of the EBT from TP, a subsidiary of the Company in which the Company holds 74.0 percent of all shares of TP, and PPT holds 26.0 percent of all shares of TP. The Restructuring Plan result in simplify the shareholding structure of the Company which encourage agility of management to be clearer and flexible. As well as related persons have the potential to enter the transaction and benefit in the long term. In addition, entering to both transactions encourage the liquidity of the Company since the Company is able to use the proceeds from the disposition of the assets of GPSC in EBT s and able to use in other investment projects of the Company.

The IFA has an opinion that this Transaction is appropriate. (shareholders can read details of the appropriateness of the Transaction additionally in section 3.1 the appropriateness and benefits of the Transaction). Regarding the appropriateness of price, the IFA has an opinion that the fair value for disposition of ordinary shares of GPSC at approximately 8.9 percent which is Baht 16,882 million and the fair value of EBT of TP which is Baht 26,773 million are appropriate since they are in the IFA's valuation range of both GPSC and TP's fair value, which are 1) Baht 16,291.3 million – Baht 18,946.7 million by using Market Value Approach due to high liquidity of GPSC's shares and the Discounted Cash Flow approach which reflects future operating performance under business operation plan and fair assumptions of GPSC. and 2) Baht 25,749.8 million – Baht 28,884.0 million by using the Discounted Cash Flow approach which reflects future operating performance under business operation plan and fair assumptions of TP.

The Board of Directors' Meeting No. 8/2020 of the Company, which was held on August 20, 2020, has resolved to approve disposal of all ordinary shares directly held by the Company in GPSC to PTT in the amount of 251,173,540 shares with a par value of Baht 10 each, representing approximately 8.9 percent of all issued shares of GPSC at the total price of approximately Baht 16,882 million ,whereby PTT shall pay for such shares of GPSC in cash and/or promissory note or other means to be agreed by the parties later. However, apart from compensation cash and / or promissory note, the payment of ordinary shares of GPSC is not compensate by ordinary share or other means which required to value (the Share Disposal Transaction) and the board of directors' meeting of the Company has resolved to approve the acceptance of the EBT from TP, the Company's subsidiary in which the Company holds 74.0 percent of all shares of TP and PTT holds the remaining 26.0 percent of all shares of TP, at the total price of business transfer of approximately Baht 26,773 million, whereby the Company will make payment in consideration of the EBT in cash and/or other means to be agreed by the parties (the EBT Transaction).

1.2 Characteristic of the Transaction

Detail of Disposition of Assets

Buyer	PTT Public Company Limited (“PTT”)
Seller	Thai Oil Public Company Limited (the “Company”)
Characteristic of the Transaction	The disposition of ordinary shares of GPSC which the disposal of all ordinary shares directly held by the Company in GPSC to PTT in the amount of 251,173,540 shares with a par value of Baht 10 each, representing approximately 8.9 percent of all issued shares of GPSC at the total price of approximately Baht 16,882 million ,whereby PTT shall pay for such shares of GPSC in cash and/or promissory note or other means to be agreed by the parties later. However, apart from compensation cash and / or promissory note, the payment of ordinary shares of GPSC is not compensate by ordinary share or other means which required to value. Should GPSC declare its dividends and schedule the record date to determine the list of shareholders entitled to dividends before completion of the acquisition of shares in GPSC, the GPSC share price under the Share Disposal Transaction shall be reduced by the amount dividend payout to GPSC shares sold under this transaction ^{1/} .
Plan for Use of Proceeds from the Transaction	pay for the considerations, taxes, fees and expenses relating to the EBT Transaction so as to increase cash, working capital and liquidity to strengthen the Company’s financial position and to serve as funds for the Company’s other investment projects in the future.
Conditions of the Entering into the Transaction	<p><u>The Company’s obligations</u></p> <ol style="list-style-type: none"> 1) The execution of the Share Disposal Transaction and the EBT Transaction, which are the 2 steps under the Restructuring Plan, shall have been approved by the extraordinary general meeting of shareholders of the Company; 2) TP and the Company have obtained an approval from the relevant regulatory authorities; and TP and the Company have entered into the EBT Agreement <p><u>PTT’s obligations</u></p> <ol style="list-style-type: none"> 1) PTT have been granted by the SEC Office a waiver from the requirement to make a tender offer for all securities of GPSC, and PTT have fully complied with the conditions imposed by the SEC Office in the waiver letter (if any); As such, PTT received an application of the waiver from the SEC which has been granted a waiver on 17 August 2020 and 2) PTT has obtained an approval from the relevant regulatory authorities (if any). <p><u>Other conditions</u></p> <p>There shall be no material adverse change to the business of GPSC</p>

Remark: ^{1/}On August 19, 2020, the board of directors of GPSC resolved to approve the interim dividend payment for the operating results in the first half of 2020 at the rate of Baht 0.50 per share, and schedule September 2, 2020 as the record date to determine the list of shareholders entitled to receive dividends and the interim dividend payment shall be due and payable on September 14, 2020.

Details of Acquisition Assets

Details of Acquisition Assets

Transferor	Thai Oil Power Co., Ltd. ("TP")
Transferee	Thai Oil Public Company Limited (the "Company")
Characteristic of the Transaction	The EBT of TP i.e. all assets, liabilities, rights, duties and obligations of TP existing on the day prior to the date the EBT, including contracts and licenses related to and used in the business operations of TP to enable the Company to continue the business operations of TP, at the total price of business transfer of approximately Baht 26,773 million, which before adjustment of TP's dividend payout, should TP pay dividends to its shareholders before the date of the EBT, such consideration shall be reduced by the amount equal to such dividend payment and subject to an adjustment according to the market price thereof as of the date of EBT appraised by an independent appraiser, whereby the Company will make payment in consideration of the EBT in cash and/or other means to be agreed by the parties.
Source of Funds	The Company's working capital and partially from such proceeds to be derived by the Company from the Share Disposal Transaction
Conditions of the Entering into the Transaction	<p><u>The Company's obligations</u></p> <ol style="list-style-type: none"> 1) The EBT Transaction shall have been approved by the extraordinary general meeting of shareholders of the Company; and 2) The Share Disposal Transaction under the SPA shall have been completed. <p><u>TP's obligations</u></p> <ol style="list-style-type: none"> 1) TP's shareholders' meeting shall have been resolved to approve the EBT of TP to the Company; and 2) There shall be no material adverse change to the business of TP. <p><u>Mutual obligations of both parties</u></p> <ol style="list-style-type: none"> 1) Termination of all agreements between TP and the Company, including execution of whereby such termination the novation agreements among TP, the Company and the parties concerned under the relevant agreements, whereby the expiration and the novation of all such respective agreements shall be effective on the EBT date; 2) Letter(s) of consent from the Ministry of Finance (by Treasury Department), as the land owner, to amend of the state-owned land sublease agreement shall have been obtained, and the parties shall have registered the amendment to the stated-owned land sublease agreement with the relevant land office prior to or on the EBT date; 3) Both parties shall have submitted the applications for transfer and acceptance of transfer of the investment promotion certificates, and such applications shall have been approved by the Office of the Board of Investment; and 4) The Company shall have accepted the transfer of and/or obtained licenses being material to its business, and the transfer and/or receipt of such licenses shall have been effective on the EBT date.

1.3 Characteristic of Disposition and Acquisition of Assets

1.3.1 Characteristic of Disposition of Assets of GPSC

Company Name	Global Power Synergy PCL																																																	
Location	555/2 Energy Complex Building B, 5th Floor, Vibhavadi – Rangsit Road, Kwaeng Chatuchak, Khet Chatuchak, Bangkok 10900.																																																	
Type of Business	GPSC is principally engaged in the production and distribution of electricity, steam and other utilities. Moreover, GPSC acquired shares in companies that produce and distribute electricity, steam and utilities as well as related businesses in domestic and international.																																																	
Registration Number	0107557000411																																																	
Date of Registration	November 27, 2014																																																	
Share Capital	28,197,293,710 Baht																																																	
Board of Director	<table border="1"> <thead> <tr> <th></th> <th>Name</th> <th>Position</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Mr. Pailin Chuchottaworn</td> <td>Chairman of the Board / Independent Director</td> </tr> <tr> <td>2</td> <td>Mr. Chawalit Tippawanich</td> <td>Director / President and Chief Executive Officer</td> </tr> <tr> <td>3</td> <td>Mr. Wittawat Svasti-xuto</td> <td>Director</td> </tr> <tr> <td>4</td> <td>Mr. Wuttikorn Stithit</td> <td>Director</td> </tr> <tr> <td>5</td> <td>Mr. Wirat Uanarumit</td> <td>Director</td> </tr> <tr> <td>6</td> <td>Mr. Kongkrapan Intarajang</td> <td>Director</td> </tr> <tr> <td>7</td> <td>Mr. Bandhit Thamprajamchit</td> <td>Director</td> </tr> <tr> <td>8</td> <td>Mr. Boonchai Chunhawiksit</td> <td>Director</td> </tr> <tr> <td>9</td> <td>Mr. Atikom Terbsiri</td> <td>Director</td> </tr> <tr> <td>10</td> <td>Mr. Kurujit Nakornthap</td> <td>Independent Director / Audit Committee Member</td> </tr> <tr> <td>11</td> <td>Mr. Payungsak Chartsutipol</td> <td>Independent Director</td> </tr> <tr> <td>12</td> <td>Maj. Gen. Chaowalek Chayansupap</td> <td>Independent Director / Audit Committee Member</td> </tr> <tr> <td>13</td> <td>Mrs. Nicha Hiranburana Thuvatham</td> <td>Independent Director</td> </tr> <tr> <td>14</td> <td>Mr. Somchai Meesen</td> <td>Independent Director</td> </tr> <tr> <td>15</td> <td>Mr. Pailin Chuchottaworn</td> <td>Chairman of the Board / Independent Director</td> </tr> </tbody> </table>			Name	Position	1	Mr. Pailin Chuchottaworn	Chairman of the Board / Independent Director	2	Mr. Chawalit Tippawanich	Director / President and Chief Executive Officer	3	Mr. Wittawat Svasti-xuto	Director	4	Mr. Wuttikorn Stithit	Director	5	Mr. Wirat Uanarumit	Director	6	Mr. Kongkrapan Intarajang	Director	7	Mr. Bandhit Thamprajamchit	Director	8	Mr. Boonchai Chunhawiksit	Director	9	Mr. Atikom Terbsiri	Director	10	Mr. Kurujit Nakornthap	Independent Director / Audit Committee Member	11	Mr. Payungsak Chartsutipol	Independent Director	12	Maj. Gen. Chaowalek Chayansupap	Independent Director / Audit Committee Member	13	Mrs. Nicha Hiranburana Thuvatham	Independent Director	14	Mr. Somchai Meesen	Independent Director	15	Mr. Pailin Chuchottaworn	Chairman of the Board / Independent Director
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Financial Statement	<table border="1"> <thead> <tr> <th>Unit: Baht million</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>Quarter 2 2020</th> </tr> </thead> <tbody> <tr> <td>Total Assets</td> <td>59,968.4</td> <td>64,439.0</td> <td>252,016.6</td> <td>249,970.9</td> </tr> <tr> <td>Total Liabilities</td> <td>19,594.5</td> <td>22,089.9</td> <td>141,840.9</td> <td>141,316.1</td> </tr> <tr> <td>Shareholders' Equity</td> <td>40,373.9</td> <td>42,349.1</td> <td>110,175.7</td> <td>108,654.8</td> </tr> <tr> <td>Revenue from Sales and Services</td> <td>19,325.0</td> <td>24,337.3</td> <td>65,789.1</td> <td>36,021.4</td> </tr> <tr> <td>Gross Profit</td> <td>3,540.8</td> <td>4,581.6</td> <td>11,499.1</td> <td>6,885.4</td> </tr> <tr> <td>Net Profit</td> <td>3,174.6</td> <td>3,359.2</td> <td>4,060.8</td> <td>3,475.9</td> </tr> </tbody> </table>				Unit: Baht million	2017	2018	2019	Quarter 2 2020	Total Assets	59,968.4	64,439.0	252,016.6	249,970.9	Total Liabilities	19,594.5	22,089.9	141,840.9	141,316.1	Shareholders' Equity	40,373.9	42,349.1	110,175.7	108,654.8	Revenue from Sales and Services	19,325.0	24,337.3	65,789.1	36,021.4	Gross Profit	3,540.8	4,581.6	11,499.1	6,885.4	Net Profit	3,174.6	3,359.2	4,060.8	3,475.9
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Source: 56-1 report of GPSC for the year 2017 – 2019 and Financial Statement of GPSC as of 30 June 2020

1.3.2 Characteristic of Acquisition of Assets of TP

Company Name	Thai Oil Power Co., Ltd.			
Location	555/1 Energy Complex Building B, 5th Floor, Vibhavadi – Rangsit Road, Kwaeng Chatuchak, Khet Chatuchak, Bangkok 10900.			
Type of Business	Generate and supply electricity and steam of combined heat cycle			
Registration Number	0105539103296			
Date of Registration	September 17, 1996			
Share Capital	2,810,000,000 Baht			
Board of Directors	Name		Position	
	1	Mr. Wirat Uanarumit	Chairman of the Board	
	2	Mr. Bandhit Thamprajamchit	Director	
	3	Mr. Charnsak Cheunchom	Director	
	4	Mr. Suthep Rungpronvisuth	Director	
	5	Mr. Pongpun Amornvivat	Director	
	6	Mr. Jeerawat Pattanasomsit	Director	
	7	Mr. Udom Wongsirinopphakhun	Director and Secretary	
Business Overview	Business		Details	
	1. Power Business	Generate and supply electricity from Small Power Produce (SPP)		
	2. Steam Business	Generate and supply steam from Small Power Produce (SPP)		
Customers	Supply electricity and other utilities to industrial users and government agencies			
Financial Statement	Unit: Baht million			
		2017	2018	2019
	Total Assets	5,071.3	5,116.7	20,066.5
	Total Liabilities	733.3	697.9	15,903.4
	Shareholders' Equity	4,338.0	4,418.9	4,163.1
	Revenue from Sales and Services	4,153.6	4,408.9	4,391.1
	Gross Profit	620.4	545.5	474.6
Net Profit	858.8	783.3	657.5	

Source: Financial Statement of TP for the year 2017 - 2019

1.4 Appropriateness and Benefits of the Transaction

The Company currently holds total ordinary shares in GPSC of approximately 29.7 percent of total issued shares, which the Company directly holds approximately 8.9 percent and indirectly holds approximately 20.8 percent of ordinary shares in GPSC through TP which is a subsidiary of the Company (the Company holds 74.0 percent of TP's total issued shares), representing the Company's effective shareholding in GPSC, directly and indirectly, a total of approximately 24.3 percent of all issued shares of GPSC. Under the Restructuring Plan, the Company will dispose of all ordinary shares directly held by the Company in GPSC of approximately 8.9 percent to PTT and then enter into the EBT Transaction to accept the EBT of TP.

Thus, entering into the Transaction is considered reasonable from restructuring the shareholding structure and proportion in the power business of the Company to reduce the complexity of the shareholding structure, which will increase transparency, flexibility and efficiency in managing and driving the business forward as well as reduce expenditure from having 2 companies.

1.5 The advantages of entering into the Transaction

1.5.1 The advantages of entering into the Share Disposal Transaction

- 1) The proceeds from the share disposition in GPSC can be used for the EBT Transaction and investment in other projects of the Company

The disposal of all ordinary shares directly held by the Company in GPSC to PTT, representing approximately 8.9 percent of all issued shares in GPSC equals to the total price of approximately Baht 16,882¹ million. The proceed can be used as a source of fund for accepting the EBT of TP at the value of 26.0 percent that PTT holds in TP of approximately Baht 6,961 million and repay approximately Baht 3,999 million loan to PTT Treasury Center Company Limited. The Company will gain approximately Baht 5,922 million of net cash flow after the Restructuring, which can be used for working capital and capital for investment in the Company's future projects.

- 2) Support the restructuring of the group

The disposition of all ordinary shares directly held by the Company in GPSC to PTT is a step of the business shareholding restructuring process correspond to the Company's policy on restructuring of shareholding structure and proportion in the power business in order to increase transparency, investment management flexibility and reduce the complexity of subsidiaries shareholding pursuant to the Restructuring plan approved by the Board of Directors' meeting of the Company No. 8/2020 held on August 20, 2020.

1.5.2 The advantages of asset acquisition of TP

- 1) Increase the management flexibility

¹ Price before deduction of dividend paid after June 30, 2020 and before the date of share transfer

Acceptance of the power business from TP will increase flexibility and efficiency in managing and driving the business and cost management as well as will reduce expenditure such as approval procedure, board of director meeting attendance compensation and other expenses from having two companies.

2) Directly receive revenue from power business operation and BOI privileges

The Company will directly receive all the revenue generated from the power business operation including revenue from GPSC's dividend. In addition, TP has a privilege from the Thailand Board of Investment (BOI), though the tax exemption privilege has been used up. However, the transfer of BOI privilege to the Company will allow the Company to benefit from future privilege given by BOI as the BOI promotion card will be transferred to the Company and there is the government's investment promotion policy might including other privilege than those granted at the present or extend period of the existing privilege.

3) Obtain the tax exemption benefit from the dividend revenue and reduce the tax burden

After the completion of EBT transaction and dissolution of TP, the Company, a listed company on SET, will obtain the tax benefit for the exemption of income revenue and withholding tax on the dividend revenue from GPSC in accordance with Section 65 Bis (10) of the Revenue code, while the GPSC's shares held by TP prior to the Transaction is subjected to income tax and withholding tax as TP is a limited company and holds less than 25.0 percent of shares in GPSC.

1.6 The disadvantages of entering into the Transaction

1.6.1 The disadvantages of entering into the Share Disposal Transaction

1) Shareholding proportion dilution in GPSC

The Company currently holds total ordinary shares in GPSC of approximately 29.7 percent of total issued shares, which the Company directly holds approximately 8.9 percent and indirectly holds approximately 20.8 percent of ordinary shares in GPSC through TP which is a subsidiary of the Company (the Company holds 74.0 percent of TP's total issued shares), representing the Company's effective shareholding in GPSC, directly and indirectly, a total of approximately 24.3 percent of all issued shares of GPSC. After the Restructuring, the Company will directly hold 20.8 percent of all issued shares of GPSC or effective shareholding of GPSC from 24.3 percent to 20.8 percent. However, the decrease in such proportion of shareholding is not considered material since it does not affect the number of the directors representing the Company and the Company still recognizes profit sharing of GPSC through Equity Method, even though receiving smaller amount of dividend as per the decreasing shareholding proportion. On the other hand, the Company gain benefits from the Restructuring in which the Company will obtain by directly holding the ordinary shares of GPSC including the dividend revenue tax exemption. However, the revenue received from the Share Disposal Transaction already reflects the opportunity loss of such dividend revenue under the assumption that the Company is deemed going concern.

1.6.2 The disadvantages of asset acquisition of TP

1) The obligation to accept all assets and liabilities of TP

The Company has the obligation to accept all assets and liabilities of TP including the loans from Thai Oil Treasury Center Company Limited and from PTT Treasury Center Company Limited from the loan agreement dated September 26, 2019 (both loan agreements have similar terms, conditions and clauses) which could be immediately due as per conditions of the agreement. However, the loan repayment to Thai Oil Treasury Center Company Limited will be settled internally without causing financial burden but the Company still has the obligation on the EBT payment to TP and to repayment of loan to PTT Treasury Center Company Limited in the amount of approximately Baht 3,999 million and other liabilities. However, the proceeds from the Share Disposal Transaction cover all the aforementioned financial burden.

1.7 Advantages of entering into the Transaction with the connected person, compared to the non-connected person

1) A process to accomplish the Restructuring of the group

This is because the Company and PTT have mutual policy to restructure the shareholding structure of its subsidiaries to increase the structure transparency and support the business operation and development under the appropriate structure to develop and generate revenue and return for both companies.

2) The capacity of the connected person will benefit the Company in the long run

PTT has a strong financial position, sufficient and of funds to execute the Transaction. Moreover, PTT is a major shareholder of GPSC and may continue to provide support to GPSC as a flagship of PTT's power business. Thus, entering into the Transaction with PTT will be beneficial to the Company's investment in GPSC in the long run compared to entering into the Transaction with the non-connected person who might not have the same capacity and qualification as PTT.

3) The purchase price of GPSC's shares is reasonable

As per the valuation of fair value of GPSC's ordinary shares using DCF and weighted average approach, the value falls between Baht 16,291.3 million – Baht 18,946.7 million. By comparing with the purchase price of Baht 16,882 million, the IFA has an opinion that the purchase price is reasonable.

1.8 The Disadvantages of entering into the Transaction to the connected party

Since PTT, the purchaser, is a major shareholder of the Company, and the Share Disposal Transaction's size is equal to 17.0 percent and EBT Transaction's size is equal to 7.0 percent of the net tangible assets (NTA) of the Company and its subsidiaries. (based on the Company's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020) which and having the aggregate connected transaction size exceeding 3.0 percent of the net tangible assets (NTA) of the Company and its subsidiaries. Therefore, the Company has additional obligations to obtain Board of Directors' approval and disclose to the SET under the aforementioned Notifications as follows:

- (1) To convene a board of directors' meeting to consider approving the Share Disposal Transaction and the EBT Transaction;
- (2) To prepare and submit a report and disclose information memorandum on the Share Disposal Transaction and the EBT Transaction to SET
- (3) To engage an independent financial advisor to provide opinions on the Share Disposal Transaction and the EBT Transaction and submit such opinions to the Office of the SEC Office, SET and the Company's shareholders.
- (4) To convene a shareholders' meeting of the Company by delivering the invitation letter for the shareholders' meeting at least 14 days prior to the date of the shareholders' meeting, and obtain approval from the shareholders' meeting of the Company with not less than three-fourths of all votes of the shareholders present at the meeting and entitled to vote, excluding such votes of the interested shareholders.

1.9 Risks of entering into the Transaction

1.9.1 The Risk before entering into the Transaction

1) Risk of not getting approval from shareholder meeting

Since the Restructuring by disposition of shares in GPSC and the EBT Transaction are connected transactions under the Notifications on Connected Transactions. Moreover, the EBT Transaction is regarded as the acceptance of transfer of the entire business by a public company pursuant to in accordance with Section 107 of the Public Limited Companies Act. The EBT Transaction is required to be approved by the shareholders' meeting before execution of such transaction with not less than three-fourths of all votes of the shareholders present at the meeting and entitled to vote, excluding such votes of the interested shareholder, which PTT holds shares in the Company, directly and indirectly, representing 48.0 percent of the Company's shares and is not entitled to vote in the shareholder meeting. However, since the Restructuring is beneficial to the Company from increasing the shareholding transparency, flexibility and efficiency in business operation of the Company, it is possible that the Company will get approval from the shareholder meeting to enter into the Transaction.

2) Risk of not getting approval from the related government entities or agencies

Under the EBT of TP, the Company will replace TP and become parties in the Power Purchase Agreement and Reserved Power Purchase Agreement with EGAT, the raw material and/or power, steam and or other by-products purchase agreements (both with the connected parties and non-connected parties), the state land rent agreement with the Treasury Department, transfer BOI promotion certificate from TP which shall be approved by the BOI committee before the EBT, as well as other licenses related to and used in the business operation of TP which shall be approved and/or agreed from the related government agencies and entities before the transfer such as the Energy Regulatory Commission (ERC). In case that the Company

does not get the approval from any agency or entity to transfer such rights/ agreements/ certificates/ licenses, the Company will not enter into any transaction related to the Restructuring. Nevertheless, the IFA viewed that such risks has a low possibility since the Company is able to operate power business and currently operates on the power business operation. The transfer of required licenses, therefore, should not be an issue in efficiency and continuity of the power business operation.

1.9.2 The Risk after entering into the Transaction

1) Risk of the performance of power business is not as expected

The COVID-19 pandemic situation affected the group companies, which are the purchasers of power and steam from TP, so the purchasers had to cease the operation temporarily, resulting in decrease in a demand for power and steam from TP. Therefore, in case that there are events in the future that affect the demand of power and steam, the Company will have the risk that the performance of the power business is lower than expected. If there is the economic downturn caused by new factors that affect the power purchasing demand and decrease the revenue of the power business to be lower than the expectation, the Company will be responsible for total loss (currently holds 74.0 percent of all issued shares).

2) Opportunity loss risk from the higher value of GPSC's shares in the future

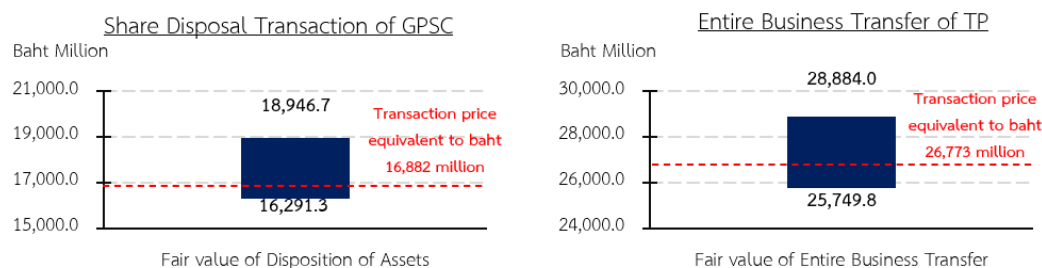
In case that GPSC's performance in the future is greater than the projection due to the future investment or business expansion which affect the value of GPSC's shares, there is a risk of opportunity loss of selling GPSC's shares at higher value than the Purchase Price, since the IFA valued GPSC's fair value based on the assumption of the current performance and solid investment and expansion plan of GPSC.

1.10 The Appropriateness of Price

Regarding the appropriateness of price, the IFA has an opinion that the fair value for accepting disposition of Assets of GPSC of approximately 8.9 percent at Baht 16,882 million is **appropriate** since it is in the IFA's valuation range of Baht 16,291.3 million – Baht 18,946.7 million by using Market Value Approach due to high liquidity of GPSC's shares and the Discounted Cash Flow approach which reflects future operating performance under business operation plan and fair assumptions of GPSC.

Regarding the appropriateness of price, the IFA has an opinion that the fair value for accepting transfer of the entire business of TP at Baht 26,773 million for payment of the Transaction is **appropriate** since it is in the IFA's valuation range of Baht 25,749.8 million – Baht 28,884.0 million by using the Discounted Cash Flow approach which is the appropriate valuation approach that reflects future operating performance under business operation plan and fair assumptions.

Summary of Fair value entering into transactions



2. Characteristic and Details of the Transaction

2.1 Transaction Date

Disposition of Assets

The Company will execute the Share Disposal Transaction after the approval from the Extraordinary General Meeting of Shareholders of the Company No. 1/2020 to be held on October 28, 2020 has been obtained and the conditions precedent to be specified under the SPA have been fulfilled. The Company is in the process of negotiating and preparing the SPA. The Company expects to execute the SPA and complete the share disposal to PTT within the year 2020.

Acquisition of Assets

The Company will execute the EBT Transaction after the approval from the Extraordinary General Meeting of Shareholders of the Company No. 1/2020 to be held on October 28, 2020 has been obtained and the conditions precedent to specified under the EBT Agreement have been fulfilled. The Company is in the process of negotiating and preparing the EBT Agreement. The Company expects to execute the EBT Agreement within 2020 and complete the acceptance of the EBT from TP within the first quarter of the year 2021.

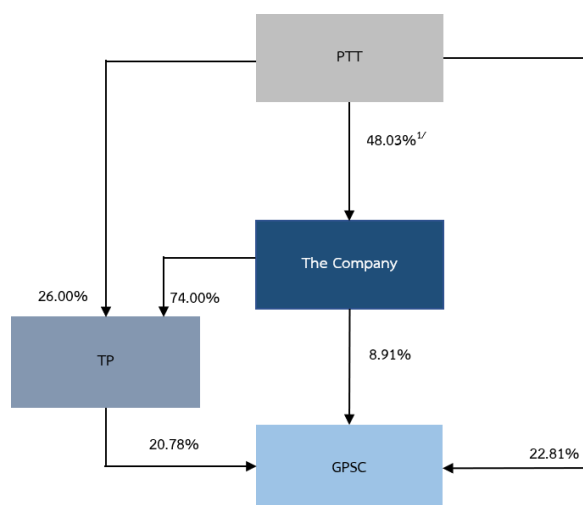
2.2 Transaction Overview

Before proceeding with the Restructuring Plan on this occasion, the Company directly holds 251,173,540 shares in GPSC representing approximately 8.9 percent of all issued shares of GPSC, and also indirectly holds ordinary shares in GPSC through its shareholding in TP (which is a subsidiary of the Company in which the Company holds 74.0 percent of all shares of TP), and TP holds 586,071,567 shares in GPSC representing approximately 20.8 percent of all issued shares of GPSC. Therefore, before proceeding with the Restructuring Plan on this occasion, the Company holds the effective shareholding in GPSC through its shareholding in TP representing approximately 15.4 percent of all issued shares of GPSC, i.e. the Company's effective shareholding in GPSC, directly and indirectly, represents a total of approximately 24.3 percent of all issued shares of GPSC.

However, PTT holds ordinary shares directly and indirectly in the Company. accounting for approximately 48.03 percent of the total issued shares of the Company. Moreover, PTT also directly holds ordinary shares of GPSC, accounting for approximately 22.8 percent of the total issued shares of GPSC, and also directly holds 26.0 percent of TP shares, resulting in PTT has effective Shareholding in GPSC, both directly and indirectly which shown in the following chart

Diagram illustrates structure before the Share Disposal Transaction and the EBT Transaction

Diagram illustrates structure before the Share Disposal Transaction and the EBT Transaction

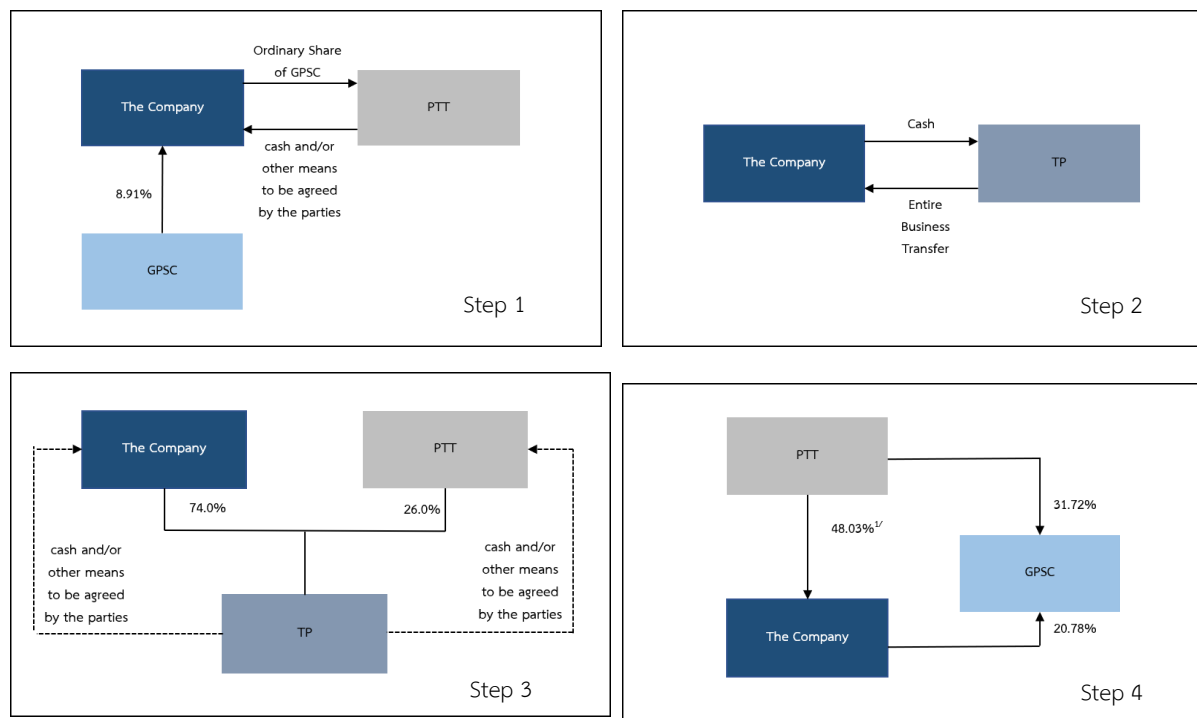


Remark: ^{1/} PTT's direct and indirect shareholding in the Company as of September 8, 2020, which is the Company's most recent closing date of its share register book.

In conducting this transaction, the Company shall dispose of all ordinary shares directly held by the Company in GPSC to PTT in the amount of 251,173,540 shares with a par value of Baht 10 each, representing approximately 8.9 percent of all issued shares of GPSC at the total price of approximately Baht 16,882 million, whereby PTT shall pay for such shares of GPSC in cash and/or promissory note or other means to be agreed by the parties later. However, apart from compensation cash and / or promissory note, the payment of ordinary shares of GPSC is not compensate by ordinary share or other means which required to value Should GPSC declare its dividends and schedule the record date to determine the list of shareholders entitled to dividends before completion of the acquisition of shares in GPSC, the total GPSC share price under the Share Disposal Transaction shall be reduced by the amount of dividend payout to GPSC shares sold under this transaction.

Therefore, after the EBT of TP to the Company, TP shall pay dividend, cease its business operations, undergo dissolution and start the liquidation process within the same fiscal year in which the EBT occurs, in compliance with the rules, procedures and conditions under the Revenue Code, so as to obtain tax benefits in respect of such transaction. After the EBT of TP to the Company, TP will cease its business operations, undergo dissolution and start the liquidation process within the same fiscal year in which the EBT occurs, in compliance with the rules, procedures and conditions under the Revenue Code, so as to obtain tax benefits in respect of such transaction. After deduction of expenses, fees or any other money in connection with or arising out of the completion of dissolution and liquidation, TP will distribute its assets to the Company and PTT according to shareholding in TP at 74.0 and 26.0 respectively as follow in the diagram.

Diagrams illustrate transaction process

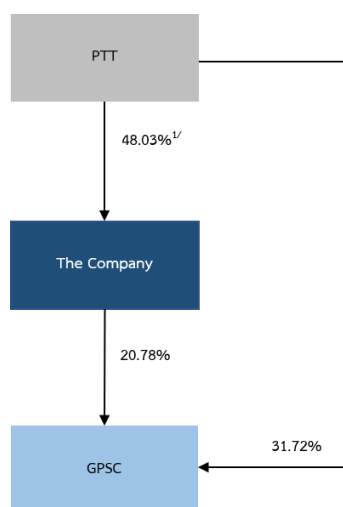


Remark: ^{1/} PTT's direct and indirect shareholding in the Company as of September 8, 2020, which is the Company's most recent closing date of its share register book.

Such price shall be adjusted and reduced by the amount equal to dividend payout of TP. All assets and liabilities of TP to be transferred to the Company as at the date of the EBT shall be as specified in the EBT Agreement. In addition, there may be an adjustment to reflect the market value at the time if EBT date assessed by an Independent appraiser which is the way that both parties mutually agreed in order to reflect the fair value of TP's net asset as of date.

After this disposal of all ordinary shares directly held by the Company in GPSC under the Share Disposal Transaction, the Company's effective shareholding in GPSC will be reduced from 24.3 percent to approximately 15.4 percent of all issued shares of GPSC. However, the Company will additionally acquire approximately 20.8 percent of all issued shares of GPSC as part of TP's assets to be transferred from TP to the Company under the EBT Transaction as per the details in Clause 3.1 (b), or representing the increase of effective shareholding in GPSC by approximately 5.4 percent (calculated from PTT's indirect shareholding in GPSC through TP at 26.0 percent). In this respect, after the execution of the Share Disposal Transaction and the EBT Transaction in accordance with the two steps in the Restructuring Plan, the Company shall directly hold ordinary shares in GPSC representing approximately 20.8 percent of all issued shares in GPSC, and in conclusion, the Company's effective shareholding in GPSC will be reduced by approximately 3.5 percent of all issued shares of GPSC from 24.3 percent to 20.8 percent of all issued shares of GPSC as follows

Diagram illustrates structure after the Share Disposal Transaction and the EBT Transaction



Source: ^{1/2} PTT's direct and indirect shareholding in the Company as of September 8, 2020, which is the Company's most recent closing date of its share register book.

However, although the Company's shareholding in GPSC has decreased, but the valuation of future dividends from GPSC that the Company should receive. Moreover, the company still has cash left from this transaction.

2.3 Related Parties and Relationship with the Company

2.3.1 Disposition of Assets

Seller	Thai Oil Public Company Limited (the Company)
Buyer	PTT Public Company Limited (PTT)
Relationship between the Parties	<p>PTT is the Company's major shareholder, and as of August 10, 2020 (which is the Company's most recent closing date of its share register book), PTT holds shares in the Company, directly and indirectly, representing 48.0 percent of all issued shares of the Company</p> <p>At present, the Company's board of directors comprises 15 directors, four of whom, namely Mr. Wirat Uanarunit, Miss Pannalin Mahawongtikul, Mr. Preecha Pocatanaawat and Miss Duangporn Thiengwatanatham, are concurrently PTT's senior management.</p>

2.3.2 Acquisition of Assets

Transferor	Thai Oil Power Co., Ltd. ("TP")
Transferee	Thai Oil Public Company Limited (the "Company")
Relationship between the Parties	<p>TP is a subsidiary in which the Company holds 74.0 percent of all shares in TP and PTT, as the Company's major shareholder, holds the remaining 26.0 percent of all shares in TP, and as of August 10, 2020 (which is the Company's most recent closing date of its share register book), PTT holds shares in the Company, directly and indirectly, representing 48.0 percent of all issued shares of the Company.</p> <p>At present, the board of directors of TP comprises seven directors, two of whom are representatives of PTT, namely Mr. Chansak Chuenchom and Mr. Suthep Ruangpornwisuth, and five of whom are representatives of the</p>

Company, namely Mr. Wirat Uanarumit, Mr. Bandhit Thamprajamchit, Mr. Pongpun Amornvivat, Mr. Jeerawat Pattanasomsit and Mr. Udom Wongsirinopphakhun.

Since PTT, as a major shareholder of the Company, holds more than 10 percent of all shares in TP, as the business transferor, the Share Disposal Transaction is regarded as a connected transaction. Moreover, since PTT, as the buyer, is a major shareholder of the Company, the EBT Transaction is regarded as a connected transaction under the Notifications on Connected Transactions. Therefore, PTT (including related parties), which directly and indirectly holds the Company's shares in the amount of 979,765,183 shares, representing 48.0 percent of all issued shares of the Company (as of the record date to determine the list shareholders of the Company on September 8, 2020), is an interested shareholder in the transactions and shall not be entitled to vote on this matter.

2.3.3 List of Related Persons and Their Relationships

1) Disposition of Assets

Four directors interested in the Share Disposal Transaction, namely 1) Mr. Wirat Uanarumit 2) Miss Pannalin Mahawongtikul 3) Mr. Preecha Pocatanaawat 4) Miss Duangporn Thiengwatanatham, were not present at the meeting approving the Share Disposal Transaction and did not vote on the approval of such transaction, as they are senior management of PTT, the Company's major shareholder, which acquires shares in GPSC from the Company under the Share Disposal Transaction.

2) Acquisition of Assets

Four directors interested in the EBT Transaction, namely 1) Mr. Wirat Uanarumit 2) Miss Phannalin Mahawongtikul 3) Mr. Preecha Pocatanaawat 4) Miss Duangporn Thiengwatanatham, were not present at the meeting approving the EBT Transaction and did not vote on the approval of such transaction, as they are senior management of PTT, the Company's major shareholder, which holds more than 10 percent of all shares in TP, the business transferor.

2.4 Characteristics of the Transaction

1) Calculation of the Transaction Size under the Notifications on Connected Transactions

Disposition of Asset

Table summary Transaction size of Disposition of Assets under connected Transactions

Value in the Calculation of Transaction Size (Million Baht)	Value of the Net Tangible Assets of the Company (Million Baht)	Percent of the Net Tangible Assets of the Company
16,882	99,154	17.0

Source: The size of the Share Disposal Transaction under the Notifications on Connected Transactions is calculated based on the information from the Company's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020.

The Share Disposal Transaction is a connected transaction under the Notifications on Connected Transactions because PTT, as the buyer, is the Company's major shareholder. Upon consideration of the size of the Share Disposal Transaction under the Notifications on Connected Transactions, the size of the transaction is equal to 17.0 percent of the net tangible assets (NTA) of the Company and its subsidiaries, and is thus regarded as a connected transaction under the Notifications on Connected Transactions having the aggregate transaction value exceeding Baht 20 million, and having the aggregate transaction size exceeding 3 percent of the net tangible assets (NTA) of the Company and its subsidiaries. Therefore, the Share Disposal Transaction is required to be approved by the shareholders' meeting before execution of such transaction. In this regard, the Company and PTT or PTT's related persons have not entered into any connected transactions under the Notifications on Connected Transactions during the past six months.

Acquisition of Assets

Table summary Transaction size of Acquisition of Assets under connected Transactions

Value in the Calculation of Transaction Size (Million Baht)	Value of the Net Tangible Assets of the Company (Million Baht)	Percent of the Net Tangible Assets of the Company
6,961	99,154	7.0

Source: The size of the EBT Transaction under the Notifications on Connected Transactions is calculated based on the information from the Company's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020.

The EBT Transaction is a connected transaction under the Notifications on Connected Transactions since PTT, as the Company's major shareholder, holds shares representing over 10 percent of all shares in TP, the business transferor. Upon consideration of the size of the EBT Transaction under the Notifications on Connected Transactions, the size of the transaction is equal to 7.0 percent of the net tangible assets (NTA) of the Company and its subsidiaries, and is thus regarded as a connected transaction under the Notifications on Connected Transactions having the aggregate transaction value exceeding Baht 20 million, and having the aggregate transaction size exceeding 3 percent of the net tangible assets (NTA) of the Company and its subsidiaries. Therefore, the EBT Transaction is required to be approved by the shareholders' meeting before execution of such transaction. In this regard, the Company and TP or TP's related persons have not entered into any connected transactions under the Notifications on Connected Transactions during the past six months.

In this regard, upon calculation of the aggregate of the size of the two steps of the Restructuring Plan, i.e. the Share Disposal Transaction and the EBT Transaction, the total size of the transaction is equal to 24.0 percent of the net tangible assets (NTA) of the Company and its subsidiaries.

2) Calculation of the Transaction Size under the Notifications on Acquisition or Disposition of Assets

Disposition of Asset

Table summary of Transaction size of Disposition of Assets

Basis of Calculation	Formula	Calculation	Transaction Size
Net Tangible Assets (NTA)	$(\text{NTA of the Business} \times \text{Disposal Proportion})$ NTA of the Listed Company	$96,158 \times 8.91\%$ 99,154	8.6%
Net Operating Profits	$(\text{Net Operating Profits of the Disposing Company} \times \text{Disposal Ratio})$ Net Operating Profits of the Listed Company	This approach is inapplicable since the Company sustains an operating loss.	
Total Value of Consideration	$\frac{\text{Value of Transaction Received}}{\text{Total Assets of the Listed Company}}$	$\frac{16,882}{298,170}$	5.7%
Value of Securities	$\frac{\text{Number of Shares Issued for Payment of Assets}}{\text{Number of Shares Issued and Paid-up of the Listed Company}}$	No securities are issued as consideration.	

Source: The size of the Share Disposal Transaction under the Notifications on Acquisition or Disposition of Assets is calculated based on the information from the Company's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020 and GPSC's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020.

The Share Disposal Transaction is regarded as a disposition of assets by the Company under the Notifications on Acquisition or Disposition of Assets, with the total value of approximately Baht 16,882 million, representing the highest transaction size equal to 8.6 percent on the basis of value of net tangible assets, which is used in the calculation of the highest transaction size.

Acquisition of Assets

Table summary of Transaction size of Acquisition of Assets

Basis of Calculation	Formula	Calculation (Million Baht)	Transaction Size
Net Tangible Assets (NTA)	$(\text{NTA of the Business} \times \text{Acquisition Proportion})$ NTA of the Listed Company	$4,1453 \times 26.0\%$ 99,154	1.1%
Net Operating Profits	$(\text{Net Operating Profits of the Acquiring Company} \times \text{Acquisition Ratio})$ Net Operating Profits of the Listed Company	This approach is inapplicable since the Company sustains an operating loss.	

Basis of Calculation	Formula	Calculation (Million Baht)	Transaction Size
Total Value of Consideration	$\frac{\text{Value of Transaction Paid}}{\text{Total Assets of the Listed Company}}$	$\frac{6,961}{298,170}$	2.3%
Value of Securities	$\frac{\text{Number of Shares Issued for Payment of Assets}}{\text{Number of Shares Issued and Paid-up of the Listed Company}}$	No securities are issued as consideration.	

Source: The size of the EBT Transaction under the Notifications on Acquisition or Disposition of Assets is calculated based on the information from the Company's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020 and TP's financial statements audited by the certified auditor for the period ended December 31, 2019. The total value of the EBT Transaction is approximately Baht 26,773 million. Since the Company currently holds 207,393,999 shares representing approximately 74.0% of all shares of TP, therefore, the acquisition of assets transaction size under the EBT Transaction will be calculated only from the value of TP's entire business which will additionally be received by the Company after the acceptance of the entire business transfer of TP under the EBT Transaction, i.e. 26.0% of the value of TP's entire business, the total value thereof is approximately Baht 6,961 million.

The EBT Transaction is regarded as an acquisition of assets by the Company under the Notifications on Acquisition or Disposition of Assets, with the total value of approximately Baht 6,961 million, representing the highest transaction size equal to 2.3 percent on the basis of total value of consideration, which is used in the calculation of the highest transaction size.

In this regard, the Company has not acquired or disposed its other assets during the past six months.

Even though the size of each transaction is lower than 15 percent and, therefore, the Company is not required to disclose information or take any actions under the Notifications on Acquisition or Disposition of Assets, the Company's board of directors, however, viewed that as the Share Disposal Transaction and the EBT Transaction form an integral part of the Company's Restructuring Plan, and the Company will call the Extraordinary General Meeting of Shareholders of the Company No. 1/2020 to consider approving both transactions under the Notifications on Connected Transactions and to consider approving the EBT Transaction under Section 107 of the Public Limited Companies Act, it was thus deemed appropriate to also propose both transactions to the Shareholders' Meeting for consideration and approval under the Notifications on Acquisition or Disposition of Assets accordingly.

2.5 Details of Disposed Assets and Acquired Assets

2.5.1 Details of Disposed Assets of GPSC

All ordinary shares directly held by the Company in GPSC in the amount of 251,173,540 shares with a par value of Baht 10 each, representing approximately 8.9 percent of all issued shares of GPSC

1) Business Overview of GPSC

Company Name	Global Power Synergy PCL	
Location	555/2 Energy Complex Building B, 5th Floor, Vibhavadi Rangsit Road, Chatuchak Subdistrict, Chatuchak District, Bangkok	
Type of Business	Production and distribution of electricity, steam, industrial water and other public utilities	
Registration Number	0107557000411	
Date of Incorporation	January 10, 2013	
Date of Listing on the SET	May 18, 2015	
Registered Capital	Baht 28,197,293,710	
Paid-up Registered Capital	Baht 28,197,293,670	
All Issued Shares	2,819,729,367 shares	
Par value	Baht 10	
Board of Director	Name Position	
	1	Mr. Pailin Chuchottaworn Chairman of the Board / Independent Director
	2	Mr. Chawalit Tippawanich Director / President and Chief Executive Officer
	3	Mr. Wittawat Svasti-xuto Director
	4	Mr. Wuttikorn Stithit Director
	5	Mr. Bandhit Thamprajamchit Director
	6	Mr. Boonchai Chunhawiksit Director
	7	Mr. Atikom Terbsiri Director
	8	Mr. Kurujit Nakornthap Independent Director / Audit Committee Member
	9	Mr. Payungsak Chartsutipol Independent Director
	10	Maj. Gen. Chaowalek Chayansupap Independent Director / Audit Committee Member
	11	Mrs. Nicha Hiranburana Thuvatham Independent Director
	12	Mrs. Saowanee Kamolbutr Independent Director / Chairman of the Audit Committee
	13	Mr. Somchai Meesen Independent Director
	14	Mr. Pailin Chuchottaworn Chairman of the Board / Independent Director
15	Mr. Wittawat Svasti-xuto Director	

2) Relationship between GPSC and the Company

GPSC, in which the Company holds approximately 8.9 percent and TP holds approximately 20.8 percent. As results, Company directly and indirectly holds shares in GPSC approximately 24.3 percent.

GPSC engages primarily in the production and distribution of electricity, steam, industrial water and other public utilities, both on its own and through investment in such business. As of June 30, 2020, GPSC's equity capacities were 5,026 megawatts of power generation, 2,876 tons of steam per hour, 7,372 cubic meters of industrial water per hour, and 15,400 refrigeration tons of chilled water, as detailed below.

3) Major Shareholders of GPSC

Table of GPSC's major shareholders

No.	Name	Amount (shares)	Shareholding (percent)
1	PTT Public Company Limited	643,177,944	22.81
2	PTT Global Chemical Public Company Limited	640,909,693	22.73
3	Thai Oil Power Company Limited	586,071,567	20.78
4	Thai Oil Public Company Limited	251,173,540	8.91
5	Thai NDVR Company Limited	84,869,469	3.01
6	Social Security Office	47,050,795	1.67
7	SOUTH EAST ASIA UK (TYPE C) NOMINEES LIMITED	25,081,788	0.89
8	Bualuang Long-Term Equity Fund	17,290,200	0.61
9	STATE STREET EUROPE LIMITED	14,681,686	0.52
10	Others	509,422,685	18.07
Total		2,819,729,367	100.00

Note: Information from SET's website as of 28 August 2020

4) Business Overview of GPSC

GPSC engages primarily in the production and distribution of electricity, steam, industrial water and other public utilities, both on its own through GLOW and through investment in such business. However, GPSC still operates other businesses both domestically and internationally.

As of June 30, 2020, GPSC's equity capacities were 5,026 megawatts of power generation, 2,876 tons of steam per hour, 7,372 cubic meters of industrial water per hour, and 15,400 refrigeration tons of chilled water, as detailed below.

- (1) Power Plant that GPSC owned and operated are natural gas power plant, which are commercial operated, located in Thailand. These Power plant can be classified into 7 Fossil fuel power plants with installed capacity of 1,1359 MW of power generation, 1,990 tons per hour of steam, 12,000 refrigerated ton of chilled water, and 2,850 cubic meters per hour of industrial water, 4 renewable power plants with installed capacity of 28 MW of power generation and one power plant of hydropower plant with installed capacity of 1,285 MW.

7 Fossil fuel Power Plant as follows

- Sriracha Power Plant Located in Sriracha District, Chonburi Province. Sriracha Power Plant has installed capacity of 700 MW of power generation and 80 cubic meters per hour of industrial water, which started commercial operation in 2000
- Central Utility Plants 1 (“CUP-1”) located in Hemaraj Eastern Industrial Estate in Map Ta Phut district, Rayong province. Central Utility Plants 1 has a installed capacity of 226 MW of power generation, 890 tons per hour of stream and 720 cubic meters per hour of industrial water, which started commercial operation in 2006
- Central Utility Plants 2 (“CUP-2”) located in Hemaraj Eastern Industrial Estate in Map Ta Phut district, and Asia Industrial Estate, Rayong province. Central Utility Plants 2 has a installed capacity of 113 MW power generation, 170 tons of per hour of stream and 510 cubic meters per hour of industrial water, which started commercial operation in 2008
- Central Utility Plants 3 (“CUP-3”) located in Hemaraj Eastern Industrial Estate in Map Ta Phut district, and Asia Industrial Estate, Rayong province. Central Utility Plants 3 has a installed capacity of 15 MW power generation, 280 tons of per hour of stream and 770 cubic meters per hour of industrial water, which started commercial operation in 2009
- Central Utility Plants 4 (“CUP-4”) located in Asia Industrial Estate Rayong province. Central Utility Plants 4 has installed capacity of 45 MW power generation and 70 tons per hour of stream which started commercial operation in 2019
- Combined Heat and Power Producing Company Limited located (“CHPP”), which is a subsidiary of GPSC that GPSC hold 100 percent, at Government Complex Chang Watthana Bangkok Province. Combined Heat and Power Producing Company Limited has installed capacity of 5 MW power generation and 12,000 refrigerated tons of chilled water, which started commercial operation in 2009
- IRPC Clean Power Company Limited (“IRPC-CP”) which is a subsidiary of GPSC that GPSC hold 51 percent, located in Rayong Province. IRPC Clean Power Company Limited has a maximum installed capacity of electricity 240 MW and 300 tons of stream per hour, which started commercial operation in 2015.

4 Renewable – energy Power Plants as follows

- Solar power plant project in Thailand which has installed capacity of 39.5 MW power generation. Solar power plant project in Thailand operate by investing through Global Renewable Power Company Limited (“GRP”) which completed on March 26, 2020.
- Combined Heat and Power Producing Company Limited (CHPP) (on-ground solar energy power plant in collaboration with Chantaburi’s Shrimp Farmers Cooperative Limited), which is a subsidiary of GPSC that GPSC hold 100 percent, located in Chantaburi Province. Combined Heat and Power Producing Company Limited has a maximum installed capacity of electricity 5 MW which started commercial operation in 2016.

- Ichinoseki Solar Power (“**ISP1**”) GK which is a subsidiary of GPSC that GPSC hold 99 percent, located in Japan. Ichinoseki Solar Power (ISP1) GK has a maximum installed capacity of electricity 20.8 MW which started commercial operation in 2017.

1 Hydropower Plants as follows

- Natee Synergy Company Limited, which is a subsidiary of GPSC that GPSC hold 100 percent, that holds shares in Xayaburi Power Company Limited located at Lao PDR. Xayaburi Power Company Limited has installed capacity of 1,285 MW power generation which started commercial operation in 2019.

(2) Power plants owned by GPSC through Glow Energy Public Company Limited operate in the business of producing and supplying electricity, steam and other utilities from various types of energy, divided into natural gas and coal-fired power plants, which is located in Thailand It has installed capacity of 2,929 MW power generation, 1,116 tons per hour of steam, 3,400 refrigerated tons of chilled water and 5,292 cubic meters per hour of industrial water. Renewable energy power plant, which located in Thailand, has installed capacity of 12.01 MW power generation, totaling of 4 plants. One Hydropower plants, which is located in Lao People's Democratic Republic (“**Lao PDR**”), with installed capacity of 152 MW power generation.

10 Fossil fuel Power Plant as follows

- Glow IPP Power Plant (“**GIPP**”), which GPSC owned through GLOW 95 percent, located in WHA Chon Buri Industrial Estate 1 Chonburi Province. Glow IPP has a maximum installed capacity of 713 MW power generation, which started commercial operation in 2003
- GHECO-One Power Plant (“**GHECO-ONE**”), which GPSC owned through Glow IPP2 Holding 65 percent, located in Map Ta Phut Industrial Estate Rayong Province. GHECO-One has installed capacity of 660 MW power generation, which started commercial operation in 2012
- Glow Energy Power Plant Phase 1-2 (“**Glow Energy Phase 1**”) (“**Glow Energy Phase 2**”), which GPSC owned through GLOW 100 percent, located in Map Ta Phut Industrial Estate Rayong Province. Glow Energy Phase 1-2 has a maximum installed capacity of electricity 281 MW, 550 tons of stream per hour and 2,520 cubic meters per hour of industrial water, which started commercial operation in 1994 and 1996, consecutively
- Glow Energy Power Plant Phase 4 (“**Glow Energy Phase 4**”), which GPSC owned through GLOW 100 percent, located in Map Ta Phut Industrial Estate Rayong Province. Glow Energy Phase 4 has installed capacity of 77 MW power generation, 137 tons per hour of stream and 2,520 cubic meters per hour of industrial water, which started commercial operation in 2005.
- Glow Energy Phase 5 (“**Glow Energy Phase 5**”), which GPSC owned through GLOW 100 percent, located in Map Ta Phut Industrial Estate Rayong Province. Glow Energy Phase 5 has installed capacity of 328 MW power generation and 160 tons per hour of stream, which started commercial operation in 2011.

- CFB 3 Power Plant (“**Glow CFB3**”) which GPSC owned through GLOW 100 percent, located in Map Ta Phut Industrial Estate Rayong Province. CFB 3 has a maximum installed capacity of electricity 85 MW and 79 tons of steam per hour, which started commercial operation in 2010.
- Glow SPP 2 (“**GLOW SPP 2**”) / Glow SPP 3 (“**GLOW SPP 3**”), which GPSC owned through GLOW 100 percent, located in Map Ta Phut Industrial Estate Rayong Province. Glow SPP 2/Glow SPP 3 has installed capacity of 513 MW power generation, 150 tons per hour of steam, and 150 cubic meters per hour of industrial water, which started commercial operation in 1999.
- Glow SPP 11 Power Plant Phase 1 (“**GLOW SPP 11 Phase 1**”), which GPSC owned through GLOW 100 percent, located in Siam Eastern Industrial Park Rayong Province. Glow SPP 11 Phase 1 has installed capacity of 120 MW power generation, 2,200 refrigerated tons of chilled water, and 360 cubic meters per hour of industrial water, which started commercial operation in 2000.
- Glow SPP 11 Power Plant Phase 2 (“**Glow SPP 11 Phase 2**”), which GPSC owned through GLOW 100 percent, located in Siam Eastern Industrial Park Rayong Province. Glow SPP 11 Phase 2 has installed capacity of 110 MW power generation, 1,200 refrigerated tons of chilled water, and 212 cubic meters per hour of industrial water, which started commercial operation in 2012.
- Glow SPP 11 Power Plant Phase 3 (“**Glow SPP 11 Phase 3**”), which GPSC owned through GLOW 100 percent, located in Siam Eastern Industrial Park Rayong Province. Glow SPP 11 Phase 2 has installed capacity of electricity 23 MW power generation, which started commercial operation in 2006.

4 Renewable – energy Power Plants as follows

- Glow Energy Solar, which is a Power Plant under GLOW, located in Asia Industrial Estate Samut Prakarn Province. Glow Energy Solar has installed capacity of 1.55 MW power generation, which started commercial operation in 2012.
- Glow Energy Rooftop, which GPSC owned through GLOW 100 percent, located in the Siam Michelin Plant WHA Saraburi Industrial Land, Nong Khae district, Sara Buri Province. Glow Energy Rooftop has installed capacity of 0.87 MW power generation, which started commercial operation in 2018.
- Glow Energy Rooftop located in the Continental Automotive (Thailand) Plant, which GPSC owned through GLOW 100 percent, located in Amata City Rayong Industrial Estate, Rayong province. Glow Energy Rooftop has a maximum installed capacity of electricity 0.99 MW, which started commercial operation in 2019.
- Chonburi Clean Energy used industrial waste as a main fuel, which GPSC owned through Glow IPP3 100 percent and Eastern Seaboard Clean Energy 33 percent, located in WHA

Chonburi Industrial Estate 1 Chonburi Province. Chonburi Clean Energy has installed capacity of 8.6 MW power generation, which started commercial operation in 2020.

1 Hydropower Plant as follows

- Houay Ho Power Plant (“**HHPC**”), which HPSC owned through GLOW and Huay Ho Company, located in Attapeu province, Laos. Houay Ho has installed capacity of 152 MW power generation, which started commercial operation in 1999.

(3) Power Plant that GPSC Domestically and Internationally invest in associates and joint venture operate in the business of producing and supplying power, steam and other utilities from various types of energy, divided into 3 natural gas power plants located in Thailand with installed capacity of 2,238 MW power generation and 160 tons per hour of steam. One renewable energy power plants which located in Thailand with installed capacity of 80 MW power generation. One hydropower plants which located in the Lao PDR with installed capacity of 650 MW power generation.

3 Fossil fuel Power Plant as follows

- Bang Pa-In Cogeneration Company Limited divided into Phase 1 (“**BIC 1**”) and Phase 2 (“**BIC 2**”), which is an associate of GPSC that GPSC hold 25 percent, located at Bang Pa-in Industrial Estate Ayutthaya Province. BIC 1 and BIC 2 has installed capacity of 234 MW power generation and 40 tons per hour of stream, which started commercial operation in 2013 and 2017, consecutively.
- Nava Nakorn Electricity Generating Company Limited (“**NNEG**”), which is an associate of GPSC that GPSC hold 30 percent, located at Nava Nakorn Industrial Promotion Zone Pathum Thani Province. Nava Nakorn Electricity Generating Company Limited has installed capacity of 125 MW power generation and 30 tons per hour of stream, which started commercial operation in 2016 and third quarter of 2020 for expansion project.
- Rachaburi Power Company Limited (“**RPCL**”), which is a long-term invest of GPSC that GPSC hold 15 percent, located in Rachaburi Province. Ratchburi Power Company has installed capacity of 1,400 MW power generatuib, which started commercial operation in 2008.

1 Renewable – energy Power Plants as follows

- Thai Solar Renewable Company Limited (“**TSR**”), which is a joint venture of GPSC that GPSC hold 40 percent, and holds shares in Siam Solar Energy 1 Company Limited located at Kanchanaburi and Suphanburi Province. Siam Solar Energy 1 Company Limited has installed capacity of 80 MW power generation which started commercial operation in 2013 - 2014.

1 Hydropowe Plants as follows

- Nam Lik 1 Power Company Limited (“**NL1PC**”), which is a joint venture of GPSC that GPSC hold 40 percent, located at Lao PDR. Nam Lik 1 Power Company Limited has installed capacity of 65 MW power generation which started commercial operation in 2019.

(4) Two Power plants under GPSC’s ongoing investment or construction, as detailed below

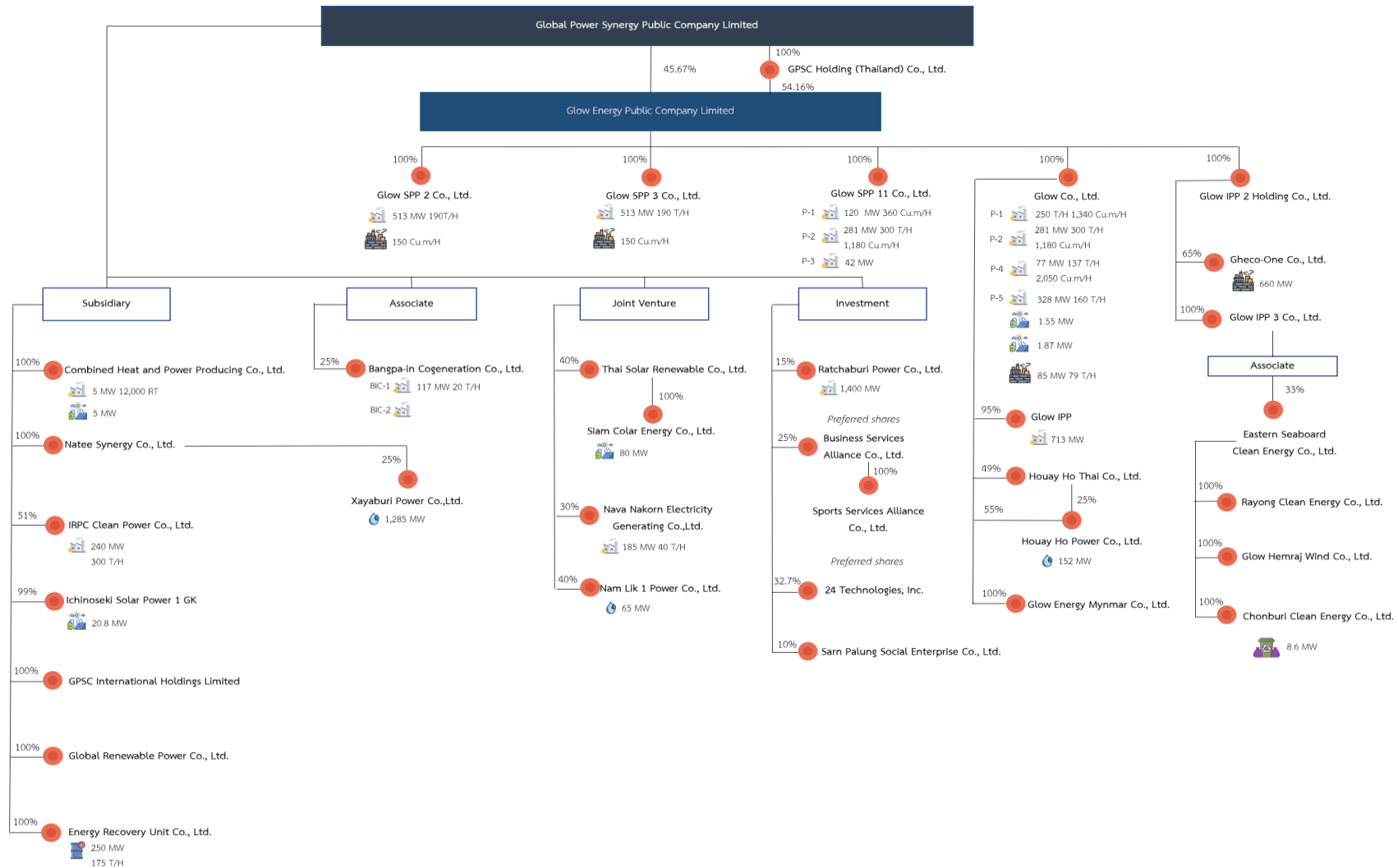
- Energy Recovery Unit (“ERU”), which is a subsidiary of GPSC that GPSC hold 100 percent, designed to serve as a public utility support unit for processes under Thai Oil’s Clean Fuel Project (CFP), with 250 MW power generation and 175 tons per hour of steam in capacity. ERU’s main fuel is the oily liquid by product of CFP’s distillation. Once the construction project is completed, GPSC or a subsidiary will be taking transfer of the ERU project. It has won a provisional acceptance certificate (PAC) under the project. Completion of the transfer is expected in the third quarter of 2023
 - Rayong Waste to Energy (“WTE”), which is a project of GPSC, management project, consisting of two subprojects located in Rayong province. Refuse-Derived Fuel (RDF) has seen its construction completed. The power plant from RDF, with a capacity of 9.8 MW power generation, is under construction; commercial distribution of power is scheduled for the second quarter of 2021.
- (5) Other business, totaling 5 companies as follows
- GPSC International Holdings Limited, which is a subsidiary of GPSC that GPSC hold 100 percent, located in Hong Kong SAR, People’s Republic of China to accommodate overseas investment.
 - 24M Technologies, Inc., which is a long-term investment of GPSC that GPSC hold preferred share 33 percent, located in USA. 24M Technologies engaging in research and development of batteries for energy storage for the industrial sector and power transmission systems for the enhanced security of power distribution, power network, and power user systems.
 - Business Services Alliance Company Limited, which is a long-term investment of GPSC that GPSC hold preferred share 25 percent, engaging in service and administration of human resources for PTT Group’s outsourcing and having acquired the shares of Sport Services Alliance Company Limited, which operates the football management business of PTT Group.
 - Sam Palang Social Enterprise Company Limited, which is a long-term investment of GPSC that GPSC hold 10 percent, formed to support PTT’s and PTT Group’s social enterprises striving to join in the efficient resolution of problems facing communities, society, and the environment while advocating hiring of local labor on the basis of sustainability.
- Global Renewable Power Company Limited (GRP), which is a subsidiary of GPSC that GPSC hold 100 percent, formed to accommodate investment growth in renewable -energy power plants worldwide under GPSC’s strategic plans.

5) Details of Companies Invested by GPSC

Details of the investment of GPSC are divided into 4 types: investment in subsidiaries, Investment in an associate, Investment in joint ventures, and long-term Investment



Diagram illustrates GPSC' company structure



Source: Annual report of GPSC in 2019

6) Revenue Structure

Table summary revenue structure of GPSC for the year 2017 – 2019 and Quarter 2 of 2019 and Quarter 2 of 2020

		2017		2018		2019		Quarter 2 2020	
		Baht million	%	Baht million	%	Baht million	%	Baht million	%
Electricity	IPP	3,828.0	18.4	3,241.0	12.8	14,956.0	22.2	3,087.0	9.7
	SPP	8,135.0	39.2	12,771.0	50.5	35,612.0	52.8	19,811.0	62.2
	VSPP	42.0	0.2	321.0	1.3	348.0	0.5	311.0	1.0
Steam	SPP	6,873.0	33.1	7,297.0	28.8	13,835.0	20.5	7,143.0	22.4
Industrial water / Chilled water	IPP	-	0.0	6.0	0.0	55.0	0.1	18.0	0.1
	SPP	268.0	1.3	309.0	1.2	631.0	0.9	386.0	1.2
	VSPP	175.0	0.8	187.0	0.7	203.0	0.3	99.0	0.3
Service	VSPP	4.0	0.0	97.0	0.4	30.0	0.0	29.0	0.1
Refused Derived Fuel (RDF)	RDF	-	0.0	4.0	0.0	16.0	0.0	-	0.0
Finance lease Agreement		592.0	2.9	543.0	2.2	773.0	1.2	425.0	1.3
Nitrogen		108.0	0.5	103.0	0.4	103.0	0.2	-	0.0
Dividend income		270.0	1.3	135.0	0.5	185.0	0.3	-	0.0
Other revenue		478.0	2.3	286.0	1.1	733.0	1.1	532.0	1.7
Total revenue		20,773.0	100.0	25,300.0	100.0	67,480.0	100.0	31,841.0	100.0

Source: 56-1 report of GPSC for the year 2017 – 2019 and MD&A of Quarter 2 of 2020

7) Details of Product characteristic and Power plants

GPSC products can be classified as follows

(1) Global Power Synergy PCL (GPSC)

GPSC is a manufacturer and distributor of power to EGAT and industrial users. The Company has a total installed capacity of 1,359 MW and provides utility services by producing and distributing steam and industrial water to nearby industrial customers. With a total installed capacity of approximately 1,990 tons per hour of steam, 12,000 refrigerated ton of chilled water, and a total capacity of approximately 2,080 cubic meters per hour of industrial water. GPSC power plant and utility plant details can be classified as follows:

Fossil Fuel Power Plant

There are 7 fossil fuel power plants, namely 1. Sriracha Power Plant 2. Central Utility Plant 1 3. Central Utility Plant 2 4. Central Utility Plant 3 5. Central Public Utility

Plant 4. 6. Combined Heat and Power Producing Company Limited located 7. IRPC Clean Power Company Limited

1. Sriracha Power Plant

Sriracha Power Plant is a power plant under the power purchase project from an Independent Power Producer (IPP) with a total capacity of 700 MW power generation, located in Thung Suk La Subdistrict, Sriracha District, Chonburi Province. All electricity generated by Sriracha Power Plant distributes to EGAT under the 25-year Power purchase agreement from the commercial operation date of August 15, 2000, which the agreement will expire in 2025, which depends on EGAT's conditions and orders.

Sriracha Power Plant is a combined cycle power plant that uses natural gas as its primary fuel and has diesel fuel as a backup fuel. Consisting of two 235 MW Gas Turbine Generators, two sets of Heat Recovery Steam Generators, one Steam Turbine to drive one set of 240 MW Steam Turbine Generator. Sriracha has 25-year natural gas purchase agreement with PTT, ending in 2025 with gas price terms for Independent Power Producers. Also, entered into a diesel purchase agreement with GPSC for use as a backup fuel and entered into a Raw Water Agreement with Eastern Water Resources Development and Management Public Company Limited for a period of 25 years, ending in 2025. In addition, Sriracha Power Plant has entered into a 10 MW power backup agreement with EGAT which is a year-to-year agreement. The Company entered into a 1 MW power backup agreement with TP, with a period of 25 years expiring in 2025 as a backup power for use during power plant maintenance.

The Sriracha Power Plant produces and distributes all electricity to EGAT under the Power Purchase Agreement (IPP), in accordance with the terms of the Power Purchase Agreement, granting EGAT the right to determine the quantity both long-term annual, monthly power purchase plans, and daily short-term power purchase plans. Sriracha Power Plant must notify EGAT the long-term and short-term availability of electricity generation, which the Availability Payment (“AP”) is the compensation that EGAT pays to

Sriracha power plant for maintaining the readiness of power generation. Regardless of the amount of electricity sold to EGAT, the availability cost consists of

- APR1: Compensation that EGAT pays to the company for factory construction Including loan obligations and compensation of SRC (Capacity Cost).
- APR2: Compensation that EGAT pays SRC for fixed operating and maintenance expenses (Fixed O&M)

Sriracha Power Plant will receive AP revenue according to the availability paid by the Sriracha Power Plant and in accordance with the terms of the Power Purchase Agreement. In addition, Sriracha Power Plant receives Energy Payment (Energy Payment “EP”) from the production of electricity according to the actual production quantity according to EGAT's Dispatch Instruction. Have the right under the Power Purchase Agreement to order the Sriracha Power Plant to stop producing electricity or not producing at full capacity, with EGAT still having to pay AP fees to the Sriracha Power Plant according to its availability.

2. Central Utility Plant (“CUP”)

Central Utility Plant Rayong engages in the business of producing and distributing power, steam and industrial water to industrial users in PTT group and general industrial users. Power is sold to EGAT in order to maintain the balance of electricity and steam generation (Balance load) in case industrial customers have high demand for steam. Resulting in increase in the production of electricity generation rate to obtain the steam volume that is sufficient to meet the needs of industrial users. Such excess power will be distributed to EGAT under the Power Purchase Agreement of the Small Power Producer (SPP) in a Non-firm. Efficiency in business operation It also increases the stability of industrial customers and can also be brought back to support the expansion of the business of industrial customers in the future.

GPSC has entered into industrial power, steam and water supply agreements with industrial customers consists of approximately 247 MW of Power purchase agreements with 28 customers with a term of 10 - 15 years and able to renew contract every 5 years. Also, GPSC entered into steam sales contracts approximately 649 tons per hour with 20 customers, with the term of 10 -15 years and able to renew the contract for 5 years. There is also a power purchase agreement with EGAT of 40 MW under the power purchase Agreement of the Small Power Producer (SPP) in Non-firm form, the agreement is valid for 5 years and is automatically renewed every 5 years from the beginning of electricity supply to EGAT's system. Central Utility Plants 1 and 3, as well as Central Utility Plants 1 and 4, have been designed to link electricity and steam transmission systems in order to increase the efficiency of electricity and steam generation, create a balance and reserve between each other. In addition, Central Utility Plant 4 has been commercially operating since the third quarter of 2019, making GPSC's electricity and steam network a stable system that Get better And able to manage and optimize the working process of the power plant together

2.1 Central Utility Plant 1 (CUP-1)

Central Utility Plant 1 has total production capacity of approximately 226 MW of electricity, 890 tons of steam per hour, and 720 cubic meters per hour of industrial water. CUP-1 located in WHA Eastern Industrial Estate (Map Ta Phut), Rayong Province, selling electricity, steam and industrial water to industrial users and to EGAT, starting with commercial operations since 2006.

Central Utility Plant 1 is a Cogeneration Power Plant, which uses natural gas as fuel. CUP-1 has six 37.6 MW gas turbine generators, six 70/140 tons per hour waste heat steam generators and one 50 ton per hour backup boiler. CUP-1 has entered into a natural gas purchase agreement with PTT for a period of 15 years ending 2021 and has the right to use water under the land purchase agreement with WHA Eastern Industrial Estate (Map Ta Phut). Also, entered into agreement back up power purchase agreement with The Provincial Electricity Authority (“PEA”) in the amount of 93.5 MW is for a period of 1 year and is automatically renewed for 1 year if the contract is not terminated.

2.2 Central Utility Plant 2 (CUP-2)

CUP-2, located in close proximity to RIL Industrial Estate, Rayong Province, has total production capacity of 113 MW, 170 tons per hour of steam, and is 510 cubic meters per hour of industrial water. CUP-2 mainly engage in supplying electricity, steam and industrial water to industrial users and sold excess electricity to EGAT. CUP-2 commencing commercial operation since 2008

CUP-2 is a Cogeneration Power Plant using natural gas as fuel. Consisting of two 37.6 MW gas turbine generators to spin the generators, two Steam generators from waste heat of 70/140 tons per hour. Steam produced sells to industrial users and the rest of the steam will pass through the steam turbine to drive a generator of one 38 MW steam turbine for the purpose to reduce the pressure of the steam before selling to medium-pressure steam customers. Steam is also produced from a secondary boiler of 50 tons per hour. CUP-2 entered into natural gas purchase agreement with PTT has been for a period of 15 years, ending in 2022, and a raw water purchase agreement from RIL Industrial Estate for a period of 15 years ending 2022. Also, GPSC entered to backup power purchase with EGAT in the amount of 37.5 MW for one year and automatically renew the agreement annually if the contract is not terminated.

CUP-2 has entered into power, steam and industrial water supply agreements with industrial users in the RIL Industrial Estate, comprising a total of 41 MW of power purchase agreements and 121 ton per hour of steam sales contracts. Moreover, CUP-2 entered into power purchase of 60 MW of electricity with EGAT under Small Power

Producer in the form of Non-firm form, with a 5-year contract term and automatically renew every 5 years from the start of the electricity supply to the EGAT system.

2.3 Central Utility Plant 3 (CUP-3)

CUP-3, located in WHA Eastern Industrial Estate (Map Ta Phut), Rayong Province, has a steam production capacity of approximately 280 tons per hour, and the production capacity of industrial water is approximately 770 cubic meters per hour. The main equipment consists of two 70 ton / hour spare boilers and three 140 ton / hour units and a demineralized water production system. CUP-3 commercially operations since 2009. CUP-3 is currently installed 1 set of 15 MW steam turbine generator completed in 2019

CUP-3 uses natural gas as its fuel to produce steam. CUP-3 has entered into a natural gas purchase agreement with PTT for a period of 15 years ending 2023 and entering into a water purchase agreement for industrial use with WHA Eastern Industrial Estate (Map Ta Phut) for a period of 15 years ending 2023

2.4 Central Utility Plant 4 Phase 1 (CUP-4)

CUP-4 Ph1, which located in Asia Industrial Estate, Rayong Province, is an investment in production capacity expansion plans in line with GPSC's strategy, which supports industrial growth in Asian estates and nearby industrial estates, and is also an investment to strengthen system-wide stability. Production and distribution network system between CUPs in an overview of GPSC.

CUP-4 is a Cogeneration Power Plant using natural gas as fuel. Consisting of a gas turbine, approximately 45 MW, waste heat steam generator approximately 70 tons per hour, and equipment Supplementary burner which can produce more steam from 70 tons per hour for a total of 140 tons per hour. Together with the construction of a network connecting electrical systems and systems steam goes to the customer segment and connects CUP-4 Ph1 and CUP-1. However, CUP-4 enters into a natural gas purchase agreement with PTT and a clean water purchase agreement with GC Estate.

3. Combined Heat and Power Producing Company Limited (CHPP)

CHPP is a Very Small Power Producer (VSPP) with an installed power generation capacity of approximately 10 MW of power generation (2 units of 5 MW per unit) and 12,000 refrigerated tons of chilled water. CHPP located at Government Centers Chaengwattana Bangkok with a non-firm power distribution agreement to MEA and

distribute cooling energy for air conditioning systems to the Government Center building.

CHPP is a Combined Heat and Power with District Cooling power plant using natural gas as a fuel to generate electricity. CHPP entered into natural gas purchase agreement with PTT for a period of 10 years, ending 2020. The Power Plant commencing commercial operation in 2009. CHPP has a chilled water production process, divided into 2 systems: chilled water generation system with heat from electricity production by using two 1,500 tons of absorption chiller units, which have not yet started commercial operation due to the process of upgrading the machinery and an electric chilled water system, with a 2,000-ton electric chiller, 3 chilling units, and 3 units for a 1,000-ton chiller.

CHPP sold power to MEA by entering into a Non-firm Power Purchase Agreement on April 23, 2009, with a 5-year power purchase agreement and automatic renewal every 5 years until the contract was terminated. The rest of the electricity will be used to produce cooling energy for distribution to air conditioning system for government buildings. Also, entering into a cooling energy purchase agreement with the company Treasury Asset Development Co., Ltd. has a 30-year contract, ending in 2038.

4. IRPC Clean Power Company Limited (IRPC-CP)

IRPC-CP is a Small Power Producer (SPP) with power generating capacity of approximately 120 MW per unit for two units, result in total of 240 MW of power generation. Also, total steam production capacity of approximately 180 - 300 tons per hour. During on-peak case of 180 tons per hour or off-peak cases of 300 tons per hour. IRPC located at Industrial Zone, Rayong Province. Under the Power Purchase Agreement for the Small Power Producer in the form of Firm of 2 contracts of 90 MW each, totaling 180 MW to EGAT under the Power Purchase Agreement, which has a 25-year contract and sells the rest of the electricity and steam to IRPC.

IRPC-CP is a Cogeneration power plant using natural gas as fuel. In electricity generation, IRPC-CP entered into a natural gas purchase agreement with PTT for a period of 27 years, starting from the date of commencement of the commercial operation of Phase 1 and entering into a raw water purchase agreement with IRPC for a period of 27 years since 2015. IRPC-CP had 2 sets of gas turbine generators per 1 unit to produce waste heat steam generators 2 sets per unit, 1 set per unit of steam turbine generators, and 1 unit of the secondary boiler, and the air-cooling system which designed and installed prior to combustion in order to increase the electricity capacity when needed.

IRPC-CP entered into power purchase agreements for small power producers in the form of Firm with EGAT on January 6, 2012 for two contracts of 90 MW of electricity each, totaling 180 MW for a period of 25 years. In addition, IRPC-CP entered into a power purchase agreement for the remainder of 60 MW of electricity and entered into a steam purchase agreement of approximately 180 - 300 tons per hour over the period with IRPC on 16 December 2013 ended 2042 or ended together with the power purchase agreement with EGAT, whichever occurs later.

4 Renewable – energy Power Plants

There are 4 renewable energy power plants: 1. Solar power plant projects in Thailand 2. Two projects of Solar power plant project and 3. Ichinoseki Solar Power 1 GK (ISP1)

1. Solar power plant project in Thailand

Solar power plant project in Thailand has total power generation capacity of 39.5 MW. The project was invested through Global Renewable Power Company Limited (GRP), a company established to invest in GPSC's renewable energy projects completed in March 26, 2020

2. Combined Heat and Power Producing Company Limited (CHPP) with Chantaburi's Shrimp Farmers Cooperative limited

CHPP has joined as a project sponsor of the ground-mounted solar power plant project for selected agricultural cooperatives to produce and distribute electric power according to the Notification of the Energy Regulatory Commission (“ERC”) regarding the purchase of electricity from the ground-mounted solar power generation project for government agencies and agricultural cooperatives, B.E. 2558, dated 17 September 2015. The project is located on the area of Chanthaburi Shrimp Farmers Cooperative Limited, Na Yai Am Subdistrict, Na Yai Am District Chanthaburi of approximately 75 rai of land and a production capacity of 5 MW of electricity, start supplying electricity to the PEA system from December 30, 2016 over the term of the 25-year project contract.

The key raw material used in Solar Power Plant is solar, which depend on the location. Topographic and climatic conditions are also important. CHPP distributes 5 MW of electricity to PEA with a period of 25 years since the commencement of supplying electricity to PEA on 30 December 2016 by using fixed throughout the project life (Feed-in Tariff: “FIT”) that the project receives is 5.66 Baht per kilowatt per hour throughout the contract period.

3. Solar rooftop Project by Combined Heat and Power Producing Company Limited (CHPP)

CHPP operates a business of providing design, procurement and installation services for solar energy projects. Currently, CHPP develops various roof-mounted solar projects as follows: Roof-mounted solar power project (Project 1) is a solar power generation system that has Installed on the roof of oil distribution islands in 5 petrol stations of PTT Oil and Retail Public Company Limited (PTTOR) in Chonburi, Singburi, Chaiyaphum and Chiang Mai provinces, which were completed in January 2019 with installed capacity 0.25 MW of electricity

Solar rooftop project (Project 2) is the roof installation of GC Logistics Solutions Co., Ltd. (GCL) distribution center building located in Map Ta Phut Industrial Estate, Rayong Province, which began commercial operations in March 2019. It has an installed capacity of 2 MW of electricity and storage energy system of 625 kWh.

Solar rooftop project (Project 3) installed on the roof of PTT Tank Terminal Company Limited (PTT Tank) located in Map Ta Phut Industrial Estate, Rayong Province, with an installed capacity of 0.1 MW of electricity.

4. Ichinoseki Solar Power GK (ISP1)

ISP1 is a Solar Power Plant in Iwate Prefecture in northern Honshu Island, Japan. Distributing electricity to Japanese utility companies with capacity of 20.8 MW of electricity using Conergy's polycrystalline Solar Photovoltaic Module technology.

The key raw material used in Solar Power Plant is solar, which depending on the location. Geographic and climatic conditions are important, GPSC conducting a study of light intensity before deciding on a location to be the location of the solar power plant. ISP1 was approved for the construction of a 20.8 MW AC solar power plant. ISP1 entered into power purchase agreement with Tohoku Electric Power, a Japanese utility company at a fixed electricity purchase rate throughout the project life (FIT) 40 yen per kilowatt per hour, the contract is valid for 20 years from the commencement of electricity supply to the system on December 15, 2017.

1 Hydropower Plant

There are 1 hydroelectric power plants: 1. Nati Synergy Company Limited (NSC)

1. Natee Synergy Company Limited (NSC)

NSC operates by holding 25 percent stake in Xayaburi Power Company Limited (“XPCL”), which develops hydroelectric power projects. XPCL is a company incorporated in the Lao PDR. Xayaburi water, a hydroelectric power plant project Dam has total capacity approximately 1,285 MW of electricity. Located on the Mekong River. Which is 100 kilometers from Luang Prabang in the south. The project uses Kaplan Turbine technology, working with seven 175 MW generators and 1 unit of 60 MW generator machine.

In the past, XPCL signed a designed and construction contract with CH. Karnchang (Lao) Co., Ltd. on October 14, 2011. The construction began on March 15, 2012 with a construction period of approximately 8 years. Xayaburi Hydroelectric Power Plant has officially started its commercial operation and sold electricity on October 29, 2019.

XPCL signed a concession agreement with the government of the Lao PDR on 29 October 2010 in the form of a concession agreement in the production and distribution system to the government of the Lao PDR. The concession agreement will expire with the power purchase agreement, which is 29 years. XPCL is granted additional 2 years of concession extension, resulting in a total concession period of 31 years from the commencement of commercial operations.

The Xayaburi Hydroelectric Power Project promotes the conservation of the biological environment by allowing fishes to pass through and river sediment drainage system, including the environment of transport with ships passing.

An important raw material for hydroelectric power generation is water that flows naturally in the river and construction of dams to generate electricity instead of reservoir construction. Although the water is naturally derived and is free of cost but the amount of water at each period is uncertain and cannot be predicted. Depending on the weather and season at each period, XPCL has conducted a study on water availability and included seasonal factors in power plant design. Long-term power purchase agreement for a period of 29 years from the commencement of commercial operation. And sold 60 MW of EDL under the long-term power purchase agreement for a period of 31 years from the commencement of commercial operation.

(2) Glow Energy Public Company Limited (GLOW)

GLOW operates as an Independent Power Producer (IPP) and a Small Power Producer (SPP). GLOW's main business is to generate and distribute electricity to EGAT, as well as generating and distributing electricity, steam, industrial water, and chilled water to industrial users located in the MapTa Phut Industrial Estate, nearby industrial estates, and Siam Eastern Industrial Park, Pluak Daeng District, Rayong Province, etc., GLOW has power plants both in the country and abroad as follows

Fossil Fuel Power Plant

There are 12 fossil fuel power plants: 1. Glow IPP Power Plant 2. GHECO-One Power Plant 3. Glow Energy Steam and Water Plant (Phase 1) 4. Power Plant Glow Energy (Phase 2) 5. Glow Energy Power Plant (Phase 4) 6. Glow Energy Power Plant (Phase 5) 7. CFB Glow Energy Power Plant 3 8. Glow SPP 2 / Glow SPP 3 (Phase 3) 9. Glow SPP 11 (Project 1) 10. Glow SPP power plant P11 (Project 2) 11. Glow SPP 11 (Project 3) and 12. Glow SPP 11 (Project 3)

1. Glow IPP (GIPP)

GIPP is a combined cycle power plant that uses natural gas as its primary fuel and with diesel as a reserve fuel which has the same power generation process as the Sriracha power plant. GIPP started commercial operation in January 2003 as an Independent Power Producer (IPP), which generates and distributes all electricity to EGAT with a total generating capacity of 713 MW of electricity.

2. GHECO-ONE

GHECO-ONE is located in the Map Ta Phut Industrial Estate. It is a power plant that uses coal energy. GHECO-ONE has a total generating capacity of 660 MW

GHECO-One Power Plant has been designed and operated according to international standards by using bituminous coal which is high quality coal that has low sulfur content as the main fuel. The coal used is imported from Indonesia. In the production process Coal is conveyed from the coal heaps using a closed conveyor belt and temporarily kept before being finely ground and before being injected into the combustion chamber of the pulverized coal-fired boiler, that produces steam to a temperature of 566 degrees celsius and a pressure of 242 bar to bring it to a steam turbine power generator. GHECO-ONE operates as an Independent Power Producer (IPP), which produces and distributes electricity to EGAT, starting commercial operations in August 2012.

3. Glow Energy Phase Phase 1 (Glow Energy Phase 1)

Glow Energy Phase 1 is a type D-fueled steam generation plant with one industrial water generator, commencing commercial operation in July 1994, which located in Map Ta Phut Industrial Estate. It has a production capacity of 250 tons per hour of steam, 1,110 cubic meters per hour of clean water, and 230 cubic meters per hour of demineralized water as the plant uses a steam generator, which is inferior in efficiency than other plants. As a result, GLOW does not enter into a long-term contract for steam distribution rather, it will be sold to serve the needs of customers in the short term during the start-up period and during the period of excess demand and used to strengthen the overall production system to be more stable. Glow Energy Phase 1 selling industrial water mainly for industrial users in the Map Ta Phut Industrial Estate.

4. Glow Energy Phase Phase 2 (Glow Energy Phase 2)

Glow Energy Phase 2 is a Cogeneration Plant, which began commercial operations in April 1996 with total generating capacity of 281 MW of electricity and 300 tons per hour of steam. 120 MW of electricity produced is sold to EGAT and the rest is sold to industrial users in Map Ta Phut Industrial Estate. Also, Glow Energy Phase 2 entered into steam distribution contract with industrial users in Map Ta Phut Industrial Estate. Glow Energy Phase 2 also has a treatment plant of turning wastewater to clean water in the amount of 900 cubic meters per hour and 280 cubic meters of mineral water per hour which used within Glow Energy Phase 1 and sold to industrial users in Map Ta Phut and nearby industrial estates.

5. Glow Energy Phase Phase 4 (Glow Energy Phase 4)

Glow Energy Phase 4 is a gas-fired cogeneration plant located in Map Ta Phut Industrial Estate, which began commercial operations in January 2005 with total capacity 77 MW of electricity, 137 tons per hour of steam, 1,500 Cubic meter per hour of clean water, and 550 cubic meters per hour of demineralized water. All electricity is supplied to EGAT while steam, clean water, and demineralized water are distributed to industrial users in the Map Ta Phut Industrial Estate and nearby industrial estates.

6. Glow Energy Phase Phase 5 (Glow Energy Phase 5)

Glow Energy Phase 5 is located in the same area as Glow SPP 3 (Glow SPP 3) in Map Ta Phut Industrial Estate. This power plant consists of a gas turbine, steam generator, and steam turbines. Glow Energy Phase 5 able to generate a maximum of 328 MW of electricity. The electricity and steam generated from the power plant will be

distributed over existing GLOW transmission lines. This is a large combined cycle and steam power plant compared to other combined cycle and steam power plants that GLOW currently has. Due to the size and efficiency of the Glow Energy Phase 5, the power plant operated a Base Load Unit while the combined cycle and steam power plants other smaller units will operate to generate electricity to sell to EGAT and balance the loads distributed to industrial users. The power plant began commercial operations in September 2011.

7. Glow CFB 3 (Glow CFB 3)

Glow CFB 3 is a coal fired power plant consisting of a boiler and steam turbines by commencing commercial operations In November 2010. Glow CFB 3 located in the same area as GLOW SPP 3 in Map Ta Phut Industrial Estate. The power plant is designed with a generating capacity of 85 MW of electricity and 79 tons per hour of steam or a total electrical capacity of 115 MW when no steam is produced. By selling electricity and steam to GPSC industrial users in Map Ta Phut Industrial Estate.

8. Glow SPP 2 (GLOW SPP 2) / Glow SPP 3 (GLOW SPP 3) (Phase 3)

GLOW SPP 2 and GLOW SPP 3 are natural gas and coal-fired combined cycle power plants, which located in the Map Ta Phut Industrial Estate and began commercial operations in March 1999. GLOW SPP 2 and GLOW SPP 3 are considered the same power plants.

GLOW SPP 2 and GLOW SPP 3 are divided into two parts: GLOW SPP 2, a gas turbine power plant with total capacity of approximately 35 MW of electricity with 2 steam generators. GLOW SPP 3 coal-fired power plants, consisting of two 222 MW coal and natural gas cogeneration generators, each consisting of: 1 steam turbine, 2 units of gas turbine approximately 35 MW, 2 steam generators and 1 boiler. GLOW SPP 2 and GLOW SPP 3, have a total power generation capacity of 513 MW of electricity, 190 tons per hour of steam, and 150 cubic meters per hour of demineralized water.

GLOW SPP 2 and GLOW SPP 3 use a cogeneration process from natural gas and coal. The power plant uses a gas turbine and steam turbine system to generate electricity and a CFB (Circulating Fluidized Bed Boiler) type boiler to produce steam. Unlike GPSC's other power plants, which use natural gas as their primary fuel, GLOW SPP 2 and GLOW SPP 3 use both coal and natural gas as their production fuel. Although the cycle of production at this power plant is different from that of conventional power plants. But the equipment used It is an international standard equipment for the general leading electricity generating industry. GPSC uses this technology for coal-fired

power generation to increase the use of coal fuel, which is more efficient and reduces the use of natural gas as a main fuel in production. The electricity produced from GLOW SPP 2 and GLOW SPP 3 will be sold to EGAT.

9. Glow SPP 11 Phase 1 (GLOW SPP 11 Phase 1)

GLOW SPP 11 Phase 1 is a natural gas-fired cogeneration plant, located in the Siam Eastern Industrial Park. GLOW SPP 11 Phase 1 began commercial operations in October 2000.

The power plant consists of two gas turbines, one steam turbine and one water chiller and one backup water chiller. The power plant has a generating capacity of 120 MW of electricity and 2,200 tons of chilled water. The electricity produced from this power plant will be sold to EGAT and electricity and chilled water will be distributed to industrial users in the Siam Eastern Industrial Park through the network of transmission lines and chilled water pipes of GPSC

10. Glow SPP 11 Phase 2 (Glow SPP 11 Phase 2)

Glow SPP 11 phase 2 combined cycle power plant which uses natural gas as fuel located in the Eastern Industrial Park and began commercial operations in December 2012

Power plants consist of two natural gas turbines, one steam turbine, an absorption cooling system and an electric cooling system for increasing productivity from the natural gas turbine. The power plant has a capacity of 110 MW of electricity and 1,200 tons per hour of chilled water. Glow SPP 11 phase 2 sells electricity to EGAT and the rest of electricity and cold water for industrial users in the Eastern Industrial Park Industrial Estate through transmission lines and chilled water pipes

11. Glow SPP 11 Phase 3 (Glow SPP 11 Phase 3)

Glow SPP 11 phase 3 includes a small generator which uses natural gas as a fuel of 4 units. The power plant is located in the vicinity of the Glow SPP 11 plant with a capacity of 23 MW of electricity. All four generators have been installed and began commercial operation in October 2006

12. Glow SPP 11 Phase 3 (Expansion) (Glow SPP 11 Phase 3 Expansion)

Glow Power Plant SPP 11 Project 3 (Expansion) consists of two natural gas-powered gas engine generator, which located in the immediate vicinity of the Glow SPP 11 plant

with a capacity of 19 MW of electricity. Both generators have been installed and began commercial operations in April 2015

Renewable – energy Power Plants

There are 3 renewable energy power plants: 1. Solar Glow Power Plant
2. Solar Roof Mounted Power Project and Chonburi Clean Energy Power Plant.

1. Glow Energy Solar

Glow Energy Solar located in the Asia Industrial Estate, which began operations in August 2012. Glow Energy Solar has an installed capacity of 1.55 MW of electricity, which generates and distributes electricity to. With PEA

2. Glow Energy Rooftop

Glow Energy Rooftop Project 1 is a solar power generation system that has been installed on the roof of the car park of the Siam Michelin plant, which is located in WHA Saraburi Industrial Land, Nong Khae District, Saraburi Province. Glow Energy Rooftop commenced commercial operation in November 2018. There was an installed capacity of 0.87 MW of electricity. Glow Energy Rooftop Project 2 installed on the roof of Continental Automotive (Thailand) Co., Ltd., which located in an industrial estate Amata City, Rayong Province, with an installed capacity of 0.99 MW of electricity, commenced commercial operation in February 2019.

3. Chonburi Clean Energy

Chonburi Clean Energy Power Plant is a power plant that uses non-hazardous industrial waste with an installed power generation capacity of 8.63 MW of electricity, capable of handling the disposal of non-hazardous industrial waste up to 100,000 tons per year in the supply of waste in the industry. Chonburi Clean Energy Power Plant has signed an agreement to supply industrial waste with a waste collection, treatment and disposal company. To procure industrial waste from various industrial estates in Chonburi Province and nearby. The power plant will bring industrial waste into the combustion chamber to generate electricity. By using technology that is highly efficient and environmentally friendly. Selling electricity to PEA's system in the amount of 6.90 MW under the power purchase agreement for a period of 20 years, with commercial operations commencing in November 2019.

Hydropower Plant

There is 1 hydropower plant, namely Huai Ho Power Plant (HHPC).

1. Houay Ho (HHPC)

HHPC is a hydroelectric power plant, which commercial operation on September 3, 1999. HHPC located in Attapu Province in the south of the Lao PDR with an installed capacity of 152 MW of electricity, operating as an Independent Power Producer (IPP). Produces and sells electricity to EGAT in the amount of 126 MW of electricity and to Lao State Electricity Enterprise (Electricite Du Lao - "EDL") of 2 MW.

- (3) Power Plant that GPSC invest in associates and joint venture

Fossil Fuel Power Plant

There are 4 fossil fuel power plants: 1. Ratchaburi Power Company Limited (RPCL) 2. Navanakorn Electricity Generating Company Limited (NNEG) 4. Bang Pa-in Cogeneration Company Limited Project 1 (BIC-1) and 5. Bang Pa-in Cogeneration Company Limited Project 2 (BIC-2)

1. Ratchburi Power Company Limited (RPCL)

RPCL is a large private power producer (IPP) with a total generating capacity of 1,400 MW of electricity for 2 units of 700 MW per unit located in Damnoen Saduak District Ratchaburi Province. All electricity generated is distributed to EGAT in accordance with the Power Purchase Agreement, which has a term of 25 years from the date of the electricity supply to EGAT's system. The 1st unit started in March 1, 2008 and the 2nd unit started in June 1, 2008. The contract will expire in 2033, whereby electricity generation for distribution is in accordance with EGAT's terms and conditions.

RPCL is a combined cycle power plant that uses natural gas as its main fuel and diesel fuel as a reserve fuel. The process of generating electricity is the same as the Sriracha power plant. RPCL has two 245 MW gas turbine generators per unit to produce waste heat steam generators and 275 MW steam turbine generators 1 set per 1 unit of production. RPCL has entered into an operation and maintenance contract with Chubu Ratchaburi Electric Services (CRESCO) for operation and maintenance of other parts of the machine, apart from gas turbines. The contract expires in 2022. CRESCO has entered into a long-term maintenance service agreement with Mitsubishi Hitachi Power System for its gas turbines, which will expire in 2020, with a 25-year natural gas purchase agreement with PTT expiring in 2033. With gas price conditions for Independent Power Producers, RPCL can pass the fuel costs included in the EP to EGAT. For RPCL to operate on reserve fuel, EGAT will compensate the increased fuel cost to RPCL, whereby RPCL has entered into a high-speed diesel purchase agreement with Susco Company Limited (SUSCO) and PTT for use as a reserve fuel. In the event

that it is unable to supply natural gas, both contracts are for a period of 5 years, ending in 2021.

RPCL produces and distributes all electricity to EGAT under the Independent Power Purchase of the Power Purchase Agreement, granting EGAT the right to determine the purchase volume of electricity through long-term annual and monthly power purchase plans and purchase plans. RPCL must notify EGAT the long-term and short-term availability of electricity generation for both long-term and short-term electricity. Regardless of the amount of electricity sold to EGAT, RPCL will receive AP revenue in accordance with the availability paid by RPCL and in accordance with the power purchase agreement. EP is obtained from the production of electricity according to the actual production volume of EGAT. EGAT has the right under the power purchase agreement to order RPCL to stop producing electricity or producing under full power. Production by EGAT

2. Nava Nakorn Electricity Generating Company Limited (NNEG)

NNEG is a Small Power Producer (SPP) with a generating capacity of approximately 125 MW of electricity and approximately 30 tons per hour of steam. NNEG located in the Nava Nakorn Industrial Promotion Zone Pathumthani Province. NNEG sold electricity under the power purchase agreement for Small Power Producers in the form of Firm, 90 MW of electricity to EGAT and supplied the rest of the electricity and steam to industrial users in Navanakorn Industrial Promotion Zone.

NNEG is a Cogeneration power plant using natural gas as a fuel for electricity generation by entering into a natural gas purchase agreement with PTT for 25 years ended in 2041 and entered into a raw water purchase agreement with Navanakorn Public Company Limited. NNEG has 2 sets of approximately 45 MW gas turbine generators, 2 waste heat steam generators, 1 set of 35 MW steam turbine generator, and also designed and installed a system to reduce air temperature before combustion in order to increase the power generation capacity. NNEG commercially operate on June 3, 2016.

3. Bang Pa-In Cogeneration Company Limited Phase 1 (BIC-1)

BIC-1 is a Small Power Producer (SPP) with a generating capacity of approximately 117 MW of electricity and 20 tons per hour of steam. BIC-1 located in Bang Pa-in Industrial Estate Bang Pa-in District Phra Nakhon Si, Ayutthaya Province. BIC-1 sells electricity under the Power Purchase Agreement for Small Power Producers in the form of 90 MW Firm (SPP Firm) mainly to EGAT and partially distributes electricity and steam to industrial users in Bang Pa-in Industrial Estate.

BIC-1 is a Cogeneration power plant using natural gas as a fuel to generate electricity and entering into a natural gas purchase agreement with PTT for 25 years ended in 2038 and raw water purchase agreement from TTW Public Company Limited. BIC-1 has the main equipment as follows: Two sets of gas turbine generators to spin the generators, the exhaust from the gas turbine will be used to transfer heat to the water to produce steam by 2 sets of waste heat steam generator through the steam turbine to drive one steam turbine generator and all the rest of the steam sold to industrial users. BIC has entered into two long-term maintenance service contracts with General Electric International Operations Company Inc. and GE Packaged Power. Inc. for gas turbines, which the contract will expire in 2027.

BIC-1 sells electricity under the Power Purchase Agreement for the Small Power Producer in the form of 90 MW to EGAT in accordance with the Power Purchase Agreement. The contract period is 25 years from the date of the commencement of electricity supply to EGAT's system since 2013 and the contract will expire in 2038. The remaining electricity is distributed to industrial users in Bang Pa-in Industrial Estate in terms of long-term power purchase agreements. The term of the agreement is about 15 years. Steam and Industrial water supply agreement is entered with industrial users in Bang Pa-in Industrial Estate.

4. Bang Pa-In Cogeneration Company Limited Phase 2 (BIC-2)

BIC-2 is a Small Power Producer (SPP) with a generating capacity of approximately 117 MW of electricity and 20 tons per hour of steam. BIC-2 located in Bang Pa-in Industrial Estate Bang Pa-in District Phra Nakhon Si, Ayutthaya Province. BIC-2 sells electricity under the Power Purchase Agreement for Small Power Producers in the form of 90 MW Firm (SPP Firm) mainly to EGAT and partially distributes electricity and steam to industrial users in Bang Pa-in Industrial Estate.

BIC-2 is a Cogeneration Power Plant using natural gas as a fuel to generate electricity and entering into a natural gas purchase agreement with PTT for 25 years termination in 2042 and raw water purchase agreement from TTW Public Company Limited, which is a year-to-year renewal of the contract. BIC-2 has two sets of gas turbine generators to spin the generators, the exhaust from the gas turbine will be used to transfer heat to the water to produce steam by 2 sets of waste heat steam generator through the steam turbine, and to drive 1 set of steam turbine generators and all the rest of the steam sold to industrial customers.

BIC-2 sells electricity under the Power Supply Agreement for Small Power Producers in the form of 90 MW to EGAT in accordance with the Power Purchase Agreement,

which has a term of 25 years from the date of the commencement of supplying electricity to the EGAT system in 2017. The contract will expire in 2042 and distribute the remaining electricity to industrial users in Bang Pa-in Industrial Estate in terms of long-term power purchase agreements. The contract expires in 15 years. Also, there is a steam purchase agreement and Industrial water with industrial users in the Bang Pa- in Industrial Estate.

Renewable – energy Power Plants

There are 1 renewable energy power plants: 1. Thai Solar Renewable Company Limited (TSR)

1. Thai Solar Renewable company Limited (TSR)

TSR operates by investing 100 percent in Siam Solar Energy 1 Company Limited (“SSE1”) to develop a Solar Power Plant. SSE1 is a Very Small Power Producer (VSPP) that uses solar power generation process by Photovoltaic system or solar cells installed on the ground (Solar Farm type PV power plants) with an installed capacity of approximately 8 MW for 10 projects, total contracted capacity of 80 MW, and distribute all electricity to PEA's system.

SSE1 hires two turnkey contractors, Conergy and SunEdison, to design and construct, supply, test and guarantee for the construction and development of Solar Power Plants. The turnkey contractor guarantees the minimum amount of electricity produced each year for a period of 10 years starting from commercial operation. The contractors will compensate the revenue portion that SSE1 loses if the guaranteed number of power units cannot be produced under the conditions stipulated in the contract. In addition, SSE1 has entered into a management and maintenance agreement with Conergy (Thailand) Co., Ltd. and N. SIS Co., Ltd. to manage and maintain the power plants for the term of 10 years from the date of commercial operation.

The key raw material used in Solar Power Plant is solar, which depend on the location. Topography and climate are also important. GPSC has studied the intensity of light before deciding on a location of solar power plants. SSE1 sold all electricity into PEA's system in accordance with 10 VSPP power purchase agreements dated April 11, 2012 for projects SSE1-PV01 to SSE1-PV05 and on July 25. In 2012, the project SSE1-PV06 to SSE1-PV10 has a power purchase volume of 8 MW per contract, with a term of 5 years and can be automatically renewed for 5 years each time. Selling electricity with a system for the purchase price of electricity in a form of incremental purchase price.

The income is divided into 2 parts: revenue according to the electricity tariff that is wholesale to PEA, which will change according to changes in fuel cost and the maximum quantity of purchased power does not exceed that stipulated in the power purchase agreement. The purchase price of electricity, which SSE1-PV01 to SSE1-PV10 projects received Adder at the rate of 6.5 Baht per kWh. It is supported for a period of 10 years from the start of commercial operation.

Hydropower Plant

There are 1 hydroelectric power plants: 1. Nam Lik 1 Power Company Limited (NL1PC).

1. Nam Lik 1 Power Company Limited (NL1PC)

NL1PC is a company incorporated in the Lao PDR. The objective is to develop the Nam Lik 1 power plant project, a 65 MW dam hydroelectric power plant, located 90 kilometers north of the Vientiane capital, which is a concrete dam. Width 160 meters blocking the Lig River which is a tributary of the Ngum River in Lao PDR, with a head of approximately 21.5 meters high, using two 32.5 MW bulb turbines.

NL1PC signed a concession agreement with the government of the Lao PDR on February 6, 2013 in the form of a construction, operating and transferring contract to the government of the Lao PDR. The concession agreement is 30 years from the date the Lao PDR government complies with the conditions precedent. NL1PC has a power purchase agreement with EDL until the end of the concession agreement. The concession agreement and the power purchase agreement will expire in 2044.

The main raw material for hydroelectric power generation is water that flows naturally in the river and the construction of the dam, which use for generating electricity instead of the construction of a reservoir. Although water is naturally derived and has no costs, the amount of water at different times is uncertain and unpredictable. Depending on the weather and season at different times, GPSC has studied the adequacy of water supply and has taken into account such factors in power plant design. NL1PC supplied all power to EDL under a long-term power purchase agreement. Until the end of the contract for a period of approximately 25 years, with the Nam Lik 1 Power Plant Project officially commenced its commercial operation from July 1, 2019.

(4) There are 4 fossil fuel and renewable energy power plants under construction and investment: 1. Energy Recovery Unit Co., Ltd. (ERU) 2. Comprehensive waste management project (Rayong Waste to Energy: WTE) 3. The Company's extension of joint power plant

projects. Nava Nakorn Electricity Generating Company Limited (NNEG) and 4. GLOW SPP Replacement Project

1. Energy Recovery Unity (ERU)

A subsidiary of GPSC to develop the Energy Recovery Unit (ERU) with the objective of being a utility support unit to supply the production process of GPSC's clean energy project with a capacity of 250 MW of electricity, where the ERU project uses oil residue as main fuel. This is a by-product from the distillation process of the Clean Energy Project. GPSC or its subsidiary will receive the ownership transfer of the ERU Project upon completion of the construction project and receive a construction certificate. Under the clean energy project. ERU operation will be completed in the third quarter of 2023.

2. Rayong Waste to energy (WTE)

WTE is a comprehensive waste management program. There are two sub-projects located in the Rayong province. Refused Derived Fuel ("RDF") project completed construction and the 9.8 MW RDF, which is currently under construction and has plans. To start selling commercial power as of the second quarter of 2021.

3. Nava Nakorn Electricity Generating company Limited (Expansion Project)
(NNEG)

NNEG is the expansion project of the power generation capacity of the Small Power Producer. The expansion of NNEG will add 60 MW of electricity, 10 tons per hour of steam. This resulted in a total net production of electricity and steam of 185 MWs and 40 tons per hour of steam, which is expected to open for commercial operation in the third quarter of 2020.

4. SPP Replacement of GLOW

According to the Energy Regulatory Commission (ERC) issued a notice to purchase electricity from Small Power Producers of Firm type for cogeneration system that will expire in 2019-2025, which must be a new construction Power Plant. By purchasing electricity more than 10 MW but not more than 30 MW or the SPP Replacement project by opening the power offering to EGAT in 2019.

GLOW has submitted an offer to sell electricity in accordance with the aforementioned SPP Replacement project and has 3 projects approved by EGAT, consisting of 6 power purchase agreements, with projects running in 2 phases.

Company / Power Plant	Location	Production Capacity								Type of Power Plant	Fuel	Power Purchase Agreement	COD
		Electricity		Steam		Chilled Water		Industrial Water					
		(MW)		(Ton/hour)		(Ton of refrigeration)		(Cu.m/hr.)					
		Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding				
Power Plant operate by GPSC													
GPSC	Sriracha Chonburi	700	700	-	-	-	-	80	80	IPP	Natural Gas 25 years contract	EGAT 700 MW 25 years contract Ending 2025	2000
GPSC / CUP-1	Hemaraj Eastern Industrial Estate Rayong	226	226	890	890	--	-	720	720	SPP (Non-firm)	Natural Gas 15 years contract	EGAT 40 MW 5 years contract and renew every 5 years Ending 2020 Industrial users 10-15 years contract Ending 2017 – 2026 and extend for 5 years	December 2006
GPSC / CUP-2	Hemaraj Eastern Industrial Estate Rayong	113	113	170	170	-	-	510	510	SPP (Non-firm)	-	EGAT 60 MW 5 years contract and extend for 5 years Ending 2020 Industrial users 10 years contract Ending 2027 and extend for 5 years	January 2008

Company / Power Plant	Location	Production Capacity								Type of Power Plant	Fuel	Power Purchase Agreement	COD
		Electricity		Steam		Chilled Water		Industrial Water					
		(MW)		(Ton/hour)		(Ton of refrigeration)		(Cu.m/hr.)					
		Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding				
GPSC / CUP-3	Hemaraj Eastern Industrial Estate Rayong	15	15	280	280	-	-	770	770	Cogeneration	Natural Gas 15 years contract	Industrial Users 15 years contract Ending 2024 – 2027 and extend for 5 years	September 2009
GPSC / CUP-4	Asia Industrial Estate Rayong	45	45	70	70	-	-	-	-	Cogeneration	Natural Gas	Industrial users 10 – 15 years contract and extension for 5 years	October 2019
CHPP	Government Complex Chaeng Watthana Bangkok	5	5	-	-	12000	12000	-	-	VSPP	Natural Gas 10 years contract	EGAT 6.4 MW 5 years contract and automatically renew for every 5 years Ending 2020	2009

Company / Power Plant	Location	Production Capacity								Type of Power Plant	Fuel	Power Purchase Agreement	COD
		Electricity		Steam		Chilled Water		Industrial Water					
		(MW)		(Ton/hour)		(Ton of refrigeration)		(Cu.m/hr.)					
		Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding				
IRPC-CP	Rayong	240	122	300	153	-	-	-	-	SPP (firm)	Natural Gas 27 years contract	EGAT 180 MW 25 years contract Ending 2042 Industrial user 27 years contract Ending 2042	Phase 1 in 2015 Phase 2 in 2017
GRP / Solar Power Plant	Pichit Suphan -buri Lopburi and Khonkaen	39.5	39.5	-	-	-	-	-	-	VSPP	Solar Power	PEA	2020
ISP 1	Japan	20.8	20.6	-	-	-	-	-	-	Solar Power plant	Solar power	Tohoku Electric Power 20.8 MW 20 years contract Ending 2037	October 2017

Company / Power Plant	Location	Production Capacity								Type of Power Plant	Fuel	Power Purchase Agreement	COD
		Electricity		Steam		Chilled Water		Industrial Water					
		(MW)		(Ton/hour)		(Ton of refrigeration)		(Cu.m/hr.)					
		Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding				
CHPP	on-ground solar energy power plant in collaboration with Chantaburi's Shrimp Farmers Cooperative Limited Chantaburi	5	5	-	-	-	-	-	-	VSP	Solar power	PEA 25 years contract Ending 2041	
CHPP / on-ground solar energy power plant	Bangkok Chonburi Singhaburi Chiangmai	2.25	2.25	-	-	-	-	-	-	-	Solar power	EPC	
XCPL	Lao PDR	1285	321	-	-	-	-	-	-	-	Hydro power	EGAT 1220 MW EDL 60 MW 25 years contract Ending 2044	October 2019



Company / Power Plant	Location	Production Capacity								Type of Power Plant	Fuel	Power Purchase Agreement	COD
		Electricity		Steam		Chilled Water		Industrial Water					
		(MW)		(Ton/hour)		(Ton of refrigeration)		(Cu.m/hr.)					
		Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding				
Power plants owned by GPSC through GLOW													
GLOW / Glow IPP	WHA Chon Buri Industrial Estate 1 Chonburi	713	677	-	0	-	-	-	-	IPP	Natural Gas	25 years contract Ending 2028	2003
GLOW / GHECO-One	Map Ta Phut Industrial Estate Rayong	660	429	-	-	-	-	-	-	IPP	Coal	25 years contract Ending 2037	2012
GLOW / Glow Energy Phase 1	Map Ta Phut Industrial Estate Rayong	-	-	250	250	-	-	1340	1340	SPP	Natural Gas	-	1994

Company / Power Plant	Location	Production Capacity								Type of Power Plant	Fuel	Power Purchase Agreement	COD
		Electricity		Steam		Chilled Water		Industrial Water					
		(MW)		(Ton/hour)		(Ton of refrigeration)		(Cu.m/hr.)					
		Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding				
GLOW / Glow Energy 2	Map Ta Phut Industrial Estate Rayong	281	281	300	300	-	-	1180	1180	SPP	Natural Gas	EGAT 21 years contract Ending 2017 and extend to 2024 Industrial users 10 – 20 years contract	1996
GLOW / Glow Energy 4	Map Ta Phut Industrial Estate Rayong	77	77	137	137	-	-	2050	2050	SPP	Natural Gas	25 years contract Ending 2030	2005
GLOW / Glow Energy 5	Map Ta Phut Industrial Estate Rayong	328	328	160	160	-	-	-	-	SPP	Natural Gas	Industrial users 10 – 20 years contract	2011

Company / Power Plant	Location	Production Capacity								Type of Power Plant	Fuel	Power Purchase Agreement	COD
		Electricity		Steam		Chilled Water		Industrial Water					
		(MW)		(Ton/hour)		(Ton of refrigeration)		(Cu.m/hr.)					
		Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding				
GLOW / CFB 3	Map Ta Phut Industrial Estate Rayong	85	85	79	79	-	-	-	-	SPP	Coal	Industrial users 10 – 20 years contract	2010
GLOW / Glow SPP 2/ Glow SPP 3 (Phase 3)	Map Ta Phut Industrial Estate Rayong	513	513	190	190	-	-	150	150	SPP	Natural Gas and Coal	EGAT 25 years contract Ending 2024 Industrial users 10 – 20 years contract	1999
GLOW / Glow SPP 11 Phase 1	Siam Eastern Industrial Park Rayong	120	120	-	-	2200	2200	360	360	SPP	Natural Gas	EGAT 25 years contract Ending 2025 Industrial users 10 – 20 years contract	2000
GLOW / Glow SPP 11 Phase 2	Siam Eastern Industrial Park Rayong	110	110	-	-	1200	1200	212	212	SPP	Natural Gas	EGAT 25 years contract Ending 2037 Industrial users 10 – 20 years contract	2012

Company / Power Plant	Location	Production Capacity								Type of Power Plant	Fuel	Power Purchase Agreement	COD
		Electricity		Steam		Chilled Water		Industrial Water					
		(MW)		(Ton/hour)		(Ton of refrigeration)		(Cu.m/hr.)					
		Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding				
GLOW / Glow SPP 11 Phase 3	Siam Eastern Industrial Park Rayong	23	23	-	-	-	-	-	-	SPP	Natural Gas	Industrial users 10 – 20 years contract	2006
GLOW / Glow SPP 11 Phase 3 (Expansion)	Siam Eastern Industrial Park Rayong	19	19	-	-	-	-	-	-	SPP	Natural Gas	Industrial users 10 – 20 years contract	2015
GLOW / Glow Energy Solar	Asia Industrial Estate Samut Prakarn	1.55	1.55	-	-	-	-	-	-	VSPP	Solar power	PEA	2012
GLOW / Glow Energy Rooftop (Installed in the roof, Phase 1)	WHA Saraburi Industrial Land Sara Buri	0.87	0.87	-	-	-	-	-	-	Solar Rooftop	Solar power	Private PPA	2018

Company / Power Plant	Location	Production Capacity								Type of Power Plant	Fuel	Power Purchase Agreement	COD
		Electricity		Steam		Chilled Water		Industrial Water					
		(MW)		(Ton/hour)		(Ton of refrigeration)		(Cu.m/hr.)					
		Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding				
GLOW / Glow Energy Rooftop (Installed in the roof, Phase 2)	Amata City Rayong Industrial Estate Rayong	0.99	0.99	-	-	-	-	-	-	Solar Rooftop	Solar power	Private PPA	2019
GLOW / Chonburi Clean Energy	WHA Chonburi Industrial Estate Chonburi	8.6	2.9	-	-	-	-	-	-	VSP	Industrial waste	PEA 8 MW 20 years contract Ending 2041	2019
GLOW / Houay Ho	Lap PDR	152	102	-	-	-	-	-	-	IPP	Hydro power	EGAT 126 MW EDL 2 MW 30 years contract Ending 2029	1999
Power Plant that GPSC invest in associates and joint venture													
RPCL	Rachaburi	1400	210	-	-	-	-	-	-	IPP	Natural Gas 25 years contract	EGAT 1400 MW 25 years contract Ending 2033	June 2008

Company / Power Plant	Location	Production Capacity								Type of Power Plant	Fuel	Power Purchase Agreement	COD
		Electricity		Steam		Chilled Water		Industrial Water					
		(MW)		(Ton/hour)		(Ton of refrigeration)		(Cu.m/hr.)					
		Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding				
BIC / Phase 1	Bang Pa-in Industrial Estate Ayutthaya	117	29	20	5	-	-	-	-	SPP (firm)	Natural Gas 25 years contract	EGAT 90 MW 25 years contract Ending 2038 Industrial users 15 years contract Ending 2025 - 2029	June 2013
BIC / Phase 2	Bang Pa-in Industrial Estate Ayutthaya	117	29	20	5	-	-	-	-	SPP (firm)	Natural Gas 25 years contract	EGAT 90 MW 25 years contract Ending 2042 Industrial users 15 years contract Ending 2032	June 2017
NNEG	Nava Nakorn Industrial Promotion Zone Pathum Thani	125	38	30	9	-	-	-	-	SPP (firm)	Natural Gas 25 years contract	EGAT 90 MW 25 years contract Ending 2041 Industrial users 10 – 15 years Ending 2041	2016

Company / Power Plant	Location	Production Capacity								Type of Power Plant	Fuel	Power Purchase Agreement	COD
		Electricity		Steam		Chilled Water		Industrial Water					
		(MW)		(Ton/hour)		(Ton of refrigeration)		(Cu.m/hr.)					
		Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding				
NNEG / Expansion Phase	Nava Nakorn Industrial Promotion Zone Pathum Thani	60	18	10	3	-	-	-	-	Cogeneration	Natural Gas	Industrial users	Under construction expected to be completed in 2020
SSE 1	Kanchanaburi Suphanburi	80	32	-	-	-	-	-	-	VSP	Solar power	PEA 80 MW 5 years contract and automatically renew for 5 years	2013 – 2014
NL1PC	Lao PDR	65	26	-	-	-	-	-	-	-	Hydro power	EDL 65 MW 25 years contract Ending 2044	July 2019
Power plants under GPSC's ongoing investment or construction													
ERU / Power Generation Project	Chonburi	250	250	175	175	-	-	-	-	Cogeneration	CFP Oil residue, a by-product of the CFP refining process	Thaioil PCL 220 MW 25 years contract Ending 2048	Quarter 3 2023



Company / Power Plant	Location	Production Capacity								Type of Power Plant	Fuel	Power Purchase Agreement	COD
		Electricity		Steam		Chilled Water		Industrial Water					
		(MW)		(Ton/hour)		(Ton of refrigeration)		(Cu.m/hr.)					
		Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding	Maximum installed capacity	Capacity according to shareholding				
GPSC / RDF- fueled power plant project	Rayong	9.8	9.8	-	-	-	-	-	-	VSPP	Commu- nity waste	PEA 8 MW 20 years contract Ending 2041	2021

8) Financial Position and Performance of GPSC

The IFA summarized GPSC's performance and financial position based on financial statements from the year 2017 - 2018 audited by KPMG Phoomchai Company Limited and financial statement for the year 2019 and Quarter 2 for the year 2020 audited and reviewed by Pricewaterhouse Coopers Company Limited, as summarized below

1) Key Summary of GPSC's Consolidated financial statement

Consolidated Income Statement

Table: Summary of key figures in GPSC's statement of comprehensive income in 2017-2019 and Quarter 2 for the year 2019 and 2020

	2017		2018		2019		Quarter 2 2019		Quarter 2 2020	
	Baht million	%	Baht million	%	Baht million	%	Baht million	%	Baht million	%
Revenue from sales and services	19,325.0	97.0	24,337.3	97.8	65,789.1	98.8	28,673.0	98.7	36,021.4	98.8
Revenue from finance lease	591.7	3.0	542.9	2.2	773.4	1.2	383.7	1.3	424.6	1.2
Total revenue	19,916.8	100.0	24,880.1	100.0	66,562.5	100.0	29,056.7	100.0	36,446.0	100.0
Cost of sales and services	(16,375.9)	(82.2)	(20,298.6)	(81.6)	(55,063.4)	(82.7)	(23,467.1)	(80.8)	(29,560.7)	(81.1)
Gross profit	3,540.8	17.8	4,581.6	18.4	11,499.1	17.3	5,589.6	19.2	6,885.4	18.9
Revenue from sales of Nitrogen	108.0	0.5	-	-	-	-	-	-	-	-
Cost of Nitrogen	(102.6)	(0.5)	-	-	-	-	-	-	-	-
Currency exchange gain (loss)	(3.3)	(0.0)	(14.7)	(0.1)	317.4	0.5	189.9	0.7	5.6	0.0
Dividend income	270.0	1.4	135.0	0.5	185.4	0.3	75.0	0.3	3.0	0.0
Other revenue	478.0	2.4	285.6	1.2	732.9	1.1	347.7	1.2	549.1	1.5
Selling expense	(10.6)	(0.1)	-	-	-	-	-	-	-	-
Administrative expense	(839.5)	(4.2)	(936.6)	(3.8)	(2,183.7)	(3.3)	(1,098.9)	(3.8)	(929.1)	(2.5)
Gain (loss) from measurement of financial instruments	-	-	-	-	-	-	-	-	(40.3)	(0.1)
Share of profit from investments in associates and joint ventures	-	-	594.8	2.4	-	-	236.4	0.8	42.1	0.1
Earning before interest expense and tax	3,957.9	19.9	4,645.7	18.7	11,388.2	17.1	5,339.7	18.4	6,515.9	17.9
Finance cost	(361.0)	(1.8)	(513.7)	(2.1)	(5,139.9)	(7.7)	(1,982.8)	(6.8)	(2,032.4)	(5.6)
Profit before tax	3,596.9	18.1	4,132.0	16.6	6,248.3	9.4	3,356.9	11.6	4,483.5	12.3
Income tax	(256.8)	(1.3)	(242.8)	(1.0)	(247.5)	(0.4)	(75.6)	(0.3)	(537.4)	(1.5)
Profit for the period	3,340.2	16.8	3,889.2	15.6	6,000.8	9.0	3,281.4	11.3	3,946.1	10.8
Profit to owner of the parent	3,174.6	16.0	3,359.2	13.5	4,060.8	6.1	2,023.3	7.0	3,475.9	9.5
Non-controlling interests	165.6	0.8	530.0	2.1	1,940.02	2.9	1,258.1	4.3	470.2	1.3

Source: Consolidated financial statement of GPSC for the period 2017 - 2019 and Quarter 2 of the year 2020

Consolidated Statement of Financial Position

Table: Summary of key figures in GPSC's statement of Financial position in 2017-2019 and Quarter 2 for 2020

	31 Dec 2017		31 Dec 2018		31 Dec 2019		30 June 2020	
	Baht million	%	Baht million	%	Baht million	%	Baht million	%
Asset								
Cash and cash equivalents	3,964.8	6.6	5,659.8	8.8	18,838.7	7.5	17,393.3	7.0
Deposits at financial institutions used as collateral	286.4	0.5	339.6	0.5	249.7	0.1	743.0	0.3
Short-term investments	6.0	0.0	10.0	0.0	964.9	0.4	-	0.0
Trade receivables	3,663.4	6.1	4,308.1	6.7	10,084.0	4.0	9,486.1	3.8
Current portion of finance lease receivable	605.2	1.0	700.9	1.1	1,106.2	0.4	1,155.9	0.5
Other receivables	687.6	1.2	273.0	0.4	582.5	0.2	547.2	0.2
Dividend receivables	-	0.0	89.8	0.1	102.2	0.0	96.8	0.0
Fuel, spare parts and supplies	484.8	0.8	626.9	1.0	6,723.5	2.7	6,707.2	2.7
Other current assets	219.8	0.4	155.8	0.2	267.6	0.1	168.6	0.1
Total current assets	9,918.0	16.5	12,163.9	18.9	38,919.3	15.4	36,298.1	14.5
Finance lease receivable	5,354.2	8.9	4,653.3	7.2	7,578.5	3.0	6,850.4	2.7
Deposits at financial institutions used as collateral	-	0.0	-	0.0	200.0	0.9	200.0	0.1
Investments in associates	6,148.3	10.3	7,065.1	11.0	7,966.7	3.2	7,498.0	3.0
Investments in joint ventures	2,626.1	4.4	2,700.3	4.2	2,658.4	1.1	2,677.1	1.1
Investments in subsidiaries	-	0.0	-	0.0	-	0.0	-	0.0
Other long-term investments	2,923.4	4.9	3,213.6	5.0	3,276.1	1.3	-	0.0
Financial assets measured at fair value through profit or loss	-	0.0	-	0.0	-	0.0	92.1	0.0
Financial assets measured at fair value through other comprehensive income	-	0.0	-	0.0	-	0.0	2,606.4	1.0
Long-term loans to and interest receivables from related parties	2,965.0	4.9	3,061.0	4.8	3,479.5	1.4	3,467.6	1.4
Property, plant and equipment	27,245.7	45.4	28,535.2	44.3	101,272.0	40.2	101,580.9	40.6
Assets not used in operation	73.1	0.1	70.6	0.1	64.3	0.0	64.3	0.0
Intangible assets	510.0	0.9	2,281.0	3.5	46,062.4	18.3	45,001.6	18.0
Right-of-use assets	-	0.0	-	0.0	-	0.0	2,606.8	1.0
Goodwill	14.9	0.0	15.0	0.0	36,104.0	14.3	36,481.2	14.6

	31 Dec 2017		31 Dec 2018		31 Dec 2019		30 June 2020	
	Baht million	%	Baht million	%	Baht million	%	Baht million	%
Deferred tax assets	-	0.0	0.1	0.0	3,118.3	1.2	3,325.0	1.3
Right of use of natural gas distribution pipeline	558.9	1.0	-	0.0	-	0.0	-	0.0
Deferred tax assets	1,043.4	1.7	-	0.0	-	0.0	-	0.0
Other non-current assets	587.3	1.0	679.9	1.1	1,317.1	0.5	1,221.2	0.5
Non-current asset	50,050.4	83.5	52,275.1	81.1	213,097.3	84.6	213,672.8	85.5
Total Assets	59,968.4	100.00	64,439.0	100.0	252,016.6	100.00	249,970.9	100.0
Liabilities								
Short-term loans	-	0.0	-	0.0	19,252.7	7.6	4,492.6	1.8
Trade payables	1,622.9	2.7	1,901.5	3.0	4,581.4	1.8	3,842.3	1.5
Other payables	607.7	1.0	991.9	1.5	3,551.3	1.4	2,453.5	1.0
Payable for assets under construction	576.6	1.0	557.0	0.9	749.5	0.3	305.2	0.1
Current portion of lease liabilities	-	0.0	-	0.0	-	0.0	138.5	0.1
Short-term loans from related parties	-	0.0	-	0.0	4,913.1	1.9	-	0.0
Current portion of long-term lease	-	0.0	-	0.0	-	0.0	-	0.0
Current portion of long-term loans from financial institutions	990.6	1.7	1,052.2	1.6	2,565.7	1.0	3,042.9	1.2
Short-term derivative liabilities	-	0.0	-	0.0	-	0.0	67.2	0.0
Provision	101.2	0.2	101.2	0.2	-	0.0	-	0.0
Other current liabilities	188.6	0.3	123.7	0.2	1,134.5	0.5	1,637.4	0.7
Total current liabilities	4,087.6	6.8	4,727.4	7.3	36,748.1	14.6	15,979.7	6.4
Lease liabilities	-	0.0	-	0.0	-	0.0	2,510.2	1.0
Derivative liabilities	-	0.0	-	0.0	-	0.0	2,215.2	0.9
Long-term loans from financial institutions	9,824.0	16.4	11,456.9	17.8	26,648.9	10.6	42,696.2	17.1
Debentures	4,993.5	8.3	4,995.0	7.8	52,707.5	20.9	52,638.4	21.1
Provisions for employee benefits	76.7	0.1	140.4	0.2	565.6	0.2	594.4	0.2
Deferred tax liabilities	507.7	0.9	491.7	0.8	10,374.6	4.1	10,066.6	4.0
Retentions	0.1	0.0	173.8	0.3	245.3	0.1	248.7	0.1
Other non-current liabilities	105.1	0.2	104.8	0.2	14,550.8	5.8	14,366.7	5.7

	31 Dec 2017		31 Dec 2018		31 Dec 2019		30 June 2020	
	Baht million	%	Baht million	%	Baht million	%	Baht million	%
Total non-current liabilities	15,506.9	25.9	17,362.6	27.0	105,092.8	41.7	125,336.4	50.1
Total liabilities	19,594.5	32.7	22,089.9	34.3	141,840.9	56.3	141,316.1	56.5
Equity								
Authorized share capital	14,983.0	25.0	14,983.0	23.3	28,197.3	11.2	28,197.3	11.3
Premium on ordinary shares	-	0.0	9,485.1	14.7	70,175.9	27.9	70,175.9	28.1
Deficit from the change in the ownership interests in subsidiaries	9,485.1	15.8	-	0.0	(14,992.0)	-6.0	(14,992.0)	-6.0
Other surpluses (deficits)	(1,118.2)	-1.9	(1,118.2)	-1.7	(1,118.2)	-0.4	(1,118.2)	-0.4
Retained earnings	-	0.0	-	0.0	-	0.0	-	0.0
Legal reserve	708.0	1.2	840.4	1.3	1,479.8	0.6	1,479.8	0.6
Unappropriated	14,496.2	24.2	15,804.9	24.5	17,273.5	6.9	18,045.4	7.2
Other components of equity	(7.2)	-0.0	(3.3)	-0.0	(123.3)	-0.1	(1,913.5)	-0.8
Equity attributable to owners of the parent	38,546.9	64.3	39,992.0	62.1	100,893.0	40.0	99,874.7	40.0
Non-controlling interest	1,827.0	3.1	2,357.1	3.7	9,282.7	3.7	8,780.1	3.5
Total equity	40,373.9	67.3	42,349.1	65.7	110,175.7	43.7	108,654.8	43.5
Total liabilities and equity	59,968.4	100.0	64,439.0	100.0	252,016.6	100.00	249,970.9	100.0

Source: Consolidated financial statement of GPSC for the period 2017 – 2019 and Quarter 2 of the year 2020

Key Financial Ratios

Table of GPSC's key financial ratios in 2017 – 2019 and Quarter 2 2020

	2017	2018	2019	30 June 2020
Liquidity ratio				
Current ratio (times)	2.4	2.5	1.0	2.2
Quick ratio (times)	1.8	1.9	0.8	1.6
Account receivable day (days)	53.5	57.1	38.8	54.2
Inventory day (days)	10.5	10.0	24.3	39.9
Account payable day (days)	30.7	31.8	21.4	31.0
Cash Cycle (days)	33.2	35.3	41.7	63.1
Profitability ratio				
Gross profit margin (%)	17.7	18.4	17.2	18.9
Operating profit margin (%)	19.8	18.7	17.1	17.9
Net profit margin (%)	15.9	13.5	6.1	9.5
Return-on-equity (%)	8.3	8.5	5.7	8.6
Solvency ratio				
Debt-to-equity ratio (times)	0.5	0.5	1.3	1.4
Interest coverage ratio (times)	10.9	9.0	2.2	2.6

Source: Calculated from financial statements of GPSC in 2017 – 2019 and Quarter 2 2020

1) Explanation for Financial Status and Performance of GPSC

Financial performance

Revenue from sales and services

Revenue from sales and services consists of revenue from electricity generating, steam production, chilled water production, Industrial water production, and nitrogen production.

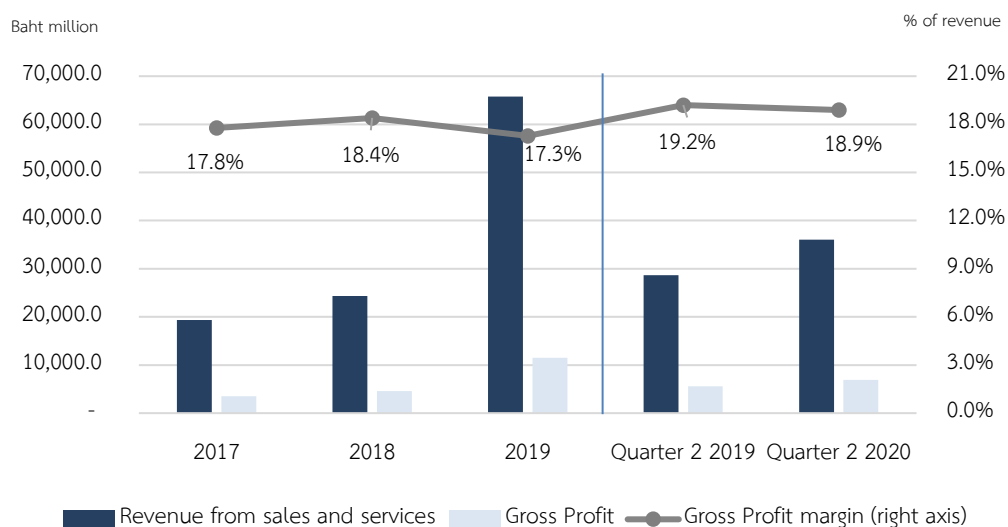
In 2018, revenue from sales and service was Baht 24,337.3 million, which increase from 2017, at the amount of Baht 19,325.0 million, totaling Baht 5,012.3 million or equivalent to a 25.9 percent increase. The increase in revenue came from the power plants IRPC-CP and ISP1, which increased from the commercial operation in Quarter 4 in 2017, and the revenue from CHPP increased from the installation of contractors of solar panels on the roofs of gas stations and buildings of PTT Group companies

In 2019, GPSC had revenue from sales and services of Baht 65,789.1 million, an increase from 2018 which was Baht 24,337.3 million, amounting to Baht 41,451.8 million or equivalent to a growth rate of 170.3 percent. The increase of revenue is mainly due to Independent Power Producer (IPP) revenue which increased by Baht 11,979 million from the recognition of IPP's electricity sales revenue from GLOW, which increased by 12,232 million Baht since in 2018, GPSC has not yet been acquired. GLOW. However, total revenue of Sriracha Power Plant decreased by Baht 253 million, as a result of lower energy payment. According to EGAT's electricity plan, despite the higher Availability Payments (AP) from contracted availability hours in 2018, Small Power Producer (SPP) revenues increased Baht 29,716 million, which is the recognition of revenue from the sale of electricity and the steam of Small Power Producer from GLOW increased by Baht 28,739 million since 2018 has not yet acquired the GLOW business. Revenue from electricity and steam sales of SPP from GPSC increased by Baht 977 million in line with the volume of electricity sales and rising steam revenue from Very Small Power Producer (VSPP) and others dropped Baht 13 million due to a decrease in revenue from solar panel installation contractor business as planned. Although the revenue from the sale of chilled water of CHPP increased in line with the increase in sales volume.

In the second quarter of 2020, GPSC's revenue from sales and service is Baht 36,021.4 million, an increase from the second quarter of 2019, which is Baht 28,673.0 million, amounting to Baht 7,348.4 million or equivalent to a 25.6 percent growth rate, mainly due to revenue recognition of GLOW power plants for the full six months in 2020, while in 2019, the revenue from GLOW is only 18 days in the first quarter and the full quarter in the second quarter. The decrease of 304 million Baht was due to the lower electricity payment (EP) in line with the lower sales volume of electricity to EGAT, despite the availability of income in reference to the US dollar, which increased from the weakening of the Baht and interest income on the finance lease increased from the financial lease income restructuring.

Gross Profit Margin

Revenue, Gross Profit and Gross profit margin of GPSC in 2017 - 2019 and Quarter 2 of 2019 and Quarter 2 of 2020



During 2017 - 2019, the gross profit was Baht 3,540.8 million, Baht 4,581.6 million, and Baht 11,499.1 million, respectively, representing the average of the past 3 years, equal to 17.8 percent of total income, which is equal to 48.1 percent of CAGR.

In 2018, the gross profit of GPSC was Baht 4,581.6 million, an increased from 2017 which was Baht 3,540.8 million amounting to Baht 1,040.8 million or equivalent to a growth rate of 29.4 percent due to IRPC-CP and ISP1 starting operate in the fourth quarter of 2017 together with the increase in revenue of CHPP from added solar cell powder to the roof of PTT group's oil service and construction companies. In 2018, the cost of natural gas, which is the main production cost of the GPSC, increased by Baht 3,245 million or 25 percent result from the rise in natural gas prices and increased gas consumption at IRPC-CP power plants. However, the rise in natural gas prices has led to price increases this year. In addition, the adjustment of 2019 also resulted in an increase in the total profit margin of 18.4 percent in 2018 GPSC, which was equal to 17.8 percent from 2018.

In 2019, the gross profit of GPSC was Baht 11,499.1 million, an increased from 2018 which was Baht 4,581.6 million amounting to Baht 6,917.5 million or equivalent to a growth rate of 151.0 percent due to the gross profit increased by Baht 5,384 million mainly due to recognizing gross profit from 3 of GLOW's IPP plants since 14th March 2019 of Baht 5,177 million. In addition, the gross profit of Sriracha Power Plant increased by Baht 207 million due to the lower cost of maintenance in which contract expiration. The gross profit increased by Baht 6,918 million from GLOW's SPP plants of Baht 7,191 million. However, the company's SPP plants which is Rayong Central Utility Plants (CUP) gross profit has decreased by Baht 214 million due to the growth of cost of natural gas by 5 percent resulting in the higher adjustment of operating cost which is higher than the adjustment of company income. In addition, the increase in maintenance

costs as a result of the maintenance of gas turbine electricity generators. Also, the gross profit from IRPC Clean Power Plant (IRPC-CP) has decreased by Baht 59 million due to the increase in natural gas cost in accordance with the usage volume and the increase in the price of natural gas. VSPP's gross profit increased by Baht 5 million, mainly because of the growth in revenue from electricity sales of Ichinoseki Solar Power 1 GK (ISP1) of Baht 26 million in 2019 while the revenue from Combined Electricity and Power Company Limited (CHPP) had a slight fall in revenue corresponding to existing projects. This result in gross profit margin of GPSC equivalent to 17.3 percent decreasing from 2018 which equivalent to 8.4 percent.

In the second quarter of 2020, the gross profit of GPSC was Baht 6,885.4 million, an increased from the second quarter of 2019 which was Baht 5,589.6 million amounting to Baht 1,295.7 million or equivalent to a growth rate of 18.8 percent due to Gross profit of Small Power Producer (SPP) increased by Baht 278 million corresponding to lower natural gas and coal price and higher electricity and steam demands of industrial customers of Rayong Central Utility Plant. In addition, Gross profit of Very Small Power Producer (VSPP) and others increased by Baht 115 million mainly from recognition of gross profit from Global Renewable Power Co., Ltd. (GRP) after the acquisition completion on 26 March 2020 and from increased gross profit of Combine Heat and Power Producing Company Limited (CHPP) from Engineering, Procurement and Construction service. This result in gross profit margin of GPSC equivalent to 18.9 percent decreasing from quarter 2 of 2020 which equivalent to 19.2 percent due to the increase in cost of sales.

Selling and Administrative Expenses

During 2017 - 2019, selling and administrative expenses was Baht 850.1 million, Baht 936.6 million, and Baht 2,183.7 million, respectively, representing the average of the past 3 years, equal to 3.8 percent of total income, which is equal to 37.0 percent of CAGR.

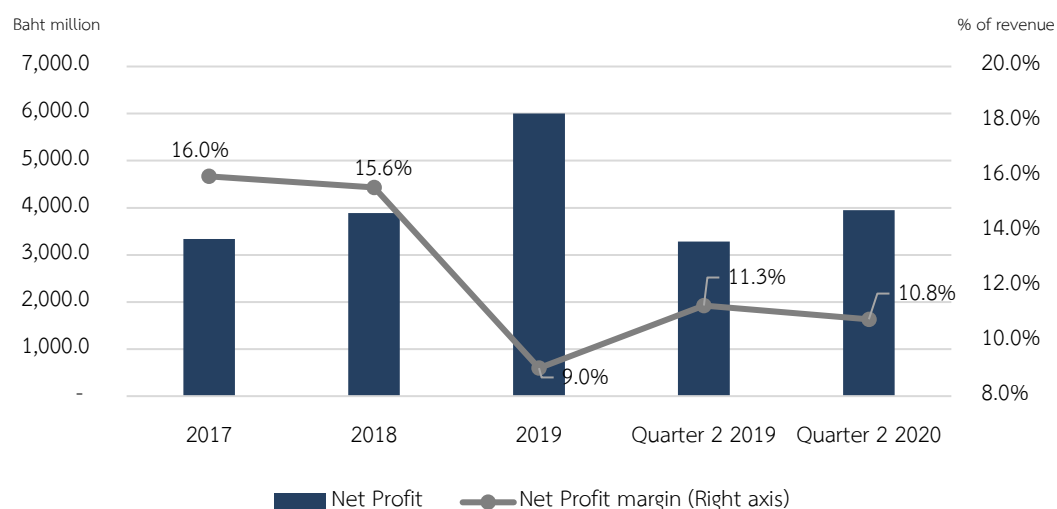
In 2018, the selling expense and administrative of GPSC was Baht 936.6 million, an increased from 2017 which was Baht 850.1 million amounting to Baht 86.5 million or equivalent to a growth rate of 10.2 percent due to management fee to support the growth of business.

In 2019, the selling expense and administrative of GPSC was Baht 2,183.7 million, an increased from 2018 which was Baht 936.6 million amounting to Baht 1,247.1 million or equivalent to a growth rate of 133.1 percent due to the recognition of selling and administrative expenses of GLOW, which increased by Baht 737 million, together with the Baht 250 million increase in administrative expenses of the company excluding GLOW, as a result of the consulting fees for business development and management fees for support the business growth.

In the second quarter of 2020, the selling expense and administrative of GPSC was Baht 929.1 million, a decreased from the second quarter of 2019 which was Baht 1,098.9 million amounting to Baht 169.8 million or equivalent to a decreased rate of 15.5 percent due to the increase in cost of goods and services of Very Small Power Producer (VSPP) and others from the recognition of additional costs from GRP after the acquisition on March 26, 2020 and increased Up from the cost of EPC work of CHPP.

Net Profit

Net Profit and Net profit margin of GPSC in 2017 - 2019 and Quarter 2 of 2019 and Quarter 2 of 2020



Net profit during the year 2017 - 2019 is equal to Baht 3,340.2 million, Baht 3,889.2 million, and 6,000.8 million Baht, accounting for 16.0 percent, 15.6 percent and 9.0 percent, respectively, with an average of 13.5 percent of income, which represents the average annual growth rate of net profit (CAGR) between 2017 - 2019, equal to 21.6 percent.

In 2018, Net Profit of GPSC was Baht 3,889.2 million, an increased from 2017 which was Baht 3,340.2 million amounting to Baht 549.0 million or equivalent to a growth rate of 16.4 percent due to the increase in revenues from the higher sales of IRPC-CP and ISP1 power plants as a result of the commercial operation in the fourth quarter of 2017. Also, the revenue from CHPP increased from providing services for installing solar panels on the roofs of gas stations and buildings of PTT Group, and a share of profit from investment in Bangpa-in Cogeneration Co., Ltd. In 2018, GPSC had a share of profit from investments in BIC equal to Baht 145 million, an increase from 2017 which was Baht 88 million, amounting to Baht 57 million or equivalent to average growth rate of 64.8 percent, mainly due to the recognition of full-year revenues after the commercial operation in June 2017.

In 2019, Net Profit of GPSC was Baht 6,000.8 million, an increased from 2018 which was Baht 3,889.2 million amounting to Baht 2,111.6 million or equivalent to a growth rate of 62.9 percent. Gross profit from IPP plants and SPP plants increased from the recognition of GLOW gross profit. The company recognized the operating results of the projects that the Company has invested and the commencement of commercial operations of projects in 2019 which are Rayong Central Utility Plant 4 (CUP-4), Namlik 1 Power Company Limited (NL1PC) and Xayaburi Power Company Limited (XPCL). Moreover, the revenue from Sriracha Power Plant increased due to the higher Availability Payment and the increase in Contracted Availability Hours as well as management of the maintenance contract, resulting in reduced maintenance cost. In addition, there was already maintenance major overhaul in quarter 4 of 2018.

In the second quarter of 2020, Net Profit of GPSC was Baht 3,946.1 million, an increased from the second quarter of 2019 which was Baht 3,281.4 million amounting to Baht 664.7 million or equivalent to a growth rate of 16.8 percent due to Full Quarter 1 and Quarter 2 results of GLOW were recognized in 2020, while in 2019, only 18-day results from quarter 1 of 2019 and full-quarter results in quarter 2 2019 were recognized and Increased Sriracha Power Plant's gross profit as a result of increased Availability Payment (AP) from a portion of AP that is USD-linked and increased revenue from finance lease agreement as a result of financial lease accounting adjustment. This result in net profit margin of GPSC equivalent to 10.8 percent decreasing from quarter 2 of 2020 which equivalent to 11.3 percent due to loss from measurement of financial instruments amounting to Baht 40.3 million.

Financial Position

Assets

At fiscal year 2018, GPSC has total assets at the amount of Baht 64,439.0 million, increased from fiscal year 2017 which equivalent to Baht 59,968.4 million by Baht 4,470.6 million or equivalent to a growth rate of 7.4 percent due to increasing in current asset at the amount of Baht 2,245.9 million or equivalent to a growth rate of 22.64 percent from Account receivable increased by Baht 428.5 million or 11.7 percent from with the increase in sales, Cash and cash equivalents and short-term investments increased by Baht 1,752.2 million or 41.1 percent from the increase in net loan issuance. Property, Plant and Equipment increased by Baht 1,289.5 million or 4.7 percent due to the cost of land and construction of Rayong Central Utility Plant 4. Finance Lease Receivable, net decreased by Baht 700.8 million or 13.09, mainly due to the decrease in EGAT's financial lease receivable with respect to revenue recognition basis under TFRIC4.

At fiscal year 2019, GPSC has total assets at the amount of Baht 252,016.6 million, increased from fiscal year 2018 which equivalent to Baht 64,439.0 million by Baht 187,577.6 million or equivalent to a growth rate of 291.1 percent due to the acquisition of GLOW on 14 March 2019 and the details of significant changes are Current assets increased by Baht 26,755.4 million or 220.0 percent from an increase of cash and cash equivalent by Baht 13,927.2 million, account receivable increased by Baht 5,992.6 million and increased by Baht 6,096.6 million from inventory. Property, plant and equipment increased by Baht 72,736.7 million or 254.9 percent due to the increase of book value in property, plant and equipment of GLOW amounting to Baht 68,519 million and recording the fair value of property, plant and equipment from the purchase of GLOW amounting to Baht 3,599 million. Finance lease and receivable increased by Baht 2,925.1 million or 62.9 percent in which GLOW financial lease and receivable increased by Baht 2,979 million and the recording the fair value of financial lease from the acquisition of GLOW Baht 991 million.

At second quarter of 2020, GPSC has total assets at the amount of Baht 249,970.9 million, decreased from second quarter of 2019 which equivalent to Baht 252,016.6 million by Baht 2,045.8 million or equivalent to a decreased rate of 0.8 percent due to Current assets decreased by Baht 2,621.2 million or 6.7 percent from a decrease in cash and cash equivalent of Baht 1,144.5 million and a decrease in short-term investment of GPSC group of Baht 965.0 million. Financial lease and receivable decreased by Baht 728.0 million or 9.6 percent as a result of the implementation of Thai Financial Reporting Standard on the lease agreement No.16.

Liabilities

At fiscal year 2018, GPSC has total liabilities at the amount of Baht 19,594.5 million, increased from fiscal year 2017 which equivalent to Baht 22,089.9 million by Baht 2,495.4 million or equivalent to a growth rate of 12.7% due to Long-term loan from financial institutions increased by Baht 1,694.4 million or 15.7 due to the issuance of long-term loan for IRPC-CP and ISP1. In addition, the company signed addition long-term loan for future expansion. Nevertheless, ISP1, IRPC-CP and CHPP repaid the loan.

At fiscal year 2019, GPSC has total liabilities at the amount of Baht 141,840.9 million, increased from fiscal year 2018 by Baht 119,751.0 million or equivalent to a growth rate of 542.1 percent due to Current liabilities increased by Baht 32,020.7 million or 677.4 percent from an increase in short-term loan by Baht 24,165.8 million, increased from account payable of Baht 5,239.2 million and increased by Baht 1513.5 million from Current portion of long-term borrowing from financial institution. Long-term borrowing and debentures increased by Baht 6,2904.5 million from debenture issuance of Baht 35,000 million, GLOW's longterm borrowing and debenture

of Baht 28,873 million and recording the fair value of long-term borrowing and debenture from GLOW acquisition of Baht 498 million.

At second quarter of 2020, GPSC has total liabilities at the amount of Baht 141,316.1 million, decreased from second quarter of 2019 by Baht 524.8 million or equivalent to a decreased rate of 0.4 percent due to decreased short-term loans by Baht 14,760.1 million, decreased account payable by Baht 1,836.8 million, and decreased short-term loans from the Company's subsidiaries by Baht 4,913.1 million. Long-term borrowings and debentures increased by Baht 16,047.3 million from long-term loans with financial institutions to repay short-term loans. Long-term lease liabilities of Baht 2,510.0 million and from recognition of derivatives liabilities of Baht 2,215.2 million.

Shareholder's equity

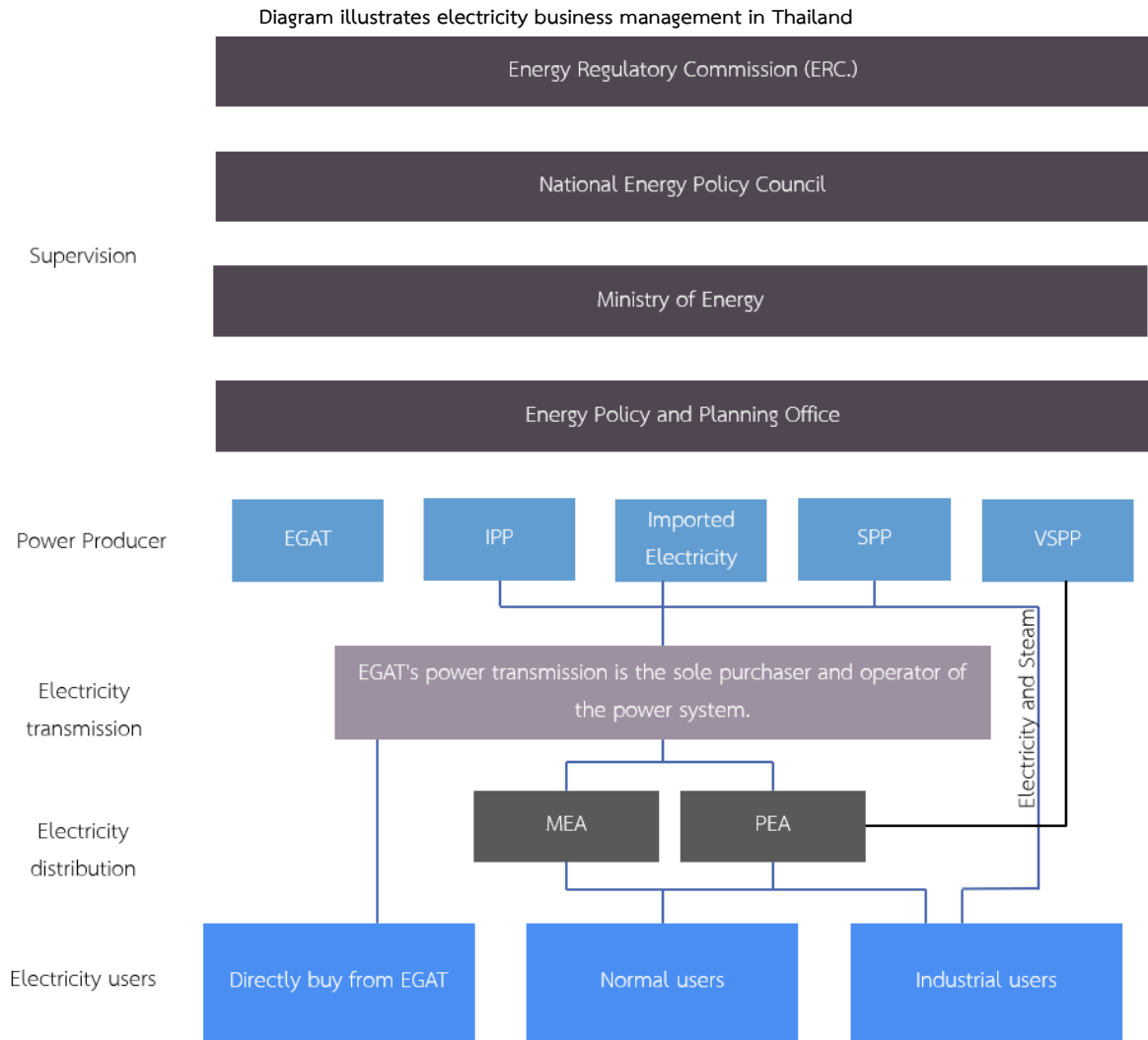
At fiscal year 2018, GPSC has total Shareholder's equity at the amount of Baht 39,992.0 million, increased from fiscal year 2017 which equivalent to Baht 38,546.9 million by Baht 1,445.1 million or equivalent to a growth rate of 3.7 percent due mainly from the increase in the unappropriated retained earnings and the increase in non-controlling shareholders equity of Baht 1,308.7 million and Baht 530 million, respectively. However, there was dividend payout of Baht 1,872.8 million during 2018.

At fiscal year 2019, GPSC has total Shareholder's equity at the amount of Baht 100,893.0 million, increased from fiscal year 2017 which equivalent to Baht 39,992.0 million by Baht 60,901.1 million or equivalent to a growth rate of 152.3 percent due to GPSC's paid up capital of Baht 74,000 million, legal reserve increased by Baht 639.4 million and unappropriated retained earning increased by Baht 1,468.5 million, the change in non-controlling interest of Baht 6,925.5 million and the difference from the change of investment portion in subsidiary of Baht 14,992.0 million.

At second quarter of 2020, GPSC has total liabilities at the amount of Baht 99,874.7 million, decreased from second quarter of 2019 which equivalent to Baht 100,893.0 million, by Baht 1,018.3 million or equivalent to a decreased rate of 0.4 percent due to a decrease in other components of shareholders' equity of Baht 1,790.1 million corresponding to the implementation of Thai Financial Reporting Standard No.9.

9) Market overview and Industry trends

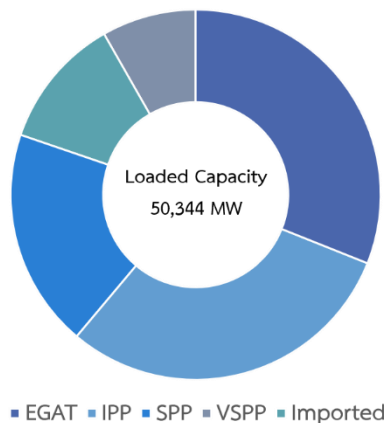
The main commercial power producers of the country are the Electricity Generating Authority of Thailand (EGAT) and private power producers. EGAT distributing almost all of its electricity from production and purchasing from private power producers and neighboring countries to two state enterprises, which are the Metropolitan Electricity Authority (MEA) and the Provincial Electricity Authority (PEA). MEA and PEA providing electricity to retail consumers, business customers and industrial users nationwide. EGAT owning a power distribution network in its service area. Also, EGAT is the country's main wholesale electricity buyer. Even though the private power producer is the direct producer and distributor of electricity to industrial customers, EGAT is also the operator of the national power system, which maintains and develops the national transmission grid. Private Power Producers in Thailand can be divided into 3 types: Large private power producers or Independent Power Producers (Independent Power Producer Program (IPP), in which EGAT purchases electricity in the amount of 5,400 MW. Small Power Producer Program Or SPP), in which each SPP project will distribute electricity to EGAT not more than 90 MW, but since each SPP can sell electricity directly to nearby consumers, SPP's capacity is usually at the level 120-150 MW. Very Small Power Producers (Very Small Producer or VSPP) are power producers, both in the private sector, government, state enterprises, and the general public who have sold electricity to EGAT with the amount of electricity sales into the system exceed 1 MW.



Source: Electricity Generating Authority of Thailand (EGAT)

As of June 30, 2020, Thailand has approximately 50,344 MW of contractual power generation capacity, excluding independent power supply (IPS) generating capacity, comprising approximately 16,110.08 MW of EGAT, 15,103.20 MW of large Power Producer (IPP), 9,565.36 MW of Small Power Producer (SPP), 4,027.52 MW of Very Small Power Producer (VSPP), and purchased from overseas 5,536.84 MW, representing 32 percent 30 percent 19 percent, 8 percent and 11 percent of total production capacity, respectively, which increased from the year 2019 with the contracted power generation capacity of approximately 47,260 MW.

Diagram illustrates Electricity generating as of 30 June 2020



Source: Energy overview as of 30 June 2020 of the Ministry of Energy

Electricity demand in Thailand has a cyclical fluctuation period during the year and during the quite exact date, that is, the highest demand for electricity each year is in the summer. During March - May, when the temperature is the highest. And the lowest demand for electric power will be in winter. During December - January, when the temperature drops to the lowest.

The country's highest electric power demand in 2020 was 30,342 MW on March 12, 2020 at 2:14 PM, a decrease from 2019 which was 32,273 MW, or a 5.9 percent reduction rate, reflecting an increase in using electricity outside the power system, such as generating electricity for own use in industrial plants Installation of solar power generation systems on the roof, etc., which change the form of use of such energy. It will begin to affect the market and change the competition of the electric business in the near future.

Decrease in power consumption in major economic sectors and industrial and agricultural businesses This was due to the impact of the COVID-19 epidemic affecting various industries. For general industries, electricity consumption decreased 1.3 percent, agriculture industry down 3.5 percent for households. The consumption of electricity increased by 6.0 percent due to the high temperature compared to the previous year. Combined with the measures at home to stop infection for the national government. In addition, the impact of COVID-19 causes system overloading problems. Which may surpass 40.0 percent

The Power Development Plan of Thailand 2018, revised No. 1, has a total power generation capacity of 2037 at 77,211 megawatts and still has a new power generation target throughout the map of 56,431 megawatts with a similar proportion of fuel to generate electricity. Currently, 53.0 percent natural gas production, 21.0 percent renewable energy, 11.0 percent coal and lignite production, 9.0 percent foreign hydroelectric production and 6.0 percent energy conservation production. The electricity distribution plan of renewable energy power plants has been adjusted. And plans to phase out some fossil fuel power plants to be suitable While increasing the target of EGAT's small hydro power plant 69 MW, an increase in the community power plant policy for the raw economy. Total capacity 1, 933

MW by the acquisition of 700 MW to enter the system in the years 2020-2022 and the revision of the Southern Pracharat Biomass Power Plant, which postponed the commencement of electricity supply to the system in 2022 - 2023 to allow electricity to enter the system. 60 megawatts per year and also accelerate the purchase of electricity from wind energy from the original year 2034 to the year 2022 by the Power Development Plan of Thailand 2018, revised version 1, with total power generation capacity and new power generation targets. As usual from the plans of the Electricity Development Plan of Thailand 2018, however, the first revised version of the Electricity Generating Authority of Thailand Plan 2018 has been approved by the NEPC and pending approval from the Cabinet.

Table summary of Load capacity in 2018-2037 from PDP 2561

Loaded capacity during 2018 - 2037	MW
Loaded capacity as at 2018	46,090
Loaded capacity released from the system during 2018 - 2037	(25,310)
New loaded capacity during 2018 - 2037	56,431
Total loaded capacity until 2037	77,211

Source: 56-1 report of GPSC

Power Plant type	New loaded capacity (MW)
Renewable energy power plant	20,766
Hydropower Plant	500
Cogeneration power plant	2,112
Combined heat power plant	13,156
Coal / Lignite power plant	1,740
Imported electricity	5,857
New powerplant and replacement	8,300
Energy conservation policy	4,000
Total	56,431

Source: 56-1 report of GPSC

Overview of the purchase of electricity from renewable energy under the Alternative Energy Development Plan (“AEDP”), revised No. 1, there are projects in which the government has commitments totaling 18,696 MW new generation of electricity in Thailand. There is a tendency to spur additional renewable electricity purchases from the private sector until 2026, but will focus on promoting electricity generation from waste according to the potential of each area. Solar power plant development on floating buoys in the dam area. And emphasizing the involvement of the public in

the electricity generation through the solar project in the public sector by setting a renewable power plant plan in accordance with the government's promotion policy and renewable energy power plants according to the AEDP plan during the years 2018-2037.

Diagram illustrates new renewable energy power plant accordingly to government's policy and the AEDP plan during the years 2018 - 2037

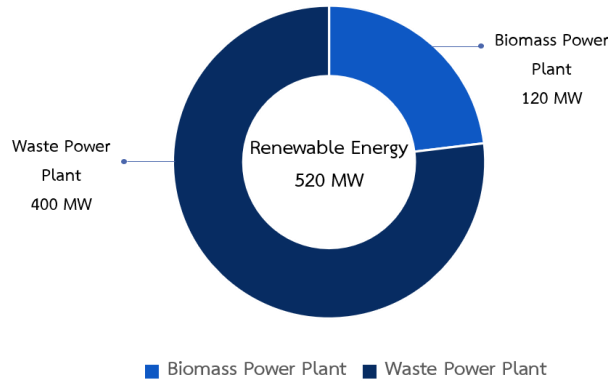
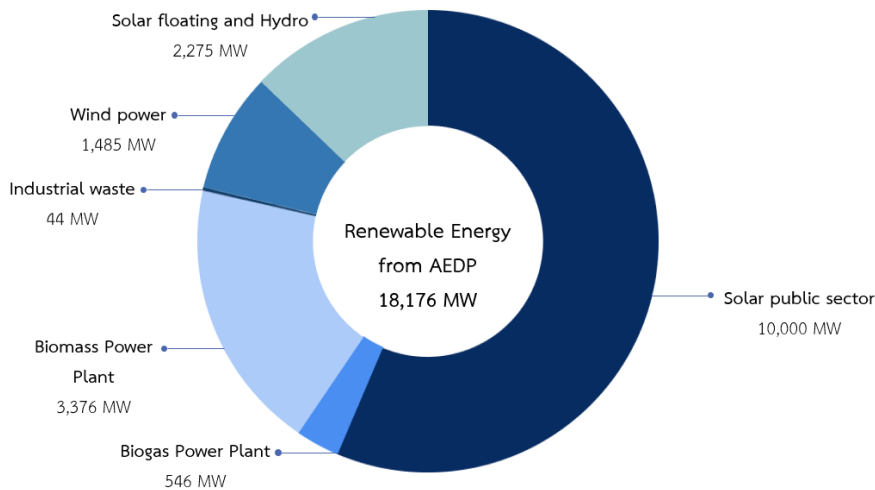


Diagram illustrates renewable energy according to AEDP during 2561-2580



Source: 56-1 report of GPSC Detailed of Acquisition of Assets of TP

The Company will accept the transfer of the entire business of TP, i.e. all assets, liabilities, rights, duties and obligations of TP existing on the day prior to the date the EBT, including contracts and licenses related to and used in the business operations of TP to enable the Company to continue the business operations of TP, at the total price of approximately Baht 26,773 million (before adjustment of TP's dividend payout and is subject to an adjustment according to the market price thereof as of the date of EBT appraised by an independent appraiser), whereby the Company will make payment in consideration of the EBT in cash and/or other means to be agreed by the parties. Such price shall be adjusted in accordance with the conditions as specified in the EBT Agreement.

- (1) All assets of TP used in the business operations of power plants and such activities relating to or in support of the power plant business, including any other activities of TP and 586,071,567 ordinary shares in GPSC held by TP with a par value of Baht 10 each, representing approximately 20.8 percent of all issued shares of GPSC, and cash and other assets, and as of June 30, 2020, the total book value of TP's all assets amounts to approximately Baht 20,093 million
- (2) All liabilities of TP comprise loans with related party (loan from Thai Oil Treasury Center Company Limited and loan from PTT Treasury Center Company Limited) and other liabilities, and as of June 30, 2020, the total book value of TP's all liabilities amounts to approximately Baht 15,811 million
- (3) Contracts related to and used in the business operations of TP in order to enable the Company to continue the operations of TP's power plant business and such business activities relating to or in support of the power plant business, including any other activities of TP transferred to the Company under the EBT Transaction, including but not limited to, power purchase agreement and reserve power agreements with EGAT, raw material supply agreements and/or agreements for distribution of electricity, steam and/or byproducts from production process (whether with third parties or related parties); and
- (4) Licenses relating to and required in the business operations of TP in order to enable the Company to continue the operations of the power plant business and such business activities relating to or in support of the power plant business of TP, including any other activities of TP transferred under the EBT Transaction, including but not limited to, electricity generation license, electricity distribution license, electricity distribution system license, regulated energy production license, factory license, oil terminal license, natural gas facility license, military equipment license.

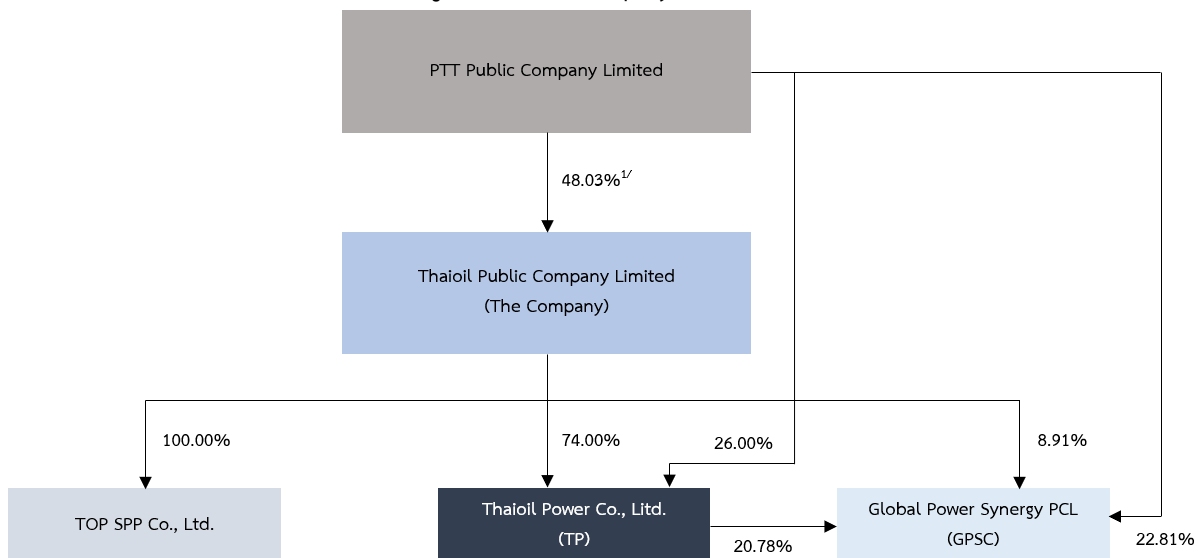
However, the Company and/or TP may consider canceling certain licenses and/or contracts which, after the execution of the EBT Transaction, may not be required and/or may not be necessary for the Company to retain such licenses or contracts.

10) Business Overview of TP

Company Name	Thai Oil Power Co., Ltd.																									
Location	555/1 Energy Complex Building B, 5th Floor, Vibhavadi Rangsit Road, Chatuchak Subdistrict, Chatuchak District, Bangkok																									
Type of Business	Power and steam producer of Thermal power type																									
Registration Number	0105539103296																									
Date of Incorporation	17 September 1996																									
Registered Capital	Baht 2,810,000,000																									
Board of Director	<table border="1"> <thead> <tr> <th></th> <th>Name</th> <th>Position</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Mr. Wirat Uanarunit</td> <td>Chairman of the Board</td> </tr> <tr> <td>2</td> <td>Mr. Bandhit Thamprajamchit</td> <td>Director</td> </tr> <tr> <td>3</td> <td>Mr. Charnsak Cheunchom</td> <td>Director</td> </tr> <tr> <td>4</td> <td>Mr. Suthep Rungpronvisuth</td> <td>Director</td> </tr> <tr> <td>5</td> <td>Mr. Pongpun Amornvivat</td> <td>Director</td> </tr> <tr> <td>6</td> <td>Mr. Jeerawat Pattanasomsit</td> <td>Director</td> </tr> <tr> <td>7</td> <td>Mr. Udom Wongsirinopphakhun</td> <td>Director and Secretary</td> </tr> </tbody> </table>			Name	Position	1	Mr. Wirat Uanarunit	Chairman of the Board	2	Mr. Bandhit Thamprajamchit	Director	3	Mr. Charnsak Cheunchom	Director	4	Mr. Suthep Rungpronvisuth	Director	5	Mr. Pongpun Amornvivat	Director	6	Mr. Jeerawat Pattanasomsit	Director	7	Mr. Udom Wongsirinopphakhun	Director and Secretary
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7	Mr. Udom Wongsirinopphakhun	Director and Secretary																								

11) Company Structure of TP

Diagram illustrates company structure of TP



Source: Information from TP

The Company holds 74.0 percent of shares in Thai Oil Power Company Limited (TP), while Thai Oil Power Company Limited (TP) holding shares of Global Power Synergy Public Company Limited (GPSC) equal to 20.8 percent.

12) Major Shareholders of TP

Lists of Major Shareholders of TP

No	Name	Amount (shares)	Total value of shareholding
1	Thai Oil Public Company Limited	207,939,999	2,079,399,990.0
2	PTT Public Company Limited	73,060,000	730,600,000.0
3	Mr. Viroj Meenaphun	1	10.0
Total		281,000,000	2,810,000,000.0

Note: Information as of 2 April 2020

13) Business Overview of TP

TP engages in the business of a natural gas-fired combined-cycle cogeneration power plant, with a capacity to generate 118 megawatts of electricity and 216 tons of steam per hour, for distribution of 41 megawatts of electricity to the Electricity Generating Authority of Thailand (“EGAT”) for 25 years under the power purchase agreement, representing approximately 20 percent of total revenues, and for distribution of the remaining electricity and all steam to the Company’s group of companies, representing approximately 80 percent of total revenues. In addition, TP holds 586,071,567 ordinary shares in GPSC representing approximately 20.8 percent of all issued shares of GPSC.

14) Revenue Structure of TP

Revenue structure of TP according to financial statement of TP as at 31 December 2017 to 31 December 2019 as follow

Table illustrate revenue structure of TP by business unit from 2017 - 2019

Products and services	2017		2018		2019	
	Baht million	%	Baht million	%	Baht million	%
Electricity business	2,527.0	60.9	2,712.0	61.5	2,715.0	61.8
Steam business	1,623.0	39.1	1,697.0	38.5	1,676.0	38.2
Total revenue	4,150.0	100.0	4,409.0	100.0	4,391.0	100.0

Source: Financial Statement of TP from 2017 - 2019

15) Products and services of TP

Thai Oil Power Co., Ltd. (TP), which the Company holds 74.0 percent of shares, is an electricity and steam producer of heat and electricity generation together (Cogeneration) using natural gas as fuel. TP has 118 MW of electricity and 216 tons per hour of steam. TP sold 41 MW of electricity to EGAT under a 25-year power purchase agreement, accounting for approximately 20.0 percent of the revenue while 80.0 percent of the revenue came from the remaining electricity and steam to Thai Oil Group. TP's power and steam purchase agreements help to maintain revenue stability and energy consumption for the Company. Under the terms of the agreement, the customer has to pay the electricity bill to TP according to the specified minimum amount of electricity (Take-or-Pay) an average of 70.0 percent and an average of 85.0 percent of steam. All in all, the Company is the Management of all aspects for TP.

16) Financial Position and Performance of TP

The IFA summarized TP's performance and financial position based on financial statements from the year 2017 - 2018 audited by KPMG Phoomchai Company Limited and financial statement for the year 2019 audited by Pricewaterhouse Coopers Company Limited, as summarized below

1) Key Summary of TP's financial statement

Income Statement

Table summary of key figure in TP's statement of comprehensive income in 2017 - 2019

	2017		2018		2019	
	Baht million	%	Baht million	%	Baht million	%
Revenue from sales	4,153.6	100.0	4,408.9	100.0	4,391.1	100.0
Cost of sales	(3,533.2)	(85.1)	(3,863.4)	(87.7)	(3,916.5)	(89.1)
Gross profit	620.4	14.9	545.5	12.4	474.6	10.8
Other revenue	358.3	8.6	392.5	8.9	409.5	9.3
Selling expense	(4.8)	(0.1)	(5.0)	(0.1)	(4.5)	(0.1)
Profit before finance cost and income tax	973.9	23.5	933.0	21.2	879.6	20.0
Finance cost	(10.9)	(0.3)	(4.5)	(0.1)	(105.8)	(2.4)
Profit before income tax	963.1	23.2	928.5	21.1	773.9	17.6
Income tax	(104.2)	(2.5)	(145.2)	(3.3)	(116.4)	(2.7)
Profit for the year	858.8	20.7	783.3	17.8	657.5	14.8

Source: Financial Statement of TP for the year 2017 - 2019

▪ Statement of Financial Position

Table summary of key figure in TP's statement of Financial Position in 2017 - 2019

	31 Dec 2017		31 Dec 2018		31 Dec 2019	
	Baht million	%	Baht million	%	Baht million	%
Asset						
Cash and cash equivalent	426.7	8.4	616.7	12.1	423.5	2.1
Trade receivable	393.8	7.8	473.2	9.3	441.8	2.2
Other receivable	46.7	0.9	45.8	0.1	44.7	0.2
Inventories	60.0	1.2	60.0	1.2	59.7	0.3
Deferred tax asset	-	-	0.6	0.0	6.9	0.0
Total current assets	927.2	18.3	1,196.2	23.4	976.6	4.
Investment in subsidiaries	2,654.6	52.4	2,654.6	51.9	18,034.8	89.9
Property plant and equipment	1,469.2	29.0	1,250.7	24.4	1,043.1	5.2
Deferred expense	15.9	0.3	12.8	0.3	9.7	0.0
Non-current asset	4.5	0.1	2.4	0.1	2.3	0.0
Total non-current assets	4,144.2	81.7	3,920.5	76.6	19,089.9	95.1
Total assets	5,071.3	100.0	5,116.7	100.0	20,066.5	100.0
Liabilities						
Trade payable	438.7	8.7	562.2	11.0	284.1	1.4
Other payable	26.8	0.5	17.9	0.3	123.0	0.6
Long-term loan from financial institution due within the period	164.3	3.2	0.00-	0.0	0.00	0.0
Deferred VAT	2.8	0.1	0.00-	0.0	0.00	0.0
Deferred tax liabilities	42.2	0.8	50.3	1.0	38.5	0.2
Total current liabilities	674.8	13.3	630.4	12.3	445.7	2.2
Loan from related parties	-	-	-	-	15,380.2	76.6
Deferred tax liabilities	58.4	1.2	67.4	1.3	77.6	0.4
Total non-current liabilities	58.4	1.2	67.4	1.3	15,457.8	77.0
Total liabilities	733.3	14.5	697.9	13.6	15,903.4	79.3
Shareholder's equity						
Authorized and paid share capital	2,810.0	55.4	2,810.0	54.9	2,810.0	14.0
Retained earnings					-	-
Legal reserve	281.0	5.5	281.0	5.5	281.0	1.4
Unappropriated	1,247.0	24.6	1,327.9	26.0	1,072.1	5.3

	31 Dec 2017		31 Dec 2018		31 Dec 2019	
	Baht million	%	Baht million	%	Baht million	%
Total Equity	4,338.0	85.5	4,418.9	86.4	4,163.1	20.7
Total liabilities and equity	5,071.3	100.0	5,116.7	100.0	20,066.5	100.0

Source: financial statement of TP for the year 2017 – 2019

- Key Financial ratio

Table of TP's key financial ratios in 2017 - 2019

	2017	2018	2019
Liquidity ratio			
Current ratio (times)	1.3	1.9	2.1
Quick ratio (times)	1.2	1.7	1.9
Account receivable day (days)	36.4	35.8	38.0
Inventory day (days)	5.8	5.6	5.5
Account payable day (days)	37.4	47.2	39.4
Cash Cycle (days)	4.9	-5.7	4.1
Profitability ratio			
Gross profit margin (%)	14.9	12.3	10.8
Operating profit margin (%)	23.4	21.1	20.0
Net profit margin (%)	20.6	17.7	14.9
Return-on-equity (%)	19.8	17.7	15.7
Solvency ratio			
Debt-to-equity ratio (times)	0.1	0.1	3.8
Interest coverage ratio (times)	89.6	209.1	8.3

Source: Calculated from financial statement of TP in 2017 - 2019

2) Explanation for Financial Status and Performance of TP

Financial performance

Revenue from sales and services

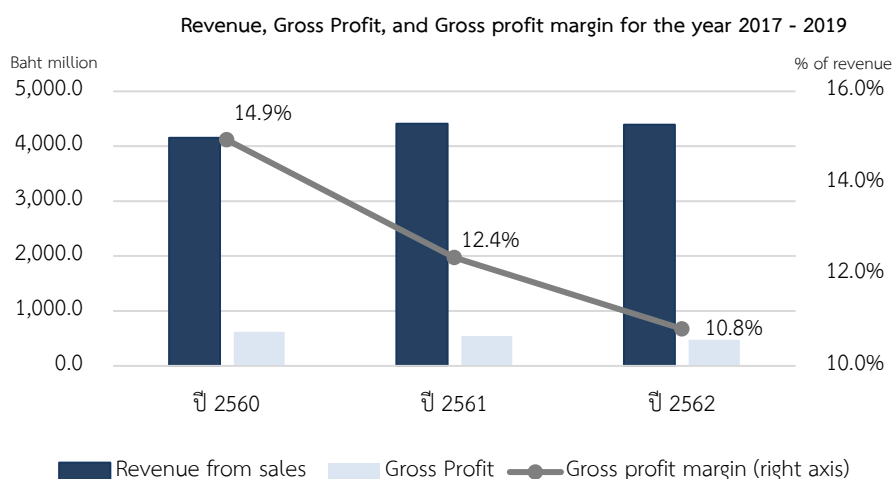
TP's sales revenues include electricity sales to EGAT, electricity and steam sales to the Company, and electricity and steam sales to Thai Paraxylene Co., Ltd. (TPX) and Thai Lue. Babes Public Company Limited (LTB)

In 2018, TP had sales revenue of Baht 4,408.9 million, an increase from 2017, which was Baht 4,150.2 million, amounting to Baht 258.7 million or equivalent to a 6.2 percent growth rate due to the increased in average selling price of electricity and steam, which in line with natural gas prices. In addition, the quantity of electricity sold increased to meet customer demand.

In 2019, TP had sales revenue of Baht 4,391.1 million, a decrease from 2018 which was Baht 4,408.9 million, amounting to 17.8 million Baht, or a 0.4 percent decrease, mainly due to the decreased in sales volume from major maintenance shutdowns. together with the increased in cost of natural gas, which is the main cost.

When considering the revenue from sales of TP from 2017 - 2019, found that the Compound Annual Growth rate increase (CAGR) between 2017 - 2019 was 1.9 percent.

Gross Profit margin



In 2018, the gross profit was Baht 545.5 million, a decrease from the year 2018 which was Baht 620.4 million, an amount of Baht 75.0 million or equivalent to 12.0 percent reduction due to the significantly increased in cost of fuel oil. In 2018, the gross profit margin was 12.3 percent compared to the year 2017, which had a gross margin of 14.9 percent.

In 2019, the gross profit was Baht 474.6 million, a decrease from 2018 which was Baht 545.5 million, an amount of Baht 70.9 million or a 13.0 percent reduction due to natural gas costs, which is the main capital increasing steadily. In 2019 the gross profit margin was 10.8 percent compared to the year 2017 with the gross profit margin of 12.4 percent.

Selling and Administrative Expense

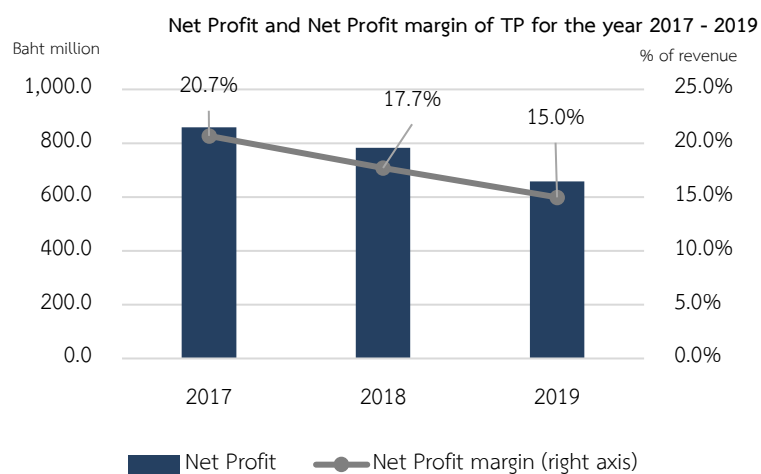
During 2017 - 2019, selling and administrative expenses were Baht 4.8 million, Baht 5.0 million, and Baht 4.5 million, respectively, representing the three-year average of 11.0% of total

income, which equivalent to Compound Annual Decline rate of selling and administrative expenses (CADR) of 2.7 percent.

In 2018, selling and administrative expenses were Baht 5.0 million, an increase from 2017 which was Baht 4.8 million, amounting to Baht 0.2 million or equivalent to a 3.0 percent growth rate.

In 2019, selling and administrative expenses were Baht 4.5 million, a decrease from 2018 which was Baht 5.0 million at Baht 0.5 million or equivalent to a 11.0 percent reduction rate.

Net Profit



TP's net profit in 2018 was Baht 783.3 million, a decrease from 2017 which was Baht 858.8 million, Baht 75.5 million or 8.8 percent, due to the income tax expense in 2018 in the amount Baht 145.2 million from the year 2018 to Baht 104.2 million or an increase of 39.3 percent. In 2018, the net profit margin was 17.8 percent compared to the year 2017, which had a net profit margin of 20.7 percent

TP's net profit in 2019 was Baht 657.5 million Baht, a decrease from 2018 which was Baht 783.3 million, an amount of Baht 125.8 million, or a 16.0 percent decrease, mainly due to the increase in finance cost of the year 2019 by Baht 101.3 million. In 2019, net profit margin was 15.0 percent compared to 2018 with a net profit margin of 17.8 percent.

When considering the net profit during the year 2017 - 2019, an average net profit margin of 17.8 percent of the total income, which is equivalent to Compound Annual Decline rate of 8.5 percent.

▪ Financial Position

Assets

At fiscal year 2018, TP has total assets at the amount of Baht 5,116.7 million, increased from fiscal year 2017 which equivalent to Baht 5,071.3 million by Baht 45.4 million or equivalent to a growth rate of 0.9 percent due to the Cash and cash equivalent at the amount of Baht 190.0 million.

At fiscal year 2019, TP has total assets at the amount of Baht 20,066.5 million, increased from fiscal year 2017 which equivalent to Baht 5,116.7 million by Baht 14,949.8 million or equivalent to a growth rate of 292.2 percent due to subscription of the newly issued ordinary shares in accordance with the shareholding proportion that TP holds shares in GPSC in accordance with the criteria and conditions for the subscription of newly issued ordinary shares of GPSC.

Liabilities

At fiscal year 2018, TP has total liabilities at the amount of Baht 697.9 million, decreased from fiscal year 2017 which equivalent to Baht 733.3 million by Baht 35.4 million or equivalent to a growth rate of 4.8 percent due to the decreased in current portion of long-term loan from financial institution at the amount of Baht 164.3 million

At fiscal year 2019, TP has total liabilities at the amount of Baht 15,903.4 million, increased from fiscal year 2018 which equivalent to Baht 697.9 million by Baht 15,205.6 million or equivalent to a growth rate of 2,178.9 percent due to the increased in loan from related parties in 2019.

As of the end of 2017, TP had a liquidity ratio of 1.3 times, before increasing to 1.9 times at the end of 2018 and 2.1 times at the end of 2019 due to an increase in non-current liabilities consisting of short-term loans to related parties. When considering the data during 2017 - 2019, TP has an average liquidity ratio of 1.8 times.

The total debt to equity ratio of TP at the end of 2017 and the end of 2018 was 0.1 times and increased 3.8 times at the end of 2019 due to an increase in long-term loans from related parties.

For TP's cash cycle at the end of 2017, it was 4.9 days before, decreasing -5.7 days at the end of 2018 and increasing to 4.1 days at the end of 2019.

Shareholder's equity

At fiscal year 2018, TP has total equity at the amount of Baht 4,418.9 million, increased from fiscal year 2017 which equivalent to Baht 4,338.0 million by Baht 80.8 million or equivalent to a growth rate of 1.9 percent due to unappropriated reserve at the amount of Baht 80.8 million.

At fiscal year 2019, TP has total equity at the amount of Baht 4,163.1 million, decreased from fiscal year 2017 which equivalent to Baht 4,418.9 million by Baht 255.7 million or equivalent to a growth rate of 5.8 percent due to unappropriated reserve at the amount of Baht 255.7 million.

17) Market Overview and Industry trends of TP

Electricity Generating Authority of Thailand (EGAT) and the National Energy Policy Council (EPPO) began purchasing electricity in the form of Small Power Producer (SPP) in 1992 so that the private sector could submit Offering electricity to EGAT. Purchasing electricity from small power producers (SPP) initiating to stimulate the creation of renewable energy power plants such as wind power and solar power and small hydro energy. It is in accordance with the conditions of EGAT to purchase all or part of the electricity from Small Power Producer (SPP) where steam and electricity that are not sold to EGAT will be sold within industrial estates or for internal use.

Table illustrates installed capacity and contracted capacity of SPP for different type of fuel as at February 2019

Type of fuel	Installed capacity (MW)	Contracted capacity with EGAT (MW)
Biomass	1,075	718
Fuel oil	-	-
Fossil Fuel	851	423
Natural Gas	9,611	6,332
Solar	589	436
Waste	180	163
Wind	1,445	1,421
Hydro	23	22
Other	21	14
Total	13,805	9,528

Source: ERC.

EGAT's power purchase rates differ from each type of power producer and by contract type, namely Firm and Non-Firm contracts and by energy sources. Firm contracts are power plants that the Small Power Producer (SPP) guarantees that they can supply electricity during high demand period

Table illustrated status of Small Power Producer (SPP) as at 31 May 2020

Details	Firm	Non-Firm	Total
Small Power Producer which already entered into Power purchase agreement			
Amount (no.)	93	62	155
Sold electricity volume (MW)	6,737.6	2,777.3	9,514.9
Small Power Producer signed Power Purchase agreement not yet sales electricity			
Amount (no.)	4	3	7
Sold electricity volume (MW)	295	63.5	358.5
Small Power Producer waiting to signed Power purchase agreement			
Amount (no.)	19	-	19
Sold electricity volume (MW)	538.8	-	538.8
Total			
Amount (no.)	116	65	181
Sold electricity volume (MW)	7,571.4	2,840.8	10,412.2

Source: EGAT as of 31 May 2020

As of May 31, 2020, the Small Power Producers with EGAT have a total power generation capacity of 9,514.9 MW (6,737 MW of Firm and 2,777.3 MW of Non-firm).

The IFA estimated net free cash flow that is expected from TP's performance (Free Cash Flow to Firm) ("FCFF"). FCFF is obtained from the Company's future cash flow projection for the period of 3 years and 9 months (1 July 2020 – 31 March 2024) to reflect the remaining SPP-PPA life between TP and EGAT which will be expiring on the March 31, 2023, and the additional one-year operation period to support the power demand within the Company's group according to the PPA between TP and industrial users, since the development of the investment project to replace the TP power plant has been postponed from the planned timeline as a result from the COVID-19 situations and other necessary factors.

2.6 Total Value of Consideration, Basis of Determination of Total Value of Consideration, Conditions for Execution of the Transactions, and Payment Method

2.6.1 Share Disposition transaction

Total Value of Consideration	Basis of Determination of Total Value of Consideration	Payment Method and Conditions for Execution of the Transaction
Approximately Baht 16,882 million	Being subject to negotiations between the Company and PTT, whereby the value of GPSC's business is based on two approaches, i.e. discounted cash flow approach (DCF) and market value approach of shares in GPSC.	PTT shall pay for such shares of GPSC in cash and/or promissory note or other means to be agreed by the parties later. However, apart from compensation cash and / or promissory note, the payment of ordinary

Total Value of Consideration	Basis of Determination of Total Value of Consideration	Payment Method and Conditions for Execution of the Transaction
		<p>shares of GPSC is not compensate by ordinary share or other means which required to value. Should GPSC declare its dividends and schedule the record date to determine the list of shareholders entitled to dividends before completion of the acquisition of shares in GPSC, the GPSC share price under the Share Disposal Transaction shall be reduced by the amount dividend payout to GPSC shares sold under this transaction</p> <p>In this regard, the Share Disposal Transaction will be executed after the approval from the Extraordinary General Meeting of Shareholders of the Company No. 1/2020 has been obtained and the conditions precedent under the SPA have been fulfilled.</p>

2.6.2 Acquisition of Assets

Total Value of Consideration	Basis of Determination of Total Value of Consideration	Total Value of Consideration
<p>Approximately Baht 26,773 million (if calculated only from the value of TP's entire business which will additionally be received by the Company of 26.0 percent the total value thereof is approximately Baht 6,961 million.)</p>	<p>Referring to the fair value of net assets to be acquired from the acquisition and the EBT from TP by the Company using the sum of the parts approach, comprising:</p> <ol style="list-style-type: none"> (1) Fair value of TP's power plant business based on the value of such business appraised by way of the discounted cash flow approach or DCF; (2) Fair value of investment in GPSC based on the value of shares of GPSC; and (3) Fair value of other assets and liabilities of TP. <p>Other than taking into account the fair value of net assets to be acquired from the acquisition and the EBT from TP by the Company in determining the total consideration of the EBT Transaction, the determination of the total consideration also takes into account the price and conditions concluded in</p>	<p>The Company shall make payment in consideration of the EBT to TP in cash and/or other means to be agreed by the parties.</p> <p>Such price under the EBT Transaction will be adjusted in accordance with the conditions that will be specified in the EBT Agreement.</p> <p>In this regard, the EBT Transaction will be executed after the approval from the Extraordinary General Meeting of Shareholders of the Company No. 1/2020 has been obtained and the conditions precedent under the EBT Agreement have been fulfilled.</p>

Total Value of Consideration	Basis of Determination of Total Value of Consideration	Total Value of Consideration
	<p>the negotiations between the Company and TP. The fair value of net assets of TP to be transferred to the Company amounts to a total of approximately Baht 26,773 million. In addition, there may be an adjustment to reflect the market value at the time if EBT date assessed by an Independent appraiser which is the way that both parties mutually agreed in order to reflect the fair value of TP's net asset as of date</p>	

2.7 Plan for Use of Proceeds from the Transaction

The Company plans to use such proceeds from the Share Disposal Transaction to pay for the considerations, taxes, fees and expenses relating to the EBT Transaction so as to increase cash, working capital and liquidity to strengthen the Company's financial position and to serve as funds for the Company's other investment projects in the future.

2.8 Source of Funds for Execution of the Transaction

The source of funds for execution of the EBT Transaction shall be partially derived from the Company's working capital and partially from such proceeds to be derived by the Company from the Share Disposal Transaction. After execution of the EBT Transaction, the Company's working capital shall remain sufficient for use in other activities of the Company.

Upon completion of the acquisition and acceptance of the EBT between the Company and TP, TP shall take various steps, including registration of its dissolution with the Department of Business Development, Ministry of Commerce, start the liquidation process. After deduction of expenses, fees or any other money in connection with or arising out of the completion of dissolution and liquidation, TP shall distribute TP's assets to its shareholders in proportion to their respective shareholding. In this regard, the Company will receive partial payment from the EBT Transaction in proportion to its shareholding of approximately 74.0 percent of all shares in TP in the form of dividends after execution of the EBT Transaction and TP's distribution of equity after registration of its dissolution within the same fiscal year in which the EBT occurs.

2.9 Details of the SPA and the EBT Agreement

SPA

The Company is in the process of negotiating and preparing the SPA, and the Company expects to execute the SPA within the year 2020. Once approvals from the board of directors' meeting of the Company No. 8/2020 to be held on August 20, 2020 and from the Extraordinary General Meeting of Shareholders of the

Company No. 1/2020 to be held on October 28, 2020 are obtained, and the conditions precedent under the SPA are fulfilled, the Company will enter into the Share Disposal Transaction

Parties	<p>Seller : The Company</p> <p>Buyer : PTT</p>
Acquired Shares	All ordinary shares in GPSC directly held by the Company in the amount of 251,173,540 shares, representing approximately 8.9% of all issued shares in GPSC (“Acquired Shares”)
Price of the Acquired Shares	<ul style="list-style-type: none"> ● PTT agrees to pay for the Acquired Shares to the Company at the total price of approximately Baht 16,882 million (before deduction of dividend paid after June 30, 2020 and before the date of share transfer). ● Should GPSC declare its dividends and schedule the record date to determine the list of shareholders entitled to dividends before the date of share transfer, the price of the Acquired Shares shall be reduced by the amount of dividend payout to the Acquired Shares.
Share Transfer Date and Procedure	The Company agrees to transfer the Acquired Shares to PTT on such date as agreed upon by both parties by way of off-market trade in scripless form at Thailand Securities Depository Co., Ltd. (TSD).
Key Conditions Precedent	<p><u>The Company’s obligations</u></p> <ol style="list-style-type: none"> 3) The execution of the Share Disposal Transaction and the EBT Transaction, which are the 2 steps under the Restructuring Plan, shall have been approved by the extraordinary general meeting of shareholders of the Company; 4) TP and the Company have obtained an approval from the relevant regulatory authorities; and 5) TP and the Company have entered into the EBT Agreement. <p><u>PTT’s obligations</u></p> <ol style="list-style-type: none"> 1) PTT have been granted by the SEC Office a waiver from the requirement to make a tender offer for all securities of GPSC, and PTT have fully complied with the conditions imposed by the SEC Office in the waiver letter (if any); As such, PTT received an application of the waiver from the SEC which has been granted a waiver on 17 August 2020 and 2) PTT has obtained an approval from the relevant regulatory authorities (if any). <p><u>Other conditions</u></p> <p>There shall be no material adverse change to the business of GPSC.</p>
Long Stop Date	6 months from the date on which PTT obtained a tender offer waiver from the SEC Office.
Termination	<ul style="list-style-type: none"> ● Each party is entitled to unilaterally terminate the SPA if there is any amendment to the Revenue Code which cancels tax exemption on EBT transaction. ● Each party is entitled to unilaterally terminate the SPA if the other party is in breach under the SPA and such breach is not cured within the specified period,

or the representation(s) given by the other party is untrue, inaccurate or incomplete.

หมายเหตุ: 1/เมื่อวันที่ 19 สิงหาคม 2563 คณะกรรมการของ GPSC ได้มีมติอนุมัติการจ่ายเงินปันผลระหว่างกาลสำหรับผลประกอบการ 6 เดือนแรกของปี 2563 ในอัตราหุ้นละ 0.50 บาท โดยได้กำหนดรายชื่อผู้ถือหุ้นที่มีสิทธิรับเงินปันผล (Record Date) ในวันที่ 2 กันยายน 2563 และกำหนดจ่ายเงินปันผลระหว่างกาลในวันที่ 14 กันยายน 2563

EBT Agreement

As of the date of the disclosure of this information memorandum, the Company is in the process of negotiating and preparing the EBT Agreement, and the Company expects to execute the EBT Agreement within the year 2020. Once approvals from the board of directors' meeting of the Company No. 8/2020 to be held on August 20, 2020 and from the Extraordinary General Meeting of Shareholders of the Company No. 1/2020 to be held on October 28, 2020 are obtained, and the conditions precedent under the EBT Agreement are fulfilled, the Company will enter into the EBT Transaction

Parties	<p>Transferor : TP</p> <p>Transferee : The Company</p>
Description of the Agreement	TP agrees to transfer and deliver its entire business to the Company, and the Company agrees to accept transfer and delivery of the entire business from TP on the EBT date, subject to the terms and conditions of the EBT Agreement.
Payment in consideration of the EBT	<ul style="list-style-type: none"> ● The Company shall make payment, as a consideration for the EBT, to TP in cash and/or other means to be agreed by the parties, in the amount of approximately Baht 26,773 million (which is subject to an adjustment according to the market price thereof as of the date of EBT appraised by an independent appraiser), reduced by the amount equals to the total dividends paid by TP to its shareholders during the period from the execution date until the day before the EBT date. ● Both parties may set off the consideration for the EBT against other debts between each other. ● Should the transfer of any item of assets and liabilities under this Agreement not be exempt from fees and taxes, such fees and taxes shall be borne by those who are responsible by default under the law. If the law does not specify as such, it shall be borne by TP.
Key Conditions Precedent	<p><u>The Company's obligations</u></p> <p>3) The EBT Transaction shall have been approved by the extraordinary general meeting of shareholders of the Company; and</p> <p>4) The Share Disposal Transaction under the SPA shall have been completed.</p> <p><u>TP's obligations</u></p> <p>3) TP's shareholders' meeting shall have been resolved to approve the EBT of TP to the Company; and</p> <p>4) There shall be no material adverse change to the business of TP.</p> <p><u>Mutual obligations of both parties</u></p> <p>5) Termination of all agreements between TP and the Company, including execution of whereby such termination the novation agreements among TP,</p>

	<p>the Company and the parties concerned under the relevant agreements, whereby the expiration and the novation of all such respective agreements shall be effective on the EBT date;</p> <p>6) Letter(s) of consent from the Ministry of Finance (by Treasury Department), as the land owner, to amend of the state-owned land sublease agreement shall have been obtained, and the parties shall have registered the amendment to the stated-owned land sublease agreement with the relevant land office prior to or on the EBT date;</p> <p>7) Both parties shall have submitted the applications for transfer and acceptance of transfer of the investment promotion certificates, and such applications shall have been approved by the Office of the Board of Investment; and</p> <p>The Company shall have accepted the transfer of and/or obtained licenses being material to its business, and the transfer and/or receipt of such licenses shall have been effective on the EBT date.</p>
Termination or Expiry	<ul style="list-style-type: none"> • The Company is entitled to unilaterally terminate the SPA by notifying TP if there is any amendment to the Revenue Code which cancels tax exemption on EBT transaction after the sale and purchase of shares in GPSC under Share Transfer Transaction is completed. • If the SPA is terminated for any reason, the EBT Agreement will be automatically terminated.

2.10 Timeline of the Transaction

The size of each transaction is lower than 15 percent and, therefore, the Company is not required to disclose information or take any actions under the Notifications on Acquisition or Disposition of Assets, the Company's board of directors, however, viewed that as the Share Disposal Transaction and the EBT Transaction form an integral part of the Company's Restructuring Plan, and the Company will call the Extraordinary General Meeting of Shareholders of the Company No. 1/2020 to consider approving both transactions under the Notifications on Connected Transactions and to consider approving the EBT Transaction under Section 107 of the Public Limited Companies Act, it was thus deemed appropriate to also propose both transactions to the Shareholders' Meeting for consideration and approval under the Notifications on Acquisition or Disposition of Assets accordingly.

Therefore, for the purpose of execution of the Share Disposal Transaction and the EBT Transaction under the Company's Restructuring Plan, the Company has the obligations under the Notifications on Connected Transactions and the Notifications on Acquisition or Disposition of Assets as follows and if there is any change, the Company will inform SET.

Table illustrates timeline of the transaction

No.	Procedures	Tentative Date
1.	The Board of Directors' Meetings of the Company shall consider approving the Share Disposal transactions and EBT transaction	20 August 2020
2.	Arrange for the shareholders' meeting of the Company by sending a notice calling for the shareholders' meeting at least 14 days in advance of the meeting date and must be approved by the shareholders' meeting of the Company with a vote of not less than three-fourths of the total number of votes of shareholders who attend the meeting and have the right to vote without counting the shareholders that has conflict of interest.	28 October 2020

2.11 Business Plan after the Transaction

2.11.1 Status of GPSC

After this disposal of at 251,173,540 ordinary shares directly held by the Company in GPSC under the Share Disposal Transaction, the Company's effective shareholding in GPSC will be reduced from 24.3 percent to approximately 15.4 percent of all issued shares of GPSC. However, the Company will additionally acquire approximately 20.8 percent of all issued shares of GPSC as part of TP's assets to be transferred from TP to the Company under the EBT Transaction or representing the increase of effective shareholding in GPSC by approximately 5.4 percent. In this respect, after the execution of the Share Disposal Transaction and the EBT Transaction in accordance with the two steps in the Restructuring Plan, the Company shall directly hold ordinary shares in GPSC representing approximately 20.8 percent of all issued shares in GPSC, and in conclusion, the Company's effective shareholding in GPSC will be reduced by approximately 3.5 percent of all issued shares of GPSC from 24.3 percent to 20.8 percent of all issued shares of GPSC.

2.11.2 Status of TP

As of the date of the EBT, the Company will accept the transfer of the entire business of TP, i.e. all assets, liabilities, rights, duties and obligations of TP existing on the day prior to the date the EBT, including contracts and licenses related to and used in the business operations of TP to enable the Company to continue the business operations of TP, at the total price of approximately Baht 26,772.7 million before adjustment of TP's dividend payout and is subject to an adjustment according to the market price thereof as of the date of EBT appraised by an independent appraiser, whereby the Company will make payment in consideration of the EBT in cash and/or other means to be agreed by the parties. Such price shall be adjusted in accordance with the conditions as specified in the EBT Agreement.

However, the Company and/or TP may consider canceling certain licenses and/or contracts which, after the execution of the EBT Transaction, may not be required and/or may not be necessary for the Company to retain such licenses or contracts.

After the EBT of TP to the Company, TP shall pay dividend, cease its business operations, undergo dissolution and start the liquidation process within the same fiscal year in which the EBT occurs, in compliance with the rules, procedures and conditions under the Revenue Code, so as to obtain tax benefits in respect of such transaction. After the EBT of TP to the Company, TP will cease its business operations, undergo dissolution and start the liquidation process within the same fiscal year in which the EBT occurs, in compliance with the rules, procedures and conditions under the Revenue Code, so as to obtain tax benefits in respect of such transaction. After deduction of expenses, fees or any other money in connection with or arising out of the completion of dissolution and liquidation, TP will distribute its assets to the Company and PTT as TP's shareholders in proportion to their respective shareholding in TP

3. The IFA's opinion on the Appropriateness and Benefits of the Transaction

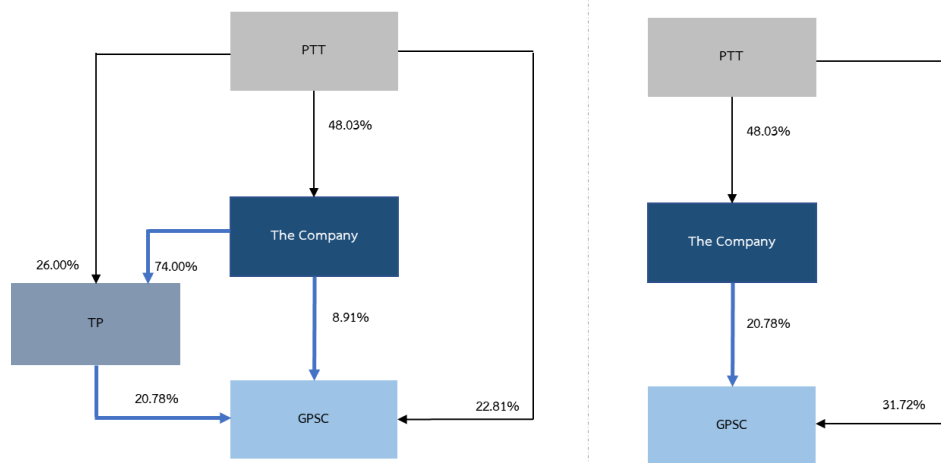
3.1 Appropriateness and Benefits of the Transaction

The Company currently holds total ordinary shares in GPSC of approximately 29.7 percent of total issued shares, which the Company directly holds approximately 8.9 percent and indirectly holds approximately 20.8 percent of ordinary shares in GPSC through TP which is a subsidiary of the Company (the Company holds 74.0 percent of TP's total issued shares), representing the Company's effective shareholding in GPSC, directly and indirectly, a total of approximately 24.3 percent of all issued shares of GPSC. Under the Restructuring Plan, the Company will dispose of all ordinary shares directly held by the Company in GPSC of approximately 8.9 percent to PTT. The Company will gain Bath 1,682 million from the Share Disposal Transaction, then enter into the EBT Transaction from TP of 26.0 percent of the value of TP's entire business, at the value thereof is approximately Baht 6,961 million from the total value of TP of approximately Baht 26,773 million¹. Where the Company agrees to accept the transfer of all assets, liabilities, rights, duties and obligations of TP to enable the Company to continue the power plant business operation. The Company will gain Bath 5,922 million of net cashflow after the Restructuring which will increase the Company's financial liquidity and strengthen financial status.

Thus, entering into the Transaction is considered reasonable from restructuring the shareholding structure and proportion in the power business of the Company to reduce the complexity of the shareholding structure which will increase transparency, flexibility and efficiency in managing and driving the business forward as well as reduce expenditure from having 2 companies. Moreover, indirectly shareholding in GPSC through TP is not regarded the exemption of income tax and withholding tax, pursuant to Section 65 Bis (10) of the Revenue Code. In addition, the Company will receive proceeds from the Share Disposal Transaction and can utilize the proceeds for the EBT Transaction and still have excess proceeds to be used as a source of fund to serve the Company's future investment, considering the Transaction price of both Share Disposal and EBT Transactions are appropriate

¹ price before adjustment of TP's dividend payout and is subject to an adjustment according to the market price thereof as of the date of entire business transfer appraised by an independent appraiser

Shareholding structure before and after entering into the Transaction



3.2 The advantages of entering into the Transaction

3.2.1 The advantages of entering into the Share Disposal Transaction

- 1) The proceeds from the share disposition in GPSC can be used for the EBT Transaction and investment in other projects

The disposal of all ordinary shares directly held by the Company in GPSC to PTT in the amount of 251,173,540 shares with a par value of Baht 10 each, representing approximately 8.9 percent of all issued shares in GPSC equals to the total price of approximately Baht 16,882¹ million. The proceed can be used as a source of fund for accepting the transfer of all assets, liabilities, rights, duties and obligations of TP existing on the day prior to the date of the EBT, including contracts and licenses related to and used in the business operations of TP with approval from related entities for the Company to continue the power plant business operation. The Company will gain Bath 5,922 million of net cashflow after the Restructuring which can be used as working capital and as a capital of the Company's future projects.

- 2) Support the restructuring of the group

The disposition of all ordinary shares directly held by the Company in GPSC to PTT in the amount of 251,173,540 shares, representing approximately 8.9 percent of all issued and outstanding shares is a step of the business shareholding restructuring process correspond to the Company's policy on restructuring of shareholding structure and proportion in the power business in order to increase transparency, investment management flexibility and reduce the complexity of subsidiaries shareholding pursuant to the Restructuring plan approved by the Board of Directors' meeting of the Company No. 8/2020 held on August 20, 2020

¹ Price before deduction of dividend paid after June 30, 2020 and before the date of share transfer

3.2.2 The advantages of asset acquisition of TP

1) Increase the management flexibility

Since TP operates in power and steam production and distribution to the Company and the group of companies under the Company, equal to approximately 80.0 percent of total revenue. Therefore, acceptance of power business from TP will increase flexibility and efficiency in managing and driving the business and cost management as well as will reduce expenditure such as approval procedure, board of director meeting attendance compensation and other expenses from having two companies.

2) Directly receive revenue from power business operation and BOI privileges

Acceptance the EBT from TP will allow the Company will directly receive all the revenue generated from the power business operation including revenue from GPSC's dividend which generate stable revenue from the power and steam purchase agreements with EGAT and the group companies which will be terminated in 2023. In addition, TP has a privilege from the Thailand Board of Investment (BOI), though the tax exemption privilege has been used up. However, the transfer of BOI privilege to the Company will allow the Company to benefit from future privilege given by BOI as the BOI promotion card will be transferred to the Company and there is the government's investment promotion policy including other privilege than those granted at the present or extend period of the existing privilege.

3) Obtain the tax exemption benefit from the dividend revenue and reduce the tax burden

After the completion of EBT transaction and dissolution of TP, the Company, a listed company on SET, will obtain the tax benefit for the exemption of income revenue and withholding tax on the dividend revenue from GPSC in accordance with Section 65 Bis (10) of the Revenue code, in case that the Company holds the GPSC's shares of no less than 3 month after the date of the dividend income arises, while the GPSC's shares held by TP is subjected to income tax and withholding tax as TP prior to the Transaction is a limited company and holds less than 25.0 percent of shares in GPSC.

3.3 The disadvantages of entering into the Transaction

3.3.1 The disadvantages of entering into the Share Disposal Transaction

1) Shareholding proportion dilution in GPSC

Currently, The Company currently holds total ordinary shares in GPSC equal to approximately 29.7 percent of total issued shares, which the Company directly holds ordinary shares in GPSC representing approximately 8.9 percent and indirectly holds ordinary shares in GPSC through its shareholding in TP (which is a subsidiary of the Company in which the Company holds 74.0 percent of all shares of TP), and TP holds ordinary shares in GPSC representing approximately 20.8 percent of all issued shares of GPSC (the Company, therefore, holds the effective shareholding in GPSC through its shareholding in TP representing approximately 15.4 percent of all issued shares of GPSC), Hence, the Company's effective shareholding in GPSC, directly and indirectly, represents a total of approximately 24.3 percent of all issued shares of GPSC. After the disposal of the ordinary shares directly held by the Company, representing approximately 8.9 percent, the Company's effective shareholding in GPSC will be reduced from 24.3 percent to approximately 15.4 percent of all issued shares of GPSC. However, the Company will additionally acquire approximately 20.8 percent of all issued shares of GPSC as part of TP's assets to be transferred from TP to the Company under the EBT Transaction as a process of the Restructuring, the Company (representing the increase of effective shareholding by approximately 5.4 percent) Therefore, after the Restructuring, the Company will directly hold 20.8 percent of all issued shares of GPSC which decrease from 24.3 to 20.8. However, the decrease in such proportion of shareholding is not considered as material as it does not affect the number of the directors representing the Company, eventually receiving smaller amount of dividend as per the decreasing shareholding proportion. On the other hand, the Company gains benefit from the Restructuring in which the Company will obtain by directly hold the ordinary shares of GPSC including the dividend revenue tax exemption. However, the revenue received from the Share Disposal Transaction already reflects the opportunity loss of such dividend revenue under the assumption that the Company is deemed going concern.

3.3.2 The disadvantages of asset acquisition of TP

1) The obligation to accept all assets and liabilities of TP

The Company has the obligation to accept all assets and liabilities of TP including the loans from Thai Oil Treasury Center Company Limited and from PTT Treasury Center Company Limited from the loan agreement dated September 26, 2019 (both loan agreements have similar terms, conditions and clauses) which could be immediately due as per Clause 5.3 (A) (2) of the agreement which obligate TP to repay the loan prior to the termination unless the lender give consent in writing in case that the borrower (TP) sell or dispose its entire business. In this regard, TP is required to obtain the writing consents from the lender(s) and the lender shall waive in writing not to

considered the EBT as a default or TP's business cessation to cause the borrower to repay the loan within 2 working days after TP receive the proceeds from such transaction or the day the lender(s) approve. However, the loan repayment to Thai Oil Treasury Center Company Limited will be settled internally without causing financial burden but the Company still has the obligation over the EBT payment to TP and to repay the loan to PTT Treasury Center Company Limited in the amount of approximately Baht 3,999 million and other liabilities. However, the proceeds from the Share Disposal Transaction cover all the aforementioned financial burden.

3.4 Advantages of entering into the Transaction with the connected person, compared to the non-connected person

- 1) A process to accomplish the Restructuring of the group

This is because the Company and PTT have mutual policy to restructure the shareholding structure of its subsidiaries to increase the structure transparency and support the business operation and development under the appropriate structure to develop and generate revenue and return for both companies. The disposal of GPSC's ordinary shares and the acceptance of the EBT of TP are process of the Restructuring to increase the transparency, flexibility, operational efficiency and good corporate image to the Company.

- 2) The capacity of the connected person will benefit the Company in the long run

PTT has a strong financial position, sufficient source of funds to execute the Transaction. Moreover, PTT is a major shareholder of GPSC and may continue to provide support to GPSC as a flagship of PTT's power business. Thus, entering into the Transaction with PTT will be beneficial to the Company's investment in GPSC in the long run, as PTT to promote the power business operation. Since PTT has capacity, financial stability and business structure beneficial to GPSC's business operation from upstream to downstream, compared to entering into the Transaction with the non-connected person who might not have the same capacity and qualification as PTT.

- 3) The purchase price of GPSC's shares is reasonable

As per the valuation of fair value of GPSC's ordinary shares using DCF and weighted average approach, the value falls between Baht 16,291.3 – 18,946.7 million, which compared to the purchase price of 16,882 million for 251,173,540 shares, the IFA has an opinion that the purchase price is reasonable. Moreover, disposition of GPSC in significant amount (big lot) trading through SET system might negatively affect the trading supply as per the market and price mechanism. In addition, it will reduce the procedure of terms and condition negotiation and expedite the execution of Transaction's conditions and benefit to both parties. The Transaction shall be executed by negotiation to benefit to both parties, the possibility to accomplish the negotiation is

therefore as achievable under the uncomplicated and execution with reasonable Transaction value.

3.5 The Disadvantages of entering into the Transaction to the connected party

The Share Disposal Transaction is regarded as a disposition of assets by the Company under the Notification of the Capital Market Supervisory Board No. TorChor. 20/2551 Re: Rules on Entering into Material Transactions Deemed as Acquisition or Disposition of Assets and the Notification of the Board of Governors of the Stock Exchange of Thailand Re: Disclosure of Information and Other Acts of Listed Companies Concerning the Acquisition or Disposition of Assets B.E. 2547 (A.D. 2004) (as amended) (collectively, the Notifications on Acquisition or Disposition of Assets). The Share Disposal Transaction has the total value of approximately Baht 16,882 million, representing the highest transaction size equal to 8.6 percent calculated by net tangible assets criteria, which is used in the calculation of the highest transaction size (based on the Company's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020 and GPSC's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020).

The EBT Transaction is also regarded as an acquisition of assets by the Company under the Notifications on Acquisition or Disposition of Assets. The EBT Transaction has the total value of approximately Baht 26,773 million, representing the highest transaction size equal to 2.3 percent calculated by value of consideration criteria, which is used in the calculation of the highest transaction size (based on the Company's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020 and TP's financial statements audited by the certified auditor for the period ended December 31, 2019). Since the Company currently holds approximately 74.0 percent of all shares of TP, the acquisition of assets transaction size under the EBT Transaction will be calculated only from the value of TP's entire business which will additionally be received by the Company after the EBT Transaction equal to 26.0 percent of the value of TP's entire business, the total value thereof is approximately Baht 6,961 million.

Hence, the size of each transaction is lower than 15.0 percent and, therefore, the Company is not required to disclose information or take any actions under the Notifications on Acquisition or Disposition of Assets.

However, the Share Disposal Transaction and EBT Transaction are both regarded as connected transactions pursuant to the Notification on Connected Transactions TorChor. 21/2551 Re: Rules on Connected Transactions, the Notification of the Board of Governors of the Stock Exchange of Thailand Bor.Jor/Por. 22-01 Re: Disclosure of Information and Other Acts of Listed Company Concerning the Connected Transactions B.E. 2546 (2003) (and as amended) Upon consideration of the size of the Share Disposal Transaction to PTT who is the Company's major shareholder, the size of the transaction is equal to 17.0 percent of the net tangible assets (NTA) of the Company and its subsidiaries. (based on the Company's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020) The EBT Transaction is a connected transaction under the Notifications on Connected Transactions since PTT, as the Company's major

shareholder, holds shares representing over 10 percent of all shares in TP, the business transferor. The size of the transaction is equal to 7.0 percent of the net tangible assets (NTA) of the Company and its subsidiaries (based on the Company's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020), and is thus regarded as a connected transaction under the Notifications on Connected Transactions having the aggregate transaction value exceeding Baht 20 million, and having the aggregate transaction size exceeding 3.0 percent of the net tangible assets (NTA) of the Company and its subsidiaries. In this regard, upon calculation of the aggregate of the size of the two steps of the Restructuring Plan, the total size of the transaction is equal to 24.0 percent of the net tangible assets (NTA) of the Company and its subsidiaries, considered as a large value sized transaction which such Transaction is required the approval of the Company's shareholders prior to enter into the Transaction. The Company has additional obligations to obtain Board of Directors' approval and disclose to the SET under the aforementioned Notifications as follows:

- (5) To convene a board of directors' meeting to consider approving the Share Disposal Transaction and the EBT Transaction;
- (6) To prepare and submit a report and disclose information memorandum on the Share Disposal Transaction and the EBT Transaction to SET
- (7) To engage an independent financial advisor to provide opinions on the Share Disposal Transaction and the EBT Transaction and submit such opinions to the Office of the SEC Office, SET and the Company's shareholders.
- (8) To convene a shareholders' meeting of the Company by delivering the invitation letter for the shareholders' meeting at least 14 days prior to the date of the shareholders' meeting, and obtain approval from the shareholders' meeting of the Company with not less than three-fourths of all votes of the shareholders present at the meeting and entitled to vote, excluding such votes of the interested shareholders.

In this case, the Company has the aforementioned obligation due to the connected transaction's value exceed Baht 20 million, and having the aggregate transaction size exceeding 3.0 percent of the net tangible assets (NTA) of the Company and its subsidiaries.

3.6 Risks of entering into the Transaction

3.6.1 The Risk before entering into the Transaction

- 1) Risk of not getting approval from shareholder meeting

Since the Restructuring by disposition of shares in GPSC and The EBT Transaction are connected transactions under the Notifications on Connected Transactions since PTT is a Company's major shareholder and the EBT Transaction is regarded as an asset acquisition transaction under the Notification on Acquisition and Disposition of Assets and the size of the transaction is equal to 7.0

percent of the net tangible assets (NTA) of the Company and its subsidiaries. Moreover, the EBT Transaction is regarded as the acceptance of transfer of the entire business by a public company pursuant to in accordance with Section 107 of the Public Limited Companies Act B.E. 2535 (A.D. 1992) (as amended) (the Public Limited Companies Act). The EBT Transaction is required to be approved by the shareholders' meeting before execution of such transaction with not less than three-fourths of all votes of the shareholders present at the meeting and entitled to vote, excluding such votes of the interested shareholder. In the case that the shareholders do not approve any or all of the Transactions, the Company might have the risk over the compensation and expenses arise from the termination of agreements (if any), including the expenses arise from the preparation to enter into the Transaction and to execute actions to request for approvals from the related entities. Therefore, since PTT is the major shareholder, directly and indirectly, holds approximately 48.0 percent of the Company's shares, PTT is not entitled to vote in the shareholder meeting. The Company, then, has the risk of not getting the approval from the shareholder meeting with no less than three-fourths of all votes of all votes of the shareholders present at the meeting and entitled to vote. However, since the Restructuring is beneficial to the Company to increase the shareholding transparency, flexibility and efficiency in business operation of the Company, therefore, possible that the Company will get approval from the shareholder meeting to enter into the Transaction.

2) Risk of not getting approved by the related government entities or agencies

Under the EBT of TP, the Company will replace TP and become parties in the Power Purchase Agreement and Reserved Power Purchase Agreement with EGAT, the raw material and/or power, steam and or other by-products purchase agreements (both with the connected parties and non-connected parties), including the state land rent agreement with the Treasury Department, transfer of BOI promotion certificate transfer from TP which shall be prior approved by the BOI committee. As well as other related license related to and used in the business operation of TP which shall be approved and/or agreed from the related government agencies and entities before the transfer such as the Energy Regulatory Commission ("ERC"). In case that the Company does not get the approval from any agency or entity to transfer such rights/ agreements/ certificates/ licenses, the Company will not enter into any transaction related to the Restructuring and might have the risk over the compensation and expenses arise from the termination of agreements (if any), including the expenses arise from the preparation to enter into the Transaction and to execute actions to request for approvals from the related entities. Nevertheless, the IFA views that such risk has a low possibility due to that the Company is capable to operate power business and currently operates on the power business operation, the transfer of required licenses, therefore, should not be an issue in efficiency and continuity of the operation. However, the Company and/or TP may consider canceling certain licenses and/or contracts which, after the execution of the EBT Transaction, may not be required and/or may not be necessary for the Company to retain such licenses or contracts.

3.6.2 The Risk after entering into the Transaction

1) Risk of the performance of power business is not as expected

The COVID -19 pandemic situation affected the group companies, which are the purchasers of power and steam from TP, the purchasers had to cease the operation temporarily, resulting in decrease in a demand for power and steam from TP. Therefore, in case that there are events in the future that affect the demand of power and steam, the Company will have the risk that the performance of the power business is lower than expected. If there is the economic downturn caused by new factors that affect the power purchasing demand and decrease the revenue of the power business to be lower than the expectation, the Company will be responsible for the total loss (currently holds 74.0 percent of all issued shares).

2) Opportunity loss risk from the higher value of GPSC's shares in the future

In case that GPSC's performance in the future is greater than the projection due to the future investment or business expansion which affect the value of GPSC's shares, there is a risk of opportunity loss of selling GPSC's shares at higher value since the IFA valued GPSC's fair value based on the assumption of the current performance and solid investment and expansion plan of GPSC.

3.7 Appropriateness of the Share Disposal Transaction of GPSC

To evaluate the fair value of GPSC, the IFA has gathered and considered information based on GPSC's financial statements for the past 3 years by which the financial statements for 2017 – 2018 were audited by KPMG Phoomchai Audit Ltd. and the financial statements for 2019 and second quarter of 2020 were audited by PricewaterhouseCoopers ABAS Ltd. as well as other publicly available information. However, the opinion of the IFA is based upon the assumption that such information is correct, complete, and credible under the current circumstances. Significant changes in business operation may alter the fair value of GPSC's share price and shareholders' decision considered in the Transaction.

The IFA has valued GPSC through 6 approaches as follows:

- 1) Book Value Approach
- 2) Adjusted Book Value Approach
- 3) Market Value Approach
- 4) Market Comparable Approach which consists of 3 approaches:
 - Price to Book Value Ratio: "P/BV"
 - Price to Earnings Ratio: "P/E"
 - Enterprise Value/Earnings Before Interest Tax Depreciation and Amortization "EV/EBITDA"

5) Transaction Comparable Approach

6) Discounted Cash Flow Approach

3.7.1 Book Value Approach

Book Value Approach is the approach that values the net asset value or total equity of GPSC at a moment in time. The IFA used the value with regards to GPSC's consolidated financial statement as of June 30, 2020.

Table: Book Value Approach

Equity (Financial Statement) Unit: Baht million	June 30, 2020
Issued and paid-up share capital	28,197.3
Premium on ordinary shares	70,175.9
Deficit from the change in ownership interests in subsidiaries	(14,992.0)
Other surplus (deficits)	(1,118.2)
Retain earnings (appropriated)	1,479.8
Retain earnings (legal reserve)	18,045.4
Total Equity Value of GPSC	99,874.7
8.9% of Equity Value	8,896.6

The fair valuation under book value approach for GPSC as of June 30, 2020 results in a total equity value of Baht 99,874.7 million. Therefore, fair value (8.9 percent) from the P/BV approach equates to Baht 8,896.6 million which is lower than the value of the Share Disposal Transaction by Baht 7,985.7 million or 47.3 percent lower than the value of Share Disposal Transaction.

Nonetheless, the book value approach to valuation reflects the equity value of GPSC at a moment in time without taking into account of future performance, economic, and industry trends which does not reflect the ability to generate future profit for GPSC. Thus, the IFA views that this approach is an inappropriate approach to evaluate the fair value of GPSC.

3.7.2 Adjusted Book Value Approach

This valuation approach determines the valuation of net assets on balance sheet or the value of equity on GPSC's financial statement shown in consolidated financial statement as of June 30, 2020, then adjusted by the items which would occur after the date on the financial statement and any additional asset appraisal with regards to the asset appraisal report conducted by the independent asset appraiser. However, as GPSC did not conduct independent asset appraisal, valuation for Share Disposal Transaction through adjusted book value approach produces the same result as book value approach.

3.7.3 Market Value Approach

The market value approach is a valuation method based on the assumption that the market price reflects the demand and supply of GPSC as a whole. GPSC's share price is shown below.

Chart representing GPSC's share price for the past 360 working days from August 20, 2020



Source: SETSMART as of August 20, 2020

Source: Average intraday price calculated from the daily traded share value per traded volume

The IFA has considered the weighted average value of GPSC's shares by the volume weighted average price ("VWAP") for the past 7 working days, 15 working days, 30 working days, 60 working days, 90 working days, 120 working days, 180 working days, and 360 working days from August 20, 2020. This is due to the fact that after the announcement of the Transaction resolution has an impact on GPSC's share price, which causes the share price after the announcement to be inappropriate. The calculation the market value approach is as follows.

Table of GPSC's share price

Time Frame	VWAP (Baht per share)
7 working days from August 20, 2020	68.7
15 working days from August 20, 2020	69.0
30 working days from August 20, 2020	72.2
60 working days from August 20, 2020	75.4
90 working days from August 20, 2020	72.2
120 working days from August 20, 2020	67.5
180 working days from August 20, 2020	75.0
270 working days from August 20, 2020	75.3
360 working days from August 20, 2020	72.6

Source: SETSMART as of August 20, 2020

Source: Average intraday price calculated from the daily traded share value per traded volume

The valuation under market value approach for GPSC by market price comparison of GPSC ordinary shares results in the range of Baht 67.5 – Baht 75.4 which equates to equity value range of Baht 190,431.6 million – Baht 212,700.2 million. Therefore, the fair value (8.9 percent) from the market value approach equates to Baht 16,963.1 million – Baht 18,946.7 million which is lower than the value of the Share Disposal

Transaction of Baht 16,882 million by Baht 80.9 million – Baht 2,064.5 million or 0.5 – 12.2 percent lower than the value of Share Disposal Transaction.

GPSC's shares are listed on the SET50 Index which is one of the stock price indices on the Stock Exchange of Thailand to represent the movement of the top 50 volatile shares which also reflects the level of demand and supply of the investors. Additionally, it is a reflection of the investor sentiment on various factors such as GPSC performance, growth prospects, and overall economy of the country. Hence, the IFA has an opinion that this valuation approach is appropriate for the share valuation of the company.

3.7.4 Market Comparable Approach

The Market Comparable Approach is the share valuation based on the assumption that companies with similar or identical business should contain similar market value ratio. The comparable company selection to value enterprise value of GPSC, the selected comparable companies may have some differences such as accounting, policy, investment policy, size of the company, revenue structure, source of non-core revenue, quality of the business, etc. Therefore, the comparable companies with similar business nature might not cover all the similarities, which might have some differences as mentioned above. Nonetheless, the IFA has considered and selected the comparable companies based on its business operation by with similar fuel types. However, the IFA did not include GPSC in the group of comparable companies as GPSC share price has been experiencing high fluctuations during the past 2 years from their acquisition of GLOW as its subsidiary.

To determine the fair value of GPSC's common stock through market ratio comparisons, the IFA used the following ratios:

1. Price to Book Value Ratio ("P/BV")
2. Price to Earnings Ratio ("P/E")
3. Enterprise Value to Earnings Before Interest, Tax, Depreciation, and Amortization ("EV/EBITDA")

Table: Comparable Companies

Company	Business Description	Country of the Stock Exchange	(Baht million)			
			Market Capitalization	Revenue	Asset	Total Debt
Ratch Group Public Company Limited	RATCH Group Public Company Limited engages in electricity generation and distribution in Thailand, Australia and other foreign countries through natural gas, coal and fuel oil, including solar, wind and biomass with a production capacity of 7,159.2 MW.	Thailand	80,837.5	33,046.9	105,446.2	37,055.9
Electricity Generating Public Company Limited	Electricity Generating Public Company Limited engages in the business of generating and distributing electricity to the government sector and industrial users especially in Thailand, the Philippines and Australia through natural gas, liquefied natural gas, coal, biomass, hydroelectric, solar energy, wind energy, geothermal energy and fuel cells with a total capacity of 5,475.0 MW.	Thailand	123,192.8	35,918.6	215,564.6	96,844.6
Banpu Power Public Company Limited	Banpu Power Public Company Limited engages in the production and distribution of electricity to the government sector. And industrial users especially in Thailand, Japan, China, Lao, and Vietnam through solar and wind power with a total production capacity of 2,247.0 MW.	Thailand	41,466.2	5,544.6	52,141.4	10,599.8
B.Grimm Power Public Company Limited	B.Grimm Power Public Company Limited engages in electricity generation and distribution in Thailand, Lao, and Vietnam through natural gas, liquefied natural gas, hydroelectric, solar energy, wind power and waste energy with a total capacity of 3,019.0 MW.	Thailand	121,220.9	45,475.1	126,166.7	64,604.6
Gulf Energy Development Public Company Limited	Gulf Energy Development Public Company Limited engages in the production and distribution of electricity to the government sector and industrial users through natural gas, liquefied natural gas, solar, wind and biomass energy with a total production capacity of 11,910.0 MW.	Thailand	333,328.1	31,928.8	152,603.8	31,982.8

Source: Capital IQ as of August 20, 2020 whereby financial information is as of the financial statement ending June 30, 2020

Source: 1/ Market Capitalization as of August 20, 2020

1. Price to Book Value Approach (“P/BV”)

The share valuation under P/BV is based on the book value of GPSC as of June 30, 2020 as stated in the book value approach which is Baht 99,874.7 million multiplied by the median of the P/BV ratio of comparable companies for the past 7 – 360 working days.

Table: P/BV of Comparable Companies

Company	P/BV Ratio (Times)								
	7 days	15 days	7 days	60 days	7 days	120 days	7 days	270 days	360 days
Ratch Group Public Company Limited	1.4	1.4	1.5	1.6	1.6	1.5	1.6	1.6	1.6
Electricity Generating Public Company Limited	1.3	1.3	1.3	1.4	1.4	1.3	1.5	1.6	1.6
Banpu Power Public Company Limited	1.0	1.1	1.1	1.2	1.1	1.1	1.1	1.2	1.3
B.Grimm Power Public Company Limited	3.5	3.5	3.7	3.8	3.6	3.4	3.6	3.5	3.2
Gulf Energy Development Public Company Limited	10.9	11.2	11.8	12.2	12.4	11.9	12.0	11.4	10.3
Median of P/BV	1.4	1.4	1.5	1.6	1.6	1.5	1.6	1.6	1.6
Book Value (Baht million)	99,874.7	99,874.7	99,874.7	99,874.7	99,874.7	99,874.7	99,874.7	99,874.7	99,874.7
Equity Value (Baht million)	141,031.4	143,614.2	149,136.3	155,169.6	155,319.6	151,186.6	157,303.5	163,618.6	160,384.9
8.9% of Equity Value (Baht million)	12,562.7	12,792.8	13,284.6	13,822.1	13,835.4	13,467.3	14,012.1	14,574.7	14,286.6

Source: Capital IQ as of August 20, 2020 whereby financial information is as of the financial statement ending June 30, 2020

Median of P/BV ratio of comparable companies over the past 12 months is 1.4 – 1.6 times which indicates that the equity value with the range of Baht 141,031.4 million – Baht 163,618.6 million. Therefore, the fair value (8.9 percent) from the P/BV approach ranges between Baht 12,562.7 million – Baht 14,574.7 million which is lower than the value of the Share Disposal of Baht 16,882 million by the range of Baht 2,307.5 million – Baht 4,319.5 million or 13.7 – 25.6 percent lower than the value of Share Disposal Transaction.

Nonetheless, the P/BV ratio reflects financial position at a point in time which does not reflect the market value of some assets and events which occurred after the financial statement's date and the asset's ability to generate profit in the future. Thus, this valuation approach may not reflect the fair value of GPSC.

2. Price to Earnings Approach ("P/E")

The share valuation under P/E ratio is based on the financial statement for the past 12 months as of June 30, 2020 which equates to Baht 5,513.3 million multiplied by the median of the P/E ratio of the comparable companies.

Table: P/E of Comparable Companies

Company	P/E Ratio (Times)								
	7 days	15 days	7 days	60 days	7 days	120 days	7 days	270 days	360 days
Ratch Group Public Company Limited	17.7	18.0	18.7	19.5	19.5	19.0	19.8	20.5	20.1
Electricity Generating Public Company Limited	12.3	12.3	12.7	13.2	13.4	13.1	14.4	15.6	15.6
Banpu Power Public Company Limited	19.1	19.5	20.4	21.5	20.9	19.5	20.4	22.2	23.8
B.Grimm Power Public Company Limited	31.9	32.2	33.7	34.6	32.8	31.5	33.4	31.7	29.2
Gulf Energy Development Public Company Limited	65.6	67.1	71.2	73.7	74.3	71.5	72.0	68.5	62.0
Median of P/E	19.1	19.5	20.4	21.5	20.9	19.5	20.4	22.2	23.8
Earnings of GPSC (Baht million)	5,513.3	5,513.3	5,513.3	5,513.3	5,513.3	5,513.3	5,513.3	5,513.3	5,513.3
Equity Value (Baht million)	105,250.8	107,707.7	112,347.3	118,675.2	115,084.1	107,707.7	112,367.5	122,320.2	131,326.9
8.9% of Equity Value (Baht million)	9,375.4	9,594.3	10,007.6	10,571.3	10,251.4	9,594.3	10,009.4	10,895.9	11,698.2

Source: Capital IQ as of August 20, 2020 whereby financial information is as of the financial statement ending June 30, 2020

Median of P/E ratio of comparable companies over the past 12 months is 19.1 – 23.8 times which indicates that the equity value with the range of Baht 105,250.8 million – Baht 131,326.9 million. Therefore, the fair value from the P/E approach (8.9 percent) ranges between Baht 9,375.4 million – Baht 11,698.2 million which is lower than the value of the Share Disposal of Baht 16,882 million by the range of Baht 5,184.0 million – Baht 7,506.8 million or 30.7 – 44.5 percent lower than the value of Share Disposal Transaction.

The P/E approach does not take into account of the following differences for each company – revenue structure, capital structure, future performance, as well as the current and future production capacity. Thus, this valuation approach may not reflect the fair value of GPSC.

3. Enterprise Value/Earnings Before Interest, Tax, Depreciation, and Amortization Ratio (“EV/EBITDA”)

The share valuation under EV/EBITDA of GPSC from enterprise value in Consolidated Financial Statement for the past 12 months as of June 30, 2020 is Baht 21,123.0 million multiplied by median of EV/EBITDA of comparable companies.

Table: EV/EBITDA of comparable companies

Company	EV/EBITDA Ratio (Times)								
	7 days	15 days	7 days	60 days	7 days	120 days	7 days	270 days	360 days
Ratch Group Public Company Limited	21.0	21.3	21.9	22.5	22.6	22.1	22.8	23.5	23.1
Electricity Generating Public Company Limited	13.1	13.1	13.4	13.8	13.8	13.7	14.5	15.4	15.4
Banpu Power Public Company Limited	12.9	13.2	13.7	14.4	14.0	13.2	13.7	14.8	15.8
B.Grimm Power Public Company Limited	15.2	15.3	15.8	16.1	15.5	15.1	15.7	15.2	14.4
Gulf Energy Development Public Company Limited	38.3	39.0	40.9	42.1	42.4	41.1	41.3	39.6	36.5
Median of EV/EBITDA	15.2	15.3	15.8	16.1	15.5	15.1	15.7	15.4	15.8
EBITDA of GPSC (Baht million)	21,123.0	21,123.0	21,123.0	21,123.0	21,123.0	21,123.0	21,123.0	21,123.0	21,123.0
Enterprise Value (Baht million)	321,552.2	323,595.6	333,834.1	340,120.2	328,175.3	318,749.2	332,159.0	324,436.8	334,010.8
Add: Cash and Cash Equivalent (Baht million)	17,393.3	17,393.3	17,393.3	17,393.3	17,393.3	17,393.3	17,393.3	17,393.3	17,393.3
Minus: Net Debt (Baht million)	105,518.8	105,518.8	105,518.8	105,518.8	105,518.8	105,518.8	105,518.8	105,518.8	105,518.8
Minus: Minority Interest	8,780.1	8,780.1	8,780.1	8,780.1	8,780.1	8,780.1	8,780.1	8,780.1	8,780.1

(Baht million)									
Equity Value	224,646.6	226,690.0	236,928.5	243,214.7	231,269.7	221,843.6	235,253.5	227,531.3	237,105.3
(Baht million)									
8.9% of Equity									
Value	20,010.9	20,192.9	21,104.9	21,664.9	20,600.9	19,761.2	20,955.7	20,267.8	21,120.7
(Baht million)									

Source: Capital IQ as of August 20, 2020 whereby financial information is as of the financial statement ending June 30, 2020

Median of EV/EBITDA ratio of comparable companies over the past 12 months is 15.1 – 16.1 times which indicates that the equity value with the range of Baht 221,843.6 million – Baht 243,214.7 million. Therefore, the fair value from the P/E approach (8.9 percent) ranges between Baht 19,761.2 million – Baht 21,664.9 million which is higher than the value of the Share Disposal of Baht 16,882 million by the range of Baht 19,761.2 million – Baht 21,664.9 million or 17.1 – 28.3 percent lower than the value of Share Disposal Transaction.

The EV/EBITDA approach does not take into account of the following differences for each company – revenue structure and future performance, as well as the current and future production capacity. Thus, this valuation approach may not reflect the fair value of GPSC.

3.7.5 Transaction Comparable Approach

The Transaction Comparable Approach is the valuation approach that uses the median of EV/EBITDA ratio for the period of during the past 12 months of comparable companies whereby their target companies conduct their business operations in power industry. The median of the EV/EBITDA is multiplied by the EBITDA of GPSC for the last period of last 12 months ending June 30, 2020. For this approach of the valuation, there are some differences between each transaction and the Company's Transactions such as transaction value and transaction date which might result in inaccurate valuation. The details of each transaction are as follows:

Table: Comparable Transactions

Date	Target Company	Country	Transaction Proportion (%)	Transaction value (Baht million)	EV/EBITDA (Times)
June 2018	Glow Energy Public Company Limited	Thailand	69.1	139,034.1	10.3
August 2017	Energy Development Corporation	Thailand	47.5	42,649.1	9.2
October 2015	TPC Power Holding Public Company Limited	Thailand	0.6	41.0	107.3
December 2013	Aboitiz Power Corporation	Philippines	0.1	86.7	9.1
October 2011	Eastern Power Group Public Company Limited	Thailand	13.8	137.8	6.0
November 2010	Ratch Group Public Company Limited	Thailand	14.0	6,679.2	6.1
				Median	9.1

Source: Capital IQ as of August 20, 2020

Table: Information on Transaction Comparable Companies

Target Company	Business Description	Country of the Stock Exchange	(Baht million)			
			Market Capitalization	Revenue	Asset	Total Debt
Glow Energy Public Company Limited	Glow Energy Public Company Limited and its subsidiaries produce and distribute electricity, steam and processed water to industrial customers, EGAT and Provincial Electricity Authority (PEA) with IPP and SPP contracts with a total production capacity of 3,084 MW.	Thailand	-	50,182.7	107,245.3	30,134.2
Energy Development Corporation	Energy Development Corporation and its subsidiaries produce and distribute electricity through geothermal energy and other types of renewable energy as well as steam in the Philippines with a total capacity of 63 megawatts	Philippines	-	24,756.3	88,141.7	36,362.1
TPC Power Holding Public Company Limited	TPC Power Holding Public Company Limited, a subsidiary of Thai Polycons Public Company Limited, engages in the production and distribution of biomass power in Thailand with a total production capacity of 119 MW.	Thailand	5,095.2	1,669.6	8,513.7	4,006.1
Aboitiz Power Corporation	Aboitiz Power Corporation engages in the production and distribution of electricity in the Philippines through hydroelectric power plant, geothermal energy, solar, coal and oil with a total production capacity of 3,350 MW.	Philippines	125,285.1	73,282.6	265,492.1	239,875.9
Eastern Power Group Public Company Limited	Eastern Power Group Public Company Limited engages in solar power plants in Thailand and Japan with a total capacity of 500 MW.	Thailand	3,336.1	1,574.5	10,682.5	6,736.7
Ratch Group Public Company Limited	RATCH Group Public Company Limited engages in electricity generation and distribution in Thailand, Australia and other foreign countries through natural gas, coal and fuel oil, including solar, wind and biomass with a production capacity of 7,159.2 MW.	Thailand	80,837.5	33,046.9	105,446.2	37,055.9

Source: Capital IQ as of August 20, 2020 whereby financial information is as of the financial statement ending June 30, 2020

Median of the EV/EBITDA ratio of other trading transaction in the past is 9.1 times.

Table: Calculation of Share Price by Using Transaction Comparable Approach

Unit: Baht million	Last 12 months period
	Median
Median of EV/EBITDA (Times)	9.1
EBITDA of GPSC	21,123.0
Enterprise Value	192,430.8
Add: Cash and Cash Equivalent	17,393.7
Minus: Interest Bearing Debt	(105,518.8)
Minus: Minority Interest	(8,780.1)
Equity Value (Baht million)	95,525.3
8.9% of Equity Value (Baht million)	8,509.2

Source: GPSC's financial statement ending June 30, 2020

The total equity value of GPSC from transaction comparable approach is Baht 99,874.7 million. Therefore, fair value (8.9 percent) from the transaction comparable approach equates to Baht 8,509.1 million which is lower than the value of the Share Disposal Transaction of Baht 16,882 million by Baht 8,373.1 million or 49.6 percent lower than the value of Share Disposal Transaction.

Nonetheless, this approach that does not take into account the differences of individual transactions such as the size of the transaction and timing of the transaction. Thus, this valuation approach might not reflect the fair value of GPSC.

3.7.6 Discounted Cash Flow Approach

Under the Discounted Cash Flow Approach, the IFA estimates net free cash flow to firm ("FCFF") that GPSC is expected to receive from the projected operation. FCFF is obtained from GPSC's future cash flow projection for the period of 30 years and 6 months during July 1, 2020 – December 31, 2050. The projection of 30-year-and-6-month period corresponds to the PPAs of SPPs of GPSC and GLOW, which will end on December 31, 2049. The IFA used several assumptions such as: power dispatch, power tariff and other significant assumptions relating to the valuation. The assumptions are based on public information, publicly available news, information provided by the Company as a major shareholder of GPSC. In addition, the IFA projected that the PPAs with EGAT will end in 2049, but its power sale to industrial Users ("IU"), steam sale and other revenues will continue on going-concern basis and will be able to operate without significant changes. The details can be shown as follows:

- Estimation of revenues, costs, expenses in order to forecast financial projection is under the current economic condition and situation.
- The IFA discounted FCFF under current economic condition and situation at the weighted average cost of capital ("WACC") across the projection period. The sum of discounted FCFF

will be added by cash and subtracted by interest-bearing liabilities. In this regard, the IFA sets out the variables used to calculate the WACC on August 20, 2020, which is the date of the Board of Directors' Meeting No. 8/2020 of the Company.

- The IFA projected GPSC's FCFE based on public information, publicly available news, as well as the interview with the Company.

Financial projections and assumptions used in GPSC's valuation are as follows:

1. Revenue

The IFA projected GPSC's revenues which can be divided into 4 categories: (1) Revenue from Independent Power Producers ("IPP") (2) Revenue from Small Power Producers ("SPP") (3) Revenue from other power producers and (4) Revenue from other operation. The assumptions in the projection are as follows.

1.1 Revenue from IPPs

Revenue from IPP is from selling and distributing power to EGAT. There are 4 IPPs: (1) Sriracha Power Plant ("SRC") (2) Glow IPP Plant ("GIPP") (3) GHECO-One Plant ("GHECO-1") and (4) Houay Ho Power Plant ("HHPC"). The assumptions in the projection are as follow:

(1) Sriracha Power Plant (SRC)

Based on PPA of IPP, revenue from power production and distribution of SRC can be categorized into 2 parts: Availability Payment ("AP"), which is paid to IPP when the IPP is available to produce and distribute power as specified under PPA, and Energy Payment ("EP"), which is paid only when EGAT orders the IPP to distribute power. The IFA projected the revenue based on historical operation, information disclosed in prospectus, as well as the projection of the Company and assumptions that the IFA deemed appropriate. In this regard, the SRC has been commercially operating since August 2000 and its PPA will end in August 2025, with the total PPA life of 25 years and capacity of 700.00 MW.

- **Availability Payment (AP)**

AP that SRC will receives under PPA is calculated by multiplying Base Availability Credit (Baht per MWh) with Dependable Contracted Capacity (which is the maximum continuous net generating capacity measured in MW, up to the contracted capacity). The formula is as follows:

$BAC_{nm} = (APR_{nm} \times 1000) / CAH_n$	
APR _{nm}	AP for the payment period, m, in the contract year, n (THB/kW)
CAH _n	Hours of available capacity in the contract year, n.

Availability Payment calculation is as follow:

Table of Calculation of Availability Payment of SRC

	2Q2020F	2021F	2022F	2023F	2024F	2025F
Contracted available hours ("CAH") ^{1/}	3,966.1	8,486.0	8,486.0	7,577.0 ^{4/}	8,510.0	2,683.0
Availability payment rate ("APR") (Baht/kW) ^{1/}	1,737.0	1,737.0	1,737.0	1,737.0	1,737.0	645.0
Base availability credit ("BAC") (Baht /MWh) ^{2/}	220.2	204.7	204.7	229.2	204.1	240.4
Capacity (MW)	700.0	700.0	700.0	700.0	700.0	700.0
Availability payment (Baht m)^{3/}	611.3	1,142.2	1,142.2	1,215.9	1,142.1	451.5

Note: 1/ Based on GPSC's prospectus

2/ Based on the IFA's projection from Base Availability Credit formula

3/ Calculated by Capacity x CAH x BAC

4/ CAH decreases once every 3 years according to the scheduled maintenance shutdowns.

● Energy Payment

EP is fuel payment that the IPP will receive when EGAT orders the IPP to distribute power. SRC will receive EP in accordance with the power dispatched to the EGAT based on the following assumptions:

Power Dispatch

The IFA projected power dispatch based on contracted capacity, which is 700.0 MW, and dispatch rate according to the projection of the Company. From 2020 onward, SRC will be ordered to dispatch less power and eventually no longer be ordered to dispatch any power in 2020 onward due to high reserved power capacity of Thailand.

Table of Projection of Power Dispatch of SRC

Item	2Q2020F	2021F	2022F	2023F	2024F	2025F
Capacity (MW)	700.0	700.0	700.0	700.0	700.0	700.0
Dispatch rate (%)	31.6%	5.5%	-	-	-	-
Power dispatch (MWh)^{1/}	976,306.0	336,000.0	-	-	-	-

Source: Projection of the Company

Note: 1/ Calculated by Capacity 700.0 MW x Hours in a year x Dispatch rate

Tariff

The IFA projected tariff according to the natural gas cost of SRC, whose natural gas price in 2020 based on the projection of the Company which reflects the decrease of natural gas market price in 2020 is Baht 1.6 /kWh.

- **Reimbursement for Gas Pipeline Fee**

Reimbursement for gas pipeline fee is a reimbursement from EGAT to reimburse gas pipeline fee that SRC has to pay even when SRC doesn't dispatch any power to EGAT due to high reserved power capacity of Thailand. The IFA projected reimbursement for gas pipeline fee based on the projection of the Company, which is Baht 902.6 million per year (Baht 905.0 million per year for leap year). In this regard, the IFA does not have PPA of SRC; however, the IFA believe that the projection of the Company is reasonable due to the similar amount of reimbursement of the historical reimbursement for gas pipeline fee of GIPP, which has similar size of capacity (713.0 MW).

According to the assumptions above, the IFA summarized the projection of revenue of SRC as follows:

Table of Projection of Revenue of SRC

Unit: Baht million	2Q2020F	2021F	2022F	2023F	2024F	2025F ^{3/}
Availability payment ^{1/} (AP)	611.3	1,142.2	1,142.2	1,215.9	1,142.1	451.5
Energy payment ^{2/} (EP)	1,535.6	528.5	-	-	-	-
Reimbursement gas pipeline fee	455.0	902.6	902.6	902.6	905.0	558.9
Total Revenue of SRC	2,601.8	2,573.2	2,044.8	2,118.5	2,047.1	1,010.4

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x CAH x BAC

2/ Calculated by Power dispatch x Tariff

3/ SRC's PPA with EGAT will expire in August 2025.

(2) GLOW IPP (GIPP)

Based on PPA of IPP, revenue from power production and distribution of GIPP can be categorized into 2 parts: AP, and EP. The IFA projected the revenue based on historical operation, information disclosed in prospectus, as well as the projection of the Company and assumptions that the IFA deemed appropriate. In this regard, GIPP has been commercially operating since February 2003 and its PPA will end in January 2028, with the total PPA life of 25 years and contracted capacity of 713.0 MW

- **Availability Payment**

AP of GIPP is similar to AP of SRC which is paid to IPP when the IPP is available to produce and distribute power as specified under PPA. In this regard, the IFA projected AP based on publicly available information as calculated as follows:

Table of Projection of AP of GIPP

Item	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F
Contracted available hours (CAH) ^{1/}	4,031.4	8,073.0	8,208.0	8,019.0	8,073.0	8,208.0	8,019.0	8,073.0	1,039.0
Availability payment rate (APR) (Baht/kW) ^{1/}	1,882.5	1,879.9	1,907.6	1,701.6	1,502.9	1,489.0	1,490.1	1,499.8	193.0
Base availability credit (BAC) (Baht/MWh) ^{2/}	234.8	232.9	232.4	212.2	186.2	181.4	185.8	185.8	185.7
Capacity (MW)	713.0	713.0	713.0	713.0	713.0	713.0	713.0	713.0	713.0
Availability payment (AP) (Baht m)^{3/}	674.8	1,340.4	1,360.1	1,213.3	1,071.6	1,061.6	1,062.4	1,069.3	98.1

Note: 1/ Based on Prospectus of GLOW

2/ Projection of the IFA based on formula of BAC calculation

3/ Calculated by Capacity x CAH x BAC

- **Energy Payment**

EP is fuel payment that the IPP will receive when EGAT orders the IPP to distribute power. GIPP will receive EP in accordance with the power dispatched to the EGAT. The IFA projected power dispatch based on dispatch rate based on the historical average of dispatch rate. Since 2017, GIPP has not dispatched any power to EGAT due to high reserved power capacity of Thailand. Therefore, the IFA projected that throughout the projection GIPP will not dispatch any power to EGAT.

- **Reimbursement for Gas Pipeline Fee**

Reimbursement for gas pipeline fee is a reimbursement from EGAT to reimburse gas pipeline fee that GIPP has to pay even when GIPP doesn't dispatch any power to EGAT due to high reserved power capacity of Thailand. The IFA projected reimbursement for gas pipeline fee based on the historical reimbursement in 2018, which was Baht 907.6 million per year (Baht 910.1 million per year for leap year). In this regard, the IFA projected the reimbursement to be equal to the fee throughout the projection.

According to the assumptions above, the IFA summarized the projection of revenue of GIPP as follows:

Table of Projection of Revenue of GIPP

Unit: Baht million	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F ^{3/}
Availability payment ^{1/} (AP)	674.8	1,340.4	1,360.1	1,213.3	1,071.6	1,061.6	1,062.4	1,069.3	98.1
Energy payment ^{2/} (EP)	-	-	-	-	-	-	-	-	-
Reimbursement gas pipeline fee	457.5	907.6	907.6	907.6	910.1	907.6	907.6	907.6	77.1
Total revenue of GIPP	1,132.3	2,248.0	2,267.7	2,120.9	1,981.7	1,969.2	1,970.0	1,976.9	175.2

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x CAH x BAC

2/ Calculated by Power dispatch x Tariff

3/ GIPP's PPA with EGAT will expire in January 2028.

(3) GHECO-One (GHECO-1)

Based on PPA of IPP, revenue from power production and distribution of GHECO-1 can be categorized into 2 parts: AP, and EP. The IFA projected the revenue based on historical operation, information disclosed in prospectus, as well as the projection of the Company and assumptions that the IFA deemed appropriate. In this regard, GHECO-1 has been commercially operating since August 2012 and its PPA will end in July 2037, with the total PPA life of 25 years and contracted capacity of 660.0 MW.

- **Availability Payment**

AP of GHECO-1 is similar to AP of SRC and GIPP, which is paid to IPP when the IPP is available to produce and distribute power as specified under PPA. In this regard, the IFA projected AP based on publicly available information as calculated as follows:



Table of Projection of AP of GHECO-1

Item	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F
Contracted Available Hours (CAH) ^{1/}	4,047.9	8,029.7	8,029.7	8,029.7	8,051.7	8,029.7	8,029.7	8,029.7	8,051.7
Availability Payment Rate (APR) (Baht/kW) ^{1/}	6,457.4	6,833.5	6,279.5	7,017.0	6,209.6	5,986.6	5,522.0	5,829.1	5,390.7
Base Availability Credit (BAC) (Baht/MWh) ^{2/}	802.0	851.0	782.0	873.9	771.2	745.6	687.7	725.9	669.5
Capacity (MW)	660.0	660.0	660.0	660.0	660.0	660.0	660.0	660.0	660.0
Availability Payment (AP) (Baht m)^{3/}	2,142.6	4,510.1	4,144.5	4,631.2	4,098.3	3,951.1	3,644.5	3,847.2	3,557.9

Note: 1/ Based on Prospectus of GLOW

2/ Projection of the IFA based on formula of BAC calculation

3/ Calculated by Capacity x CAH x BAC

Table of Projection of AP of GHECO-1

Item	2029F	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F
Contracted Available Hours (CAH) ^{1/}	8,029.7	8,029.7	8,029.7	8,051.7	8,029.7	8,029.7	8,029.7	8,051.7	4,663.8
Availability Payment Rate (APR) (Baht/kW) ^{1/}	6,016.5	4,869.6	5,591.2	5,206.9	5,669.5	4,969.7	5,554.5	5,125.8	3,843.2
Base Availability Credit (BAC) (Baht/MWh) ^{2/}	749.3	606.4	696.3	646.7	706.1	618.9	691.7	636.6	824.0
Capacity (MW)	660.0	660.0	660.0	660.0	660.0	660.0	660.0	660.0	660.0
Availability Payment (AP) (Baht m)^{3/}	3,970.9	3,213.9	3,690.2	3,436.5	3,741.9	3,280.0	3,666.0	3,383.0	2,536.5

Note: 1/ Based on Prospectus of GLOW

2/ Projection of the IFA based on formula of BAC calculation

3/ Calculated by Capacity x CAH x BAC

- **Energy Payment**

EP is fuel payment that the IPP will receive when EGAT orders the IPP to distribute power. GHECO-1 will receive EP in accordance with the power dispatched to the EGAT based on the following assumptions:

Power Dispatch

The IFA projected power dispatch based on contracted capacity, which is 660.0 MW and historical average dispatch rate in the past 3 years during 2016 – 2018 (because in 2019 GPSC does not publish power dispatch of GHECO-1) which are 90.3 percent, 86.8 percent, and 95.2 percent, respectively, whose average is 90.8 percent.

Table of Projection of Power Dispatch of GHECO-1

Item	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F
Capacity (MW)	660.0	660.0	660.0	660.0	660.0	660.0	660.0	660.0	660.0
Dispatch rate (%)	90.8%	90.8%	90.8%	90.8%	90.8%	90.8%	90.8%	90.8%	90.8%
Power dispatch (MWh) ^{1/}	2,646,336.5	5,249,526.3	5,249,526.3	5,249,526.3	5,263,908.6	5,249,526.3	5,249,526.3	5,249,526.3	5,263,908.6

Source: Projection of the Company

Note: 1/ Calculated by Capacity 660.0 MW x Hours in a year x Dispatch rate

Table of Projection of Power Dispatch of GHECO-1

Item	2029F	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F
Capacity (MW)	660.0	660.0	660.0	660.0	660.0	660.0	660.0	660.0	660.0
Dispatch rate (%)	90.8%	90.8%	90.8%	90.8%	90.8%	90.8%	90.8%	90.8%	90.8%
Power dispatch (MWh) ^{1/}	5,249,526.3	5,249,526.3	5,249,526.3	5,263,908.6	5,249,526.3	5,249,526.3	5,249,526.3	5,263,908.6	3,049,039.9

Source: Projection of the Company

Note: 1/ Calculated by Capacity 660.0 MW x Hours in a year x Dispatch rate

Tariff

The IFA projected tariff, which is compensation for power dispatched and distributed to EGAT for each kWh. The calculation of EP is based on fuel cost for power production, which GHECO-1 has to guarantee the efficiency of power production that each 1 kWh of power will use a certain amount of fuel (contracted heat rate). Should GHECO-1 consume fuel more than it promises, it will not receive tariff for the excess fuel consumed.

In this regard, the IFA projected contracted heat rate of 10,207.0 million BTU/kWh based on TRIS Rating Report of GLOW publicly available and projection of coal price based on the projection of the Company, which reflects the decrease of natural gas market price in 2020, which is Baht 98.7/million BTU and growing 1.4 percent annually throughout the projection based on the compounded annual growth rate (CAGR) of coal price at New Castle during 1999 – 2019.

According to the assumptions above, the IFA summarized the projection of revenue of GHECO-1 as follows:

Table of Projection of Revenue of GHECO-1

Unit: Baht million	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F
Availability payment (AP) ^{1/}	2,142.6	4,510.1	4,144.5	4,631.2	4,098.3	3,951.1	3,644.5	3,847.2	3,557.9
Energy payment ^{2/} (EP) ^{2/}	2,666.5	5,362.8	5,437.2	5,512.6	5,604.3	5,666.5	5,745.1	5,824.7	5,921.7
Total revenue of GHECO-1	4,809.1	9,872.9	9,581.7	10,143.8	9,702.7	9,617.6	9,389.6	9,671.9	9,479.5

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x CAH x BAC

2/ Calculated by Power dispatch x Tariff

Table of Projection of Revenue of GHECO-1

Unit: Baht million	2029F	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F ^{3/}
Availability payment (AP) ^{1/}	3,970.9	3,213.9	3,690.2	3,436.5	3,741.9	3,280.0	3,666.0	3,383.0	2,536.5
Energy payment ^{2/} (EP) ^{2/}	5,987.4	6,070.4	6,154.5	6,257.0	6,326.4	6,414.1	6,503.0	6,611.3	3,882.6
Total revenue of GHECO-1	9,958.3	9,284.3	9,844.7	9,693.5	10,068.2	9,694.1	10,169.0	9,994.3	6,419.1

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x CAH x BAC

2/ Calculated by Power dispatch x Tariff

3/ GHECO-1's PPA with EGAT will expire in July 2537

(4) Houay Ho Power Plant (HHPC)

The IFA projected based on historical information, prospectus, and projection of the Company as well as assumptions that the IFA deems appropriate. HHPC has been commercially operating since September 1999 and its PPA will end in August 2029, with the total PPA life of 30 years and contracted capacity of 152.0 MW

Power Dispatch

The IFA projected power dispatch based on contracted capacity, which is 152.0 MW and historical average dispatch rate in the past 3 years during 2016 – 2018 (because in 2019 GPSC does not publish power dispatch of HHPC) which are 29.2 percent, 30.5 percent, and 32.1 percent, respectively, whose average is 30.6 percent.

Table of Projection of Power Dispatch of HHPC

Item	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F
Capacity (MW)	152.0	152.0	152.0	152.0	152.0	152.0	152.0	152.0	152.0	152.0
Dispatch rate (%)	30.6%	30.6%	30.6%	30.6%	30.6%	30.6%	30.6%	30.6%	30.6%	30.6%
Power dispatch (MWh)^{1/}	205,516.6	407,682.5	407,682.5	407,682.5	408,799.4	407,682.5	407,682.5	407,682.5	408,799.4	271,416.0

Source: Projection of the Company

Note: 1/ Calculated by Capacity 152.0 MW x Hours in a year x Dispatch rate



Tariff

The IFA projected tariff of HHPC based on the tariff in 2018 (because in 2019 GPSC does not publish tariff of HHPC), which is Baht 1.7/kWh and referred to formula of tariff calculation according to PPA, the tariff will grow 35.0 percent of inflation rate of 2.0 percent throughout the projection.

Table of Projection of Revenue of HHPC

Unit: Baht million	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F ^{2/}
Power dispatch (MWh)	205,516.6	407,682.5	407,682.5	407,682.5	408,799.4	407,682.5	407,682.5	407,682.5	408,799.4	271,416.0
Tariff (Baht/kWh)	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Revenue of HHPC^{1/}	355.8	710.7	715.7	720.7	727.8	730.9	736.0	741.1	748.4	500.3

Source: Projection of the IFA

Note: 1/ Calculated by Power dispatch x Tariff

2/ HHPC's PPA with EGAT will expire in August 2029.

1.2 Revenue from SPPs

(1) SPPs of GPSC

SPPs of GPSC consist 5 power plants with total power capacity of 639.0 MW and total steam capacity of 1,710.0 tons/hour. SPPs of GPSC have entered into PPA with EGAT and Industrial Users (“IU”) as well as steam contracts with IUs as follow:

Table of Power and Steam Purchase Agreements of SPPs of GPSC

Power Plant	Power Capacity to EGAT (MW)	Power Capacity to IUs (MW)	Steam Capacity to IUs (tons/hour)
CUP-1	40.0 (Non-firm)	186.0	890.0
CUP-2	60.0 (Non-firm)	53.0	170.0
CUP-3	-	15.0	280.0
CUP-4	-	45.0	70.0
IRPC	180.0	60.0	180.0 – 300.0 ^{1/}

Source: 56-1 Report of GPSC and projection of the IFA

Note: 1/ Capacity during peak hour is 180.0 tons/hour and capacity during off-peak hour is 300.0 tons/hour.

The IFA considered assumptions based on 56-1 report, MD&A, and other sources of public information including management interview of the Company. The details are as follow:

- **Revenue from Power distribution to EGAT**

Currently, SPPs of GPSC have PPAs with EGAT as follow:

Table of PPAs with EGAT of SPPs of GPSC

Power Plant	COD	PPA Expiration Date	Fuel	Capacity (MW)
CUP-1	December 2006	November 2021 (renew every 5 years)	Natural Gas	40.0 (Non-firm)
CUP-2	January 2008	December 2022 (renew every 5 years)	Natural Gas	60.0 (Non-firm)
IRPC	November 2017	November 2042	Natural Gas	180.0

Source: 56-1 Report of GPSC and projection of the IFA

PPAs of CUP-1 and CUP-2 are SPP Non-firm (meaning that the PPA tenor will not exceed 5 years and will only receive EP) short-term tenor of 5 years; however, based on CUP-1 and CUP-2 historical operation, they are always able to renew the PPAs every 5 years with EGAT continuously. Therefore, for CUP-1 and CUP-2, the IFA projected that they will be able to renew PPAs continuously throughout the projection.

Power Dispatch

The IFA projected power dispatch according to contracted capacity of each power plant an average dispatch rate of each power plant. The details are as follow:

Table of Dispatch Rate and Contracted Capacity to EGAT of SPPs of GPSC

Power Plant	Dispatch Rate	Contracted Capacity (MW)
CUP	86.4%	100.0 (Non-firm)
IRPC	76.8%	180.0

Source: Projection of the IFA

Tariff

The IFA projected tariff for EGAT in 2020 based on projection of the Company, which reflects the decrease of natural gas market price in 2020, which is Baht 2.5/kWh and will grow at 0.6 percent annually, as a pass-through rate (tariff growth rate-to-fuel growth rate) of 57.5 percent (based on the projection of the Company, which the IFA believed to be reasonable and appropriate because the pass-through rate is similar to the pass-through rate of tariff for IUs in the past of SPPs of GLOW which is 62.1 percent.) per natural gas price growth rate at 1.0 percent annually based on the compounded annual growth rate (CAGR) of natural gas price at Henry Hub during 1998 – 2019.

Table of Assumptions of Tariff for EGAT of SPPs of GPSC

Item	Projection
Pass-through rate of tariff (%)	57.5 ^{1/}
Natural gas price growth rate (%)	1.0 ^{2/}
Tariff growth rate (%) ^{3/}	0.6
Tariff for EGAT (Baht/kWh) ^{4/}	2.5 – 2.9

Source: Projection of the Company and the IFA

Note: 1/ Based on projection of the Company according to PPA with SPPs of GPSC and EGAT

2/ Based on the compounded annual growth rate (CAGR) of natural gas price at Henry Hub during 1998 – 2019

3/ Calculated by Pass-through rate x Natural gas price growth rate

4/ Calculated by Tariff of a year before x (1+ (Pass-through rate of tariff x Natural gas price growth rate))

According to the assumptions above, the IFA summarized the projection of revenue of SPPs of GPSC as follows:

Table of Revenue from Power Distribution to EGAT of SPPs of GPSC

Unit: Baht million	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
Power dispatch (MWh) ^{1/}	991,657.0	1,967,145.6	1,967,145.6	1,967,145.6	1,972,535.0	1,967,145.6	1,967,145.6	1,967,145.6	1,972,535.0	1,967,145.6	1,967,145.6
Average tariff (Baht/kWh)	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6
Revenue SPPs of GPSC (EGAT) ^{2/}	2,469.6	4,922.6	4,946.4	4,970.4	5,008.3	5,019.0	5,043.7	5,068.5	5,107.5	5,118.7	5,144.2

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Power dispatch x Tariff

Table of Revenue from Power Distribution to EGAT of SPPs of GPSC

Unit: Baht million	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F	2040F
Power dispatch (MWh) ^{1/}	1,967,145.6	1,972,535.0	1,967,145.6	1,967,145.6	1,967,145.6	1,972,535.0	1,967,145.6	1,967,145.6	1,967,145.6	1,972,535.0
Average tariff (Baht/kWh)	2.6	2.6	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.8
Revenue SPPs of GPSC (EGAT) ^{2/}	5,169.8	5,209.9	5,221.8	5,248.0	5,274.6	5,315.8	5,328.2	5,355.4	5,382.8	5,425.3

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Power dispatch x Tariff

Table of Revenue from Power Distribution to EGAT of SPPs of GPSC

Unit: Baht million	2041F	2042F ^{3/}	2043F	2044F	2045F	2046F	2047F	2048F	2049F	2050F ^{4/}
Power dispatch (MWh) ^{1/}	1,967,145.6	1,784,787.6	756,951.6	759,025.4	756,951.6	756,951.6	756,951.6	759,025.4	756,951.6	756,951.6
Average tariff (Baht/kWh)	2.8	2.8	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Revenue SPPs of GPSC (EGAT) ^{2/}	5,438.3	4,972.1	2,191.4	2,202.6	2,201.7	2,206.9	2,212.1	2,223.3	2,222.4	2,227.7

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Power dispatch x Tariff

3/ IRPC's PPA with EGAT will expire in November 2042.

4/ CUP's PPA with EGAT will be renewed continuously every 5 years.

- **Revenue from Power Distribution to IUs**

Currently, SPPs of GPSC have PPAs with IUs as follow:

Table of PPAs with IUs of SPPs of GPSC

Power Plant	PPA	Fuel	Capacity (MW)
CUP-1	December 2006 (renewed continuously)	Natural gas	186.0
CUP-2	January 2008 (renewed continuously)	Natural gas	53.0
CUP-3	September 2009 (renewed continuously)	Natural gas	15.0
CUP-4	October 2019 (renewed continuously)	Natural gas	45.0
IRPC	November 2017 – November 2045	Natural gas	60.0

Source: 56-1 Report of GPSC and projection of the IFA

After PPAs with current IUs expired, the IFA projected that CUP-1, CUP-2, CUP-3, and CUP-4 (“CUPs”) will be able to renew the PPAs with these IUs and able to maintain current level of power dispatch because CUPs have connected cogeneration power system and steam operation system in Asia industrial estate area, Hemaraj Eastern Seaboard industrial estate area, Padaeng industrial estate area, and Map Ta Phut industrial estate area in order to produce and supply power and steam continuously and stably. There are several advantages to such grid connection: CUPs can stabilize the production and transmission of power and steam, have flexibility to rotate machine shutdown to match with maintenance projection and enable customers to schedule shut down for maintenance and deliver power in the most demanding period. The stability of the power supply is CUPs’ competitive advantage which the IFA believes that these strengths will be able to help CUPs maintain their IUs, which is accordance with historical power dispatch to IUs.

According to the abovementioned information, the IFA projected that CUPs will be able to renew its PPAs with all IUs and maintain its current level of power dispatch to IUs throughout the projection.

Power Dispatch

The IFA projected power dispatch according to contracted capacity of each power plant and average dispatch rate of each power plant. The details are as follow:

Table of Dispatch Rate and Contracted Capacity to IUs of SPPs of GPSC

Power Plant	Dispatch Rate	Capacity (MW)
CUP	86.4%	299.0
IRPC	76.8%	60.0

Source: Projection of the Company

Tariff

The IFA projected tariff for IUs in 2020 based on projection of the Company, which reflects the decrease of natural gas market price in 2020, which is Baht 2.7/kWh and will grow at 0.6 percent annually, as a pass-through rate (tariff growth rate-to-fuel growth rate) of 62.1 percent (based on historical pass-through rate of tariff for IUs of SPPs of GLOW during 2004 – 2019) per natural gas price growth rate at 1.0 percent annually based on the compounded annual growth rate (CAGR) of natural gas price at Henry Hub during 1998 – 2019.

Table of Assumptions of Tariff for IUs of SPPs of GPSC

Item	Projection
Pass-through rate of tariff (%)	62.1 ^{1/}
Natural gas price growth rate (%)	1.0 ^{2/}
Tariff growth rate (%) ^{3/}	0.6
Tariff for IUs (Baht/kWh) ^{4/}	2.7 – 3.3

Source: Projection of the Company and the IFA

Note: 1/ based on historical pass-through rate of tariff for IUs of SPPs of GLOW during 2004 – 2019

2/ Based on the compounded annual growth rate (CAGR) of natural gas price at Henry Hub during 1998 – 2019

3/ Calculated by Pass-through rate x Natural gas price growth rate

4/ Calculated by Tariff of a year before x (1+ (Pass-through rate of tariff x Natural gas price growth rate))

According to the assumptions above, the IFA summarized the projection of revenue of SPPs of GPSC as follows:

Table of Revenue from Power Distribution to IUs of SPPs of GPSC

Unit: Baht million	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
Power dispatch (MWh) ^{1/}	1,343,396.1	2,653,765.3	2,673,768.8	2,675,370.3	2,681,155.6	2,668,244.3	2,665,409.3	2,678,130.3	2,685,517.1	2,656,709.3	2,678,130.3
Average tariff (Baht/kWh)	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.9	2.9	2.9	2.9
Revenue SPPs of GPSC (IU) ^{2/}	3,685.2	7,323.7	7,423.3	7,472.5	7,533.8	7,542.6	7,580.0	7,662.0	7,729.5	7,692.6	7,801.3

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Power dispatch x Tariff

Table of Revenue from Power Distribution to IUs of SPPs of GPSC

Unit: Baht million	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F	2040F
Power dispatch (MWh) ^{1/}	2,678,130.3	2,682,682.1	2,655,523.3	2,675,295.3	2,680,965.3	2,688,310.4	2,680,965.3	2,680,965.3	2,680,965.3	2,688,310.4
Average tariff (Baht/kWh)	2.9	2.9	3.0	3.0	3.0	3.0	3.0	3.1	3.1	3.1
Revenue SPPs of GPSC (IU) ^{2/}	7,848.3	7,909.0	7,876.0	7,982.5	8,047.6	8,118.2	8,144.8	8,193.8	8,243.2	8,315.5

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Power dispatch x Tariff

Table of Revenue from Power Distribution to IUs of SPPs of GPSC

Unit: Baht million	2041F	2042F ^{3/}	2043F	2044F	2045F	2046F	2047F	2048F	2049F	2050F ^{4/}
Power dispatch (MWh) ^{1/}	2,680,965.3	2,618,027.2	2,263,285.3	2,269,486.1	2,263,285.3	2,263,285.3	2,263,285.3	2,269,486.1	2,263,285.3	2,263,285.3
Average tariff (Baht/kWh)	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.3	3.3
Revenue SPPs of GPSC (IU) ^{2/}	8,342.8	8,196.0	7,128.1	7,190.7	7,214.2	7,257.6	7,301.3	7,365.4	7,389.5	7,434.0

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Power dispatch x Tariff

3/ IRPC's PPA with IUs will expire in November 2042.

4/ CUP's PPA with IUs will be renewed continuously.

- **Revenue from Steam Distribution to IUs**

Currently, SPPs of GPSC have steam contracts with IUs as follow:

Table of steam contracts with IUs of SPPs of GPSC

Power Plant	PPA	Fuel	Capacity (tons/hour)
CUP-1	December 2006 (renewed continuously)	Natural gas	890.0
CUP-2	January 2008 (renewed continuously)	Natural gas	170.0
CUP-3	September 2009 (renewed continuously)	Natural gas	280.0
CUP-4	October 2019 (renewed continuously)	Natural gas	70.0
IRPC	November 2017 – November 2045	Natural gas	180.0 – 300.0 ^{1/}

Source: 56-1 Report of GPSC and projection of the IFA

Note: 1/ Capacity during peak hour is 180.0 tons/hour and capacity during off-peak hour is 300.0 tons/hour.

In order to determine the assumption that steam contracts be renewed, the IFA forecasted to match with the assumption that CUPs would be renewed the PPAs with IUs since the products are related with the same customer base. The IFA also expected that CUPs would be able to maintain its production capacity and sales volume to IUs.

Steam Dispatch

The IFA projected steam dispatch according to contracted capacity of each power plant an average dispatch rate of each power plant based on projection of the Company because GPSC did not publish information of steam dispatch rate in detail in 2019 but only published mixed information of its total steam dispatch rate of its SPPs, which include the new power plant that is CUP-4 and SPPs of GLOW that it consolidated in 2019. Therefore, the IFA referred to the projection of the Company. In this regard during 2017 - 2018, CUP-1, CUP-2, and CUP-3 have average steam dispatch rate of 48.2 and IRPC of 41.5 percent, which are similar to the projection of the Company. Therefore, the IFA believes that the projection of the Company is reasonable and appropriate. The details are as follow:

Table of Dispatch Rate and Steam Capacity to IUs of SPPs of GPSC

Power Plant	Dispatch Rate	Capacity (tons/hour)
CUP	48.0%	1,410.0
IRPC	44.4%	180.0 – 300.0

Source: Projection of the Company

Steam Price

The IFA projected steam price for IUs in 2020 based on projection of the Company, which reflects the decrease of natural gas market price in 2020, which is Baht 786.9/ton and will grow at 0.8 percent annually, as a pass-through rate (steam price growth rate-to-fuel growth rate) of 81.9 percent (based on projection of the Company according to steam contracts of SPPs of GPSC and IUs) per natural gas price growth rate at 1.0 percent annually based on the compounded annual growth rate (CAGR) of natural gas price at Henry Hub during 1998 – 2019.

Table of Assumptions of Steam Price for IUs of SPPs of GPSC

Item	Projection
Pass-through rate of steam price (%)	81.9 ^{1/}
Natural gas price growth rate (%)	1.0 ^{2/}
Steam price growth rate (%) ^{3/}	0.8
Steam price for IUs (Baht/ton) ^{4/}	786.9 – 977.7

Source: Projection of the Company and the IFA

Note: 1/ Based on projection of the Company according to steam contracts with SPPs of GPSC and IUs

2/ Based on the compounded annual growth rate (CAGR) of natural gas price at Henry Hub during 1998 – 2019

3/ Calculated by Pass-through rate x Natural gas price growth rate

4/ Calculated by Steam price of a year before x (1 + (Pass-through rate of steam price x Natural gas price growth rate))

According to the assumptions above, the IFA summarized the projection of revenue of SPPs of GPSC as follows:

Table of Revenue from Steam Distribution to IUs of SPPs of GPSC

Unit: Baht million	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
Steam dispatch (tons) ^{1/}	3,440,299.6	6,755,587.4	6,784,567.4	6,786,912.4	6,803,197.0	6,776,307.4	6,772,107.4	6,790,587.4	6,809,217.0	6,759,507.4	6,790,587.4
Average steam price (Baht/ton)	786.9	793.1	799.4	805.8	812.2	818.7	825.2	831.7	838.3	845.0	851.7
Revenue SPPs of GPSC (steam) ^{2/}	2,707.2	5,358.2	5,423.9	5,468.9	5,525.6	5,547.4	5,588.0	5,647.8	5,708.3	5,711.6	5,783.5

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Steam dispatch x Steam price

Table of Revenue from Steam Distribution to IUs of SPPs of GPSC

Unit: Baht million	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F	2040F
Steam dispatch (tons) ^{1/}	6,790,587.4	6,805,017.0	6,757,827.4	6,786,387.4	6,794,787.4	6,813,285.7	6,794,787.4	6,794,787.4	6,794,787.4	6,814,110.7
Average steam price (Baht/ton)	858.5	865.3	872.2	879.1	886.1	893.1	900.2	907.3	914.6	921.8
Revenue SPPs of GPSC (steam) ^{2/}	5,829.4	5,888.2	5,893.8	5,965.8	6,020.6	6,085.0	6,116.6	6,165.2	6,214.2	6,281.4

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Steam dispatch x Steam price

Table of Revenue from Steam Distribution to IUs of SPPs of GPSC

Unit: Baht million	2041F	2042F ^{3/}	2043F	2044F	2045F	2046F	2047F	2048F	2049F	2050F ^{4/}
Steam dispatch (tons) ^{1/}	6,794,787.4	6,663,546.8	5,923,827.4	5,940,057.0	5,923,827.4	5,923,827.4	5,923,827.4	5,940,057.0	5,923,827.4	5,923,827.4
Average steam price (Baht/ton)	929.1	936.5	944.0	951.5	959.0	966.6	974.3	982.1	989.9	997.7
Revenue SPPs of GPSC (steam) ^{2/}	6,313.3	6,240.6	5,591.9	5,651.8	5,681.1	5,726.2	5,771.7	5,833.5	5,863.8	5,910.4

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Steam dispatch x Steam price

3/ IRPC's steam contract with IUs will expire in November 2042.

4/ CUP's steam contract with IUs will be renewed continuously.

(2) SPPs of GLOW

SPPs of GLOW consist 11 power plants with total power capacity of 1,556 MW and total steam capacity of 1,116.0 tons/hour. SPPs of GLOW have entered into PPAs with EGAT and Industrial Users as well as steam contracts with IUs as follow:

Table of Power and Steam Purchase Agreements of SPPs of GLOW

Power Plant	Power Capacity to EGAT (MW)	Power Capacity to IUs (MW)	Steam Capacity to IUs (tons/hour)
GLOW Energy Phase 1	-	-	250.0 ^{1/}
GLOW Energy Phase 2	120.0	101.0	300.0
GLOW Energy Phase 4	77.0	-	137.0
GLOW Energy Phase 5	-	328.0	160.0
GLOW CFB3	-	85.0	79.0
GLOW SPP 2	120.0	93.0	140.0
GLOW SPP 3	180.0	120.0	50.0
GLOW SPP 11 Phase 1	90.0	30.0	-
GLOW SPP 11 Phase 2	90.0	20.0	-
GLOW SPP 11 Phase 3	-	23.0	-
GLOW SPP 11 Phase 3 Expansion	-	19.0	-

Source: 56-1 Report of GPSC and projection of the IFA

Note: 1/ GLOW Energy Phase 1 is steam producer that uses obsolete equipment; therefore, it doesn't have any long-term steam contract.

The IFA considered assumptions based on 56-1 report, MD&A, and other sources of public information including management interview of the Company. The details are as follow:

- Revenue from Power distribution to EGAT

Currently, SPPs of GLOW have PPAs with EGAT as follow:

Table of PPAs with EGAT of SPPs of GLOW

Power Plant	COD	PPA Expiration Date	Fuel	Capacity (MW)
Current PPAs with EGAT				
GLOW Energy Phase 2	April 1996	March 2021	Natural Gas	120.0 ^{1/}
GLOW Energy Phase 4	January 2005	January 2030	Natural Gas	77.0
GLOW SPP 2	March 1999	April 2024	Natural Gas	120.0
GLOW SPP 3	December 1999	December 2024	Coal	180.0
GLOW SPP 11 Phase 1	October 2000	October 2025	Natural Gas	90.0
GLOW SPP 11 Phase 2	December 2012	December 2037	Natural Gas	90.0
PPAs that will be renewed with EGAT (SPP Replacement – Firm)				
GLOW Energy Phase 2	November 2022	October 2047	Natural Gas	60.0
GLOW SPP 2	January 2025	December 2050	Natural Gas	60.0
GLOW SPP 3	January 2025	December 2050	Coal	60.0

Source: 56-1 Report of GPSC and projection of the IFA

Note: 1/ GLOW Energy Phase 2's PPA is extended for 120.0 MW until 2021 before the signing of the SPP Replacement PPA with EGAT according to ERC's resolution in its meeting on April 10, 2019, approved SPP Firm Cogeneration to expire in 2019 - 2021.

- Current PPAs with EGAT

Power Dispatch

The IFA projected power dispatch according to contracted capacity of each power plant an average dispatch rate of each power plant based on the historical average in the past 3 years during 2017 – 2019. The details are as follow:

Table of Dispatch Rate to EGAT of SPPs of GLOW

Power Plant	2017A	2018A	2019A	Projection
Current PPAs with EGAT				
Natural gas-fired SPPs of GLOW in Map Ta Phut industrial estate ("MTP") ^{1/2/}	73.9%	72.4%	71.2%	72.5%
Coal-fired SPPs of GLOW in Map Ta Phut industrial estate ^{3/}	78.6%	78.9%	75.9%	77.8%
SPPs of GLOW in Padaeng industrial estate ^{4/}	68.6%	65.6%	67.9%	67.4%

Source: Projection of the IFA

Note: 1/ Such as GLOW Energy Phase 2, GLOW Energy Phase 4 and GLOW SPP 2

2/ The average dispatch rate of natural gas-fired SPPs of GLOW in MTP in 2017 and 2018 includes in calculation of power dispatch of GLOW SPP1 which is owned by Glow SPP 1 Co., Ltd., which was already sold in March 2019. The IFA believes that the average dispatch rate of SPPs of GLOW is reasonable and appropriate for the projection of SPPs of GLOW at the present that no longer have GLOW SPP 1 because GLOW SPP 1 is small in term of capacity, 124.0 MW, and located in MTP like other SPPs of GLOW; therefore, such dispatch rate can represent the operation in the future.

3/ Such as GLOW SPP 3

4/ Such as GLOW SPP 11 Phase 1 and GLOW SPP 11 Phase 2

Tariff Current PPAs with EGAT

The IFA projected tariff for EGAT in 2020 based on projection of the Company, which reflects the decrease of fuel market price in 2020, which is Baht 2.2/kWh. For natural gas-fired SPPs of GLOW, the tariff will grow at 0.6 percent annually, as a pass-through rate (tariff growth rate-to-fuel price growth rate) of 64.0 percent (based on the projection of the Company according to the PPAs of SPPs of GLOW and EGAT) per natural gas price growth rate at 1.0 percent annually based on the compounded annual growth rate (CAGR) of natural gas price at Henry Hub during 1998 – 2019. And for coal-fired SPPs of GLOW, the tariff will grow at 1.0 percent annually, as a pass-through rate (tariff growth rate-to-fuel price growth rate) of 73.3 percent (based on the projection of the Company according to the PPAs of SPPs of GLOW and EGAT) per coal price growth rate at 1.4 percent annually based on the compounded annual growth rate (CAGR) of coal price at New Castle during 1999 – 2019. In this regard, the pass-through rates are based on the projection of the Company, which the IFA believed to be reasonable and appropriate because the pass-through rate is similar to the pass-through rate of tariff for IUs in the past of SPPs of GLOW which is 62.1 percent.

Table of Assumptions of Tariff for EGAT of SPPs of GLOW

Item	Natural gas-fired plants	Coal-fired plants
Pass-through rate of tariff (%)	64.0 ^{1/}	73.3 ^{2/}
Fuel price growth rate (%)	1.0 ^{3/}	1.4 ^{4/}
Tariff growth rate (%) ^{5/}	0.6	1.0
Tariff for EGAT (Baht/kWh) ^{6/}	2.2 – 2.5	2.2 – 2.3

Source: Projection of the Company and the IFA

- Note:
- 1/ Based on projection of the Company according to PPA with natural gas-fired SPPs of GLOW and EGAT
 - 2/ Based on projection of the Company according to PPA with coal-fired SPPs of GLOW and EGAT
 - 3/ Based on the compounded annual growth rate (CAGR) of natural gas price at Henry Hub during 1998 – 2019
 - 4/ Based on the compounded annual growth rate (CAGR) of coal price at New Castle during 1999 – 2019
 - 5/ Calculated by Pass-through rate x Fuel price growth rate
 - 6/ Calculated by Tariff of a year before x (1+ (Pass-through rate of tariff x Fuel price growth rate))

According to the assumptions above, the IFA summarized the projection of revenue of SPPs of GLOW as follows:

Table of Revenue from Current PPAs with EGAT of SPPs of GLOW

Unit: Baht million	2Q2020F	2021F ^{4/}	2022F	2023F	2024F ^{5/6/}	2025F ^{7/}	2026F	2027F	2028F
Power dispatch (MWh) ^{1/}	2,169,330.5	3,728,936.2	3,540,965.5	3,540,965.5	2,925,328.1	1,422,082.2	1,020,386.8	1,020,386.8	1,023,182.4
Average tariff (Baht/kWh) ^{2/}	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Revenue SPPs of GLOW (current EGAT) ^{3/}	4,806.0	8,326.6	7,969.7	8,033.0	6,688.3	3,251.1	2,351.8	2,367.3	2,389.5

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Average tariff includes Capacity Payment and Energy Payment

3/ Calculated by Power dispatch x Tariff

4/ GLOW Energy Phase 2's current PPA with EGAT will expire in March 2021

5/ GLOW SPP 2's current PPA with EGAT will expire in April 2024

6/ GLOW SPP 3's current PPA with EGAT will expire in December 2024

7/ GLOW SPP 11's current PPA with EGAT will expire in October 2025

Table of Revenue from Current PPAs with EGAT of SPPs of GLOW

Unit: Baht million	2029F	2030F ^{4/}	2031F	2032F	2033F	2034F	2035F	2036F	2037F ^{5/}
Power dispatch (MWh) ^{1/}	1,020,386.8	549,989.9	531,227.6	532,683.1	531,227.6	531,227.6	531,227.6	532,683.1	502,119.3
Average tariff (Baht/kWh) ^{2/}	2.4	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Revenue SPPs of GLOW (current EGAT) ^{3/}	2,398.8	1,288.4	1,250.4	1,260.7	1,264.2	1,271.2	1,278.2	1,288.8	1,221.6

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Average tariff includes Capacity Payment and Energy Payment

3/ Calculated by Power dispatch x Tariff

4/ GLOW Energy Phase 4's current PPA with EGAT will expire in January 2030

5/ GLOW SPP 11 Phase 2's current PPA with EGAT will expire in December 2037

- PPAs that will be renewed with EGAT (SPP Replacement – Firm)

Power Dispatch

The IFA projected power dispatch according to contracted capacity of each power plant an average dispatch rate of each power plant based on the historical average in the past 3 years during 2017 – 2019. The details are as follow:

Table of Dispatch Rate to EGAT of SPPs of GLOW

Power Plant	2017A	2018A	2019A	Projection
PPAs that will be renewed with EGAT (SPP Replacement – Firm)				
Natural gas-fired SPPs of GLOW in MTP ^{1/2/}	73.9%	72.4%	71.2%	72.5%
Coal-fired SPPs of GLOW in MTP ^{3/}	78.6%	78.9%	75.9%	77.8%

Source: Projection of the IFA

Note: 1/ Such as GLOW Energy Phase 2 and GLOW SPP 2

2/ The average dispatch rate of natural gas-fired SPPs of GLOW in MTP in 2017 and 2018 includes in calculation of power dispatch of GLOW SPP1 which is owned by Glow SPP 1 Co., Ltd., which was already sold in March 2019. The IFA believes that the average dispatch rate of SPPs of GLOW is reasonable and appropriate for the projection of SPPs of GLOW at the present that no longer have GLOW SPP 1 because GLOW SPP 1 is small in term of capacity, 124.0 MW, and located in MTP like other SPPs of GLOW; therefore, such dispatch rate can represent the operation in the future.

3/ Such as GLOW SPP 3

Tariff PPAs that will be renewed with EGAT (SPP Replacement – Firm)

For tariff of PPAs that will be renewed with EGAT in 2019 – 2025, the IFA projected tariff scheme based on resolution of EPPO regarding the renewal of SPPs' PPAs as follow:

- Capacity Payment

CP for SPP Replacement for 1. Natural gas-fired power plants and 2. Coal-fired power plants are as follow:

1. CP of natural gas-fired power plants	
Capacity Payment (THB/kW/month) = $497.94 * [0.5 * (FX_t / 34) + 0.5]$	
$FX_t^{1/}$	Average foreign exchange rate of US Dollar and Baht published by Bank of Thailand at the last working date of the month, t
2. CP of coal-fired power plants	
Capacity Payment (THB/kW/month) = $700.80 * [0.5 * (FX_t / 34) + 0.5]$	
$FX_t^{1/}$	Average foreign exchange rate of US Dollar and Baht published by Bank of Thailand at the last working date of the month, t

Note: 1/ Exchange rate projection of Baht 31.6/US Dollar

- Energy Payment

EP for SPP Replacement for 1. Natural gas-fired power plants and 2. Coal-fired power plants are as follow:

1. EP of natural gas-fired power plants	
Energy Payment (Baht/kWh) = $2.0086 + [(NG_t - 263) \times 7,409 / 10^6]$	
$NG_t^{1/}$	Natural gas price in the month, t (Baht/million BTU)
2. EP of coal-fired power plants	
Energy Payment (Baht/ kWh) = $1.400 + [(Coal_t \times FX_t - 2,888.89) \times 9,600 / (26.5877 \times 10^6)]$	
$Coal_t^{2/}$	Coal price in the month, t (US Dollar/ton)
$FX_t^{3/}$	Average foreign exchange rate of US Dollar and Baht published by Bank of Thailand at the last working date of the month, t

Note: 1/ Natural gas price projection in 2020 of Baht 207.7/million BTU and growing at 1.0% annually
 2/ Coal price projection in 2020 of US Dollar 81.8/ton and growing at 1.4% annually
 3/ Exchange rate projection of Baht 31.6/US Dollar

According to the assumptions above, the IFA summarized the projection of revenue of SPPs of GLOW as follows:

Table of Revenue from SPP Replacement of SPPs of GLOW

Unit: Baht million	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F
Power dispatch (MWh) ^{1/}	-	-	63,701.2	381,163.0	382,207.3	1,171,334.3	1,171,334.3	1,171,334.3	1,174,543.5	1,171,334.3
Capacity Payment ^{2/}	-	-	55.6	332.7	332.7	1,133.6	1,133.6	1,133.6	1,133.6	1,133.6
Energy Payment ^{3/}	-	-	103.8	627.2	634.8	1,832.6	1,850.3	1,868.1	1,891.3	1,904.3
Revenue of SPPs of GLOW (Replacement)	-	-	159.4	959.9	967.5	2,966.2	2,983.8	3,001.6	3,024.8	3,037.8

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated according to CP formula of SPP Replacement scheme adjusted by projection of exchange rate of Baht 31.6/US Dollar

3/ Calculated according to EP formula of SPP Replacement scheme adjusted by projection of exchange rate of Baht 31.6/US Dollar

Natural gas price in 2020 of Baht 207.7/million BTU and growing 1.0% annually

Coal price in 2020 of US Dollar 81.8/ton and growing 1.4% annually

Table of Revenue from SPP Replacement of SPPs of GLOW

Unit: Baht million	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F
Power dispatch (MWh) ^{1/}	1,171,334.3	1,171,334.3	1,174,543.5	1,171,334.3	1,171,334.3	1,171,334.3	1,174,543.5	1,171,334.3	1,171,334.3	1,171,334.3
Capacity Payment ^{2/}	1,133.6	1,133.6	1,133.6	1,133.6	1,133.6	1,133.6	1,133.6	1,133.6	1,133.6	1,133.6
Energy Payment ^{3/}	1,922.7	1,941.3	1,965.5	1,979.2	1,998.4	2,017.9	2,043.1	2,057.4	2,077.5	2,097.8
Revenue of SPPs of GLOW (Replacement)	3,056.3	3,074.9	3,099.1	3,112.7	3,132.0	3,151.4	3,176.7	3,191.0	3,211.1	3,231.4

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated according to CP formula of SPP Replacement scheme adjusted by projection of exchange rate of Baht 31.6/US Dollar

3/ Calculated according to EP formula of SPP Replacement scheme adjusted by projection of exchange rate of Baht 31.6/US Dollar

Natural gas price in 2020 of Baht 207.7/million BTU and growing 1.0% annually

Coal price in 2020 of US Dollar 81.8/ton and growing 1.4% annually

Table of Revenue from SPP Replacement of SPPs of GLOW

Unit: Baht million	2040F	2041F	2042F	2043F	2044F	2045F	2046F	2047F ^{4/}	2048F	2049F ^{5/6/}
Power dispatch (MWh) ^{1/}	1,174,543.5	1,171,334.3	1,171,334.3	1,171,334.3	1,174,543.5	1,171,334.3	1,171,334.3	1,107,633.1	792,336.2	790,171.3
Capacity Payment ^{2/}	1,133.6	1,133.6	1,133.6	1,133.6	1,133.6	1,133.6	1,133.6	1,078.0	800.9	800.9
Energy Payment ^{3/}	2,124.2	2,139.2	2,160.2	2,181.4	2,209.0	2,224.6	2,246.6	2,137.7	1,503.2	1,514.4
Revenue of SPPs of GLOW (Replacement)	3,257.8	3,272.7	3,293.7	3,315.0	3,342.5	3,358.2	3,380.2	3,215.6	2,304.1	2,315.3

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated according to CP formula of SPP Replacement scheme adjusted by projection of exchange rate of Baht 31.6/US Dollar

3/ Calculated according to EP formula of SPP Replacement scheme adjusted by projection of exchange rate of Baht 31.6/US Dollar

Natural gas price in 2020 of Baht 207.7/million BTU and growing 1.0% annually

Coal price in 2020 of US Dollar 81.8/ton and growing 1.4% annually

4/ GLOW Energy Phase 2's replacement PPA will expire in October 2047

5/ GLOW SPP 2's replacement PPA will expire in May 2049

6/ GLOW SPP 3's replacement PPA will expire in December 2049

According to the projections above, the IFA summarized the projection of revenue from EGAT of SPPs of GLOW as follows:

Table of Revenue from EGAT of SPPs of GLOW

Unit: Baht million	2Q2020F	2021F ^{1/}	2022F ^{1/}	2023F	2024F ^{2/3/}	2025F ^{2/3/4/}	2026F	2027F	2028F	2029F
Revenue from current PPAs	4,806.0	8,326.6	7,969.7	8,033.0	6,688.3	3,251.1	2,351.8	2,367.3	2,389.5	2,398.8
Revenue from replacement PPA	-	-	159.4	959.9	967.5	2,966.2	2,983.8	3,001.6	3,024.8	3,037.8
Total Revenue of SPPs of GLOW (EGAT)	4,806.0	8,326.6	8,129.1	8,992.8	7,655.7	6,217.3	5,335.6	5,369.0	5,414.3	5,436.6

Source: Projection of the IFA

Note: 1/ GLOW Energy Phase 2's current PPA will expire in March 2021 and the replacement PPA will commence in November 2022.

2/ GLOW SPP 2's current PPA will expire in April 2024 and the replacement PPA will commence in January 2025.

3/ GLOW SPP 3's current PPA will expire in December 2024 and the replacement PPA will commence in January 2025.

4/ GLOW SPP 11's current PPA will expire in October 2025.

Table of Revenue from EGAT of SPPs of GLOW

Unit: Baht million	2030F ^{1/}	2031F	2032F	2033F	2034F	2035F	2036F	2037F ^{2/}	2038F	2039F
Revenue from current PPAs	1,288.4	1,250.4	1,260.7	1,264.2	1,271.2	1,278.2	1,288.8	1,221.6	-	-
Revenue from replacement PPA	3,056.3	3,074.9	3,099.1	3,112.7	3,132.0	3,151.4	3,176.7	3,191.0	3,211.1	3,231.4
Total Revenue of SPPs of GLOW (EGAT)	4,344.7	4,325.3	4,359.8	4,376.9	4,403.2	4,429.6	4,465.5	4,412.5	3,211.1	3,231.4

Source: Projection of the IFA

Note: 1/ GLOW Energy Phase 4's current PPA will expire in January 2030.

2/ GLOW SPP 11 Phase 2's current PPA will expire in December 2037.

Table of Revenue from EGAT of SPPs of GLOW

Unit: Baht million	2040F	2041F	2042F	2043F	2044F	2045F	2046F	2047F ^{1/}	2048F	2049F ^{2/3/}
Revenue from current PPAs	-	-	-	-	-	-	-	-	-	-
Revenue from replacement PPA	3,257.8	3,272.7	3,293.7	3,315.0	3,342.5	3,358.2	3,380.2	3,215.6	2,304.1	2,315.3
Total Revenue of SPPs of GLOW (EGAT)	3,257.8	3,272.7	3,293.7	3,315.0	3,342.5	3,358.2	3,380.2	3,215.6	2,304.1	2,315.3

Source: Projection of the IFA

Note: 1/ GLOW Energy Phase 2's replacement PPA will expire in October 2047.

2/ GLOW SPP 2's replacement PPA will expire in May 2049.

3/ GLOW SPP 3's replacement PPA will expire in December 2049.

- Revenue from Power Distribution to IUs

Currently, SPPs of GLOW have PPAs with IUs as follow:

Table of PPAs with IUs of SPPs of GLOW

Power Plant	COD	Fuel	Capacity (MW)
GLOW Energy Phase 2	April 1996	Natural gas	101.0
GLOW Energy Phase 5	September 2011	Natural gas	328.0
GLOW CFB3	November 2010	Coal	85.0
GLOW SPP 2	March 1999	Natural gas	93.0
GLOW SPP 3	December 1999	Coal	120.0
GLOW SPP 11 Phase 1	October 2000	Natural gas	30.0
GLOW SPP 11 Phase 2	December 2012	Natural gas	20.0
GLOW SPP 11 Phase 3	October 2006	Natural gas	23.0
GLOW SPP 11 Phase 3 expansion	April 2015	Natural gas	19.0

Source: 56-1 Report of GPSC and projection of the IFA

After PPAs with current IUs expired, the IFA projected that SPPs of GLOW in the same area as CUPs will be able to maintain the volume of power dispatch and IUs because of the same reasons that CUPs is able to maintain IUs' power dispatch.

the IFA projected that SPPs of GLOW will be able to renew its PPAs with all IUs and maintain its current level of power dispatch to IUs throughout the projection.

Power Dispatch

The IFA projected power dispatch according to contracted capacity of each power plant and average dispatch rate of each power plant based on the historical average in the past 3 years during 2017 – 2019. The details are as follow:

Table of Dispatch Rate to IUs of SPPs of GLOW

Power Plant	2017A	2018A	2019A	Projection
Natural gas-fired SPPs of GLOW in MTP ^{1/2/}	73.9%	72.4%	71.2%	72.5%
Coal-fired SPPs of GLOW in MTP ^{3/}	78.6%	78.9%	75.9%	77.8%
SPPs of GLOW in Padaeng industrial estate ^{4/}	68.6%	65.6%	67.9%	67.4%

Source: Projection of the IFA

Note: 1/ Such as GLOW Energy Phase 2, GLOW Energy Phase 4 and GLOW SPP 2

2/ The average dispatch rate of natural gas-fired SPPs of GLOW in MTP in 2017 and 2018 includes in calculation of power dispatch of GLOW SPP1 which is owned by Glow SPP 1 Co., Ltd., which was already sold in March 2019. The IFA believes that the average dispatch rate of SPPs of GLOW is reasonable and appropriate for the projection of SPPs of GLOW at the present that no longer have GLOW SPP 1 because GLOW SPP 1 is small in term of capacity, 124.0 MW, and located in MTP like other SPPs of GLOW; therefore, such dispatch rate can represent the operation in the future.

3/ Such as GLOW CFB3 and GLOW SPP 3

4/ Such as GLOW SPP 11 Phase 1, GLOW SPP 11 Phase 2, GLOW SPP 11 Phase 3 and GLOW SPP 11 Phase 3 expansion

Tariff

The IFA projected tariff for IUs in 2020 based on projection of the Company, which reflects the decrease of fuel market price in 2020, which is Baht 2.7/kWh. For natural gas-fired SPPs of GLOW, the tariff will grow at 0.6 percent annually, as a pass-through rate (tariff growth rate-to-fuel growth rate) of 62.1 percent (based on historical pass-through rate of tariff for IUs of SPPs of GLOW during 2004 – 2019) per natural gas price growth rate at 1.0 percent annually based on the compounded annual growth rate (CAGR) of natural gas price at Henry Hub during 1998 – 2019. And for coal-fired SPPs of GLOW, the tariff will grow at 0.9 percent annually, as a pass-through rate of 62.1 percent per coal price growth rate at 1.4 percent annually based on the compounded annual growth rate (CAGR) of coal price at New Castle during 1999 – 2019.

Table of Assumptions of Tariff for IUs of SPPs of GLOW

Item	Natural gas-fired plants	Coal-fired plants
Pass-through rate of tariff (%)	62.1 ^{1/}	62.1 ^{1/}
Natural gas price growth rate (%)	1.0 ^{2/}	1.4 ^{3/}
Tariff growth rate (%) ^{4/}	0.6	0.9
Tariff for IUs (Baht/kWh) ^{5/}	2.7 – 3.3	2.7 – 3.6

Source: Projection of the Company and the IFA

Note: 1/ based on historical pass-through rate of tariff for IUs of SPPs of GLOW during 2004 – 2019

2/ Based on the compounded annual growth rate (CAGR) of natural gas price at Henry Hub during 1998 – 2019

3/ based on the compounded annual growth rate (CAGR) of coal price at New Castle during 1999 – 2019

4/ Calculated by Pass-through rate x Fuel price growth rate

5/ Calculated by Tariff of a year before x (1+ (Pass-through rate of tariff x Fuel price growth rate))

According to the assumptions above, the IFA summarized the projection of revenue of SPPs of GLOW as follows:

Table of Revenue from Power Distribution to IUs of SPPs of GLOW

Unit: Baht million	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
Power dispatch (MWh) ^{1/}	2,649,900.4	5,256,595.9	5,256,595.9	5,256,595.9	5,270,997.5	5,256,595.9	5,256,595.9	5,256,595.9	5,270,997.5	5,256,595.9	5,256,595.9
Average tariff (Baht/kWh)	2.7	2.8	2.8	2.8	2.8	2.8	2.9	2.9	2.9	2.9	2.9
Revenue SPPs of GLOW (IU) ^{2/}	7,269.3	14,516.8	14,614.2	14,712.3	14,851.6	14,910.5	15,010.6	15,111.4	15,254.7	15,315.2	15,418.1

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Power dispatch x Tariff

Table of Revenue from Power Distribution to IUs of SPPs of GLOW

Unit: Baht million	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F	2040F
Power dispatch (MWh) ^{1/}	5,256,595.9	5,270,997.5	5,256,595.9	5,256,595.9	5,256,595.9	5,270,997.5	5,256,595.9	5,256,595.9	5,256,595.9	5,270,997.5
Average tariff (Baht/kWh)	3.0	3.0	3.0	3.0	3.0	3.1	3.1	3.1	3.1	3.1
Revenue SPPs of GLOW (IU) ^{2/}	15,521.8	15,669.0	15,731.2	15,837.1	15,943.6	16,094.9	16,158.9	16,267.7	16,377.2	16,532.7

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Power dispatch x Tariff

Table of Revenue from Power Distribution to IUs of SPPs of GLOW

Unit: Baht million	2041F	2042F	2043F	2044F	2045F	2046F	2047F	2048F	2049F	2050F ^{3/}
Power dispatch (MWh) ^{1/}	5,256,595.9	5,256,595.9	5,256,595.9	5,270,997.5	5,256,595.9	5,256,595.9	5,256,595.9	5,270,997.5	5,256,595.9	5,256,595.9
Average tariff (Baht/kWh)	3.2	3.2	3.2	3.2	3.2	3.3	3.3	3.3	3.3	3.4
Revenue SPPs of GLOW (IU) ^{2/}	16,598.6	16,710.4	16,823.0	16,982.8	17,050.5	17,165.5	17,281.3	17,445.5	17,515.2	17,633.4

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Power dispatch x Tariff

3/ SPPs of GLOW's PPA with IUs will be renewed continuously.

- Revenue from Steam Distribution to IUs

Currently, SPPs of GLOW have steam contracts with IUs as follow:

Table of steam contracts with IUs of SPPs of GLOW

Power Plant	COD	Fuel	Capacity (tons/hour)
GLOW Energy Phase 2	April 1996	Natural gas	300.0
GLOW Energy Phase 4	January 2005	Natural gas	137.0
GLOW Energy Phase 5	September 2011	Natural gas	160.0
GLOW CFB3	November 2010	Coal	79.0
GLOW SPP 2	March 1999	Natural gas	140.0
GLOW SPP 3	December 1999	Coal	50.0

Source: 56-1 Report of GPSC and projection of the IFA

In order to determine the assumption that steam contracts be renewed, the IFA forecasted to match with the assumption that SPPs of GLOW would be renewed the PPAs with IUs since the products are related with the same customer base. The IFA also expected that CUPs would be able to maintain its production capacity and sales volume to IUs.

Steam Dispatch

The IFA projected steam dispatch according to contracted capacity of each power plant and average dispatch rate of each power plant based on the historical average in the past 3 years during 2017 – 2019. The details are as follow:

Table of Dispatch Rate and Steam Capacity to IUs of SPPs of GLOW

Power Plant	2017A	2018A	2019A	Projection
Natural gas-fired SPPs of GLOW in MTP ^{1/2/}	67.17%	74.29%	78.42%	73.29%
Coal-fired SPPs of GLOW in MTP ^{3/}	170.5%	183.0%	177.0%	176.8%

Source: Projection of the IFA

Note: 1/ Such as GLOW Energy Phase 2, GLOW Energy Phase 4, GLOW Energy Phase 5 and GLOW SPP 2

2/ The average dispatch rate of natural gas-fired SPPs of GLOW in MTP in 2017 and 2018 includes in calculation of steam dispatch of GLOW SPP1 which is owned by Glow SPP 1 Co., Ltd., which was already sold in March 2019. The IFA believes that the average dispatch rate of SPPs of GLOW is reasonable and appropriate for the projection of SPPs of GLOW at the present that no longer have GLOW SPP 1 because GLOW SPP 1 is small in term of capacity, 90 tons/hour, and located in MTP like other SPPs of GLOW; therefore, such dispatch rate can represent the operation in the future.

3/ Such as GLOW CFB3 and GLOW SPP 3

Steam Price

The IFA projected steam price for IUs in 2020 based on projection of the Company, which reflects the decrease of fuel market price in 2020, which is Baht 786.9/ton. For natural gas-fired SPPs of GLOW, the steam price will grow at 0.8 percent annually, as a pass-through rate (steam price growth rate-to-fuel growth rate) of 81.9 percent (based on projection of the Company according to steam contracts of SPPs of GLOW and IUs) per natural gas price growth rate at 1.0 percent annually based on the compounded annual growth rate (CAGR) of natural gas price at Henry Hub during 1998 – 2019. And for coal-fired SPPs of GLOW, the steam price will grow at 1.1 percent annually, as a pass-through rate of 81.9 percent per coal price growth rate at 1.4 percent annually based on the compounded annual growth rate (CAGR) of coal price at New Castle during 1999 – 2019.

Table of Assumptions of Steam Price for IUs of SPPs of GLOW

Item	Natural gas-fired plants	Coal-fired plants
Pass-through rate of steam price (%)	81.9 ^{1/}	81.9 ^{1/}
Natural gas price growth rate (%)	1.0 ^{2/}	1.4 ^{3/}
Steam price growth rate (%) ^{4/}	0.8	1.1
Steam price for IUs (Baht/ton) ^{5/}	786.9 – 997.7	786.9 – 1,104.1

Source: Projection of the Company and the IFA

Note: 1/ Based on projection of the Company according to PPA with SPPs of GLOW and IUs

2/ Based on the compounded annual growth rate (CAGR) of natural gas price at Henry Hub during 1998 – 2019

3/ Based on the compounded annual growth rate (CAGR) of coal price at New Castle during 1999 – 2019

4/ Calculated by Pass-through rate x Fuel price growth rate

5/ Calculated by Steam price of a year before x (1+ (Pass-through rate of steam price x Fuel price growth rate))

According to the assumptions above, the IFA summarized the projection of revenue of SPPs of GLOW as follows:

Table of Revenue from Steam Distribution to IUs of SPPs of GLOW

Unit: Baht million	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
Steam dispatch (tons) ^{1/}	3,392,771.8	6,730,226.7	6,730,226.7	6,730,226.7	6,748,665.7	6,730,226.7	6,730,226.7	6,730,226.7	6,748,665.7	6,730,226.7	6,730,226.7
Average steam price (Baht/ton)	786.9	793.9	801.1	808.2	815.5	822.8	830.2	837.6	845.1	852.7	860.4
Revenue SPPs of GLOW (steam) ^{2/}	2,669.8	5,343.4	5,391.3	5,439.6	5,503.4	5,537.6	5,587.2	5,637.4	5,703.5	5,739.0	5,790.6

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Steam dispatch x Steam price

Table of Revenue from Steam Distribution to IUs of SPPs of GLOW

Unit: Baht million	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F	2040F
Steam dispatch (tons) ^{1/}	6,730,226.7	6,748,665.7	6,730,226.7	6,730,226.7	6,730,226.7	6,748,665.7	6,730,226.7	6,730,226.7	6,730,226.7	6,748,665.7
Average steam price (Baht/ton)	868.1	875.9	883.8	891.7	899.7	907.8	916.0	924.2	932.6	941.0
Revenue SPPs of GLOW (steam) ^{2/}	5,842.6	5,911.2	5,948.0	6,001.5	6,055.4	6,126.6	6,164.9	6,220.3	6,276.3	6,350.2

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Steam dispatch x Steam price

Table of Revenue from Steam Distribution to IUs of SPPs of GLOW

Unit: Baht million	2041F	2042F	2043F	2044F	2045F	2046F	2047F	2048F	2049F	2050F ^{3/}
Steam dispatch (tons) ^{1/}	6,730,226.7	6,730,226.7	6,730,226.7	6,748,665.7	6,730,226.7	6,730,226.7	6,730,226.7	6,748,665.7	6,730,226.7	6,730,226.7
Average steam price (Baht/ton)	949.4	958.0	966.6	975.3	984.1	993.0	1,002.0	1,011.0	1,020.1	1,029.3
Revenue SPPs of GLOW (steam) ^{2/}	6,389.9	6,447.4	6,505.5	6,582.2	6,623.3	6,683.1	6,743.4	6,822.9	6,865.6	6,927.6

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Steam dispatch x Steam price

3/ SPPs of GLOW's steam contract with IUs will be renewed continuously.

1.3 Revenue from Other Power Plants

Other power plants of GPSC can be categorized into 3 categories: (1) Solar power plants, (2) Refuse-derived fuel power plant, and (3) Petroleum pitch power plant. The assumptions in the projection are as follow:

(1) Solar Power Plants

Solar power plants of GPSC consist of (1) Global Renewable Power Co., Ltd. (“GRP”), (2) Ichinoseki solar power (“ISP”), and (3) Combined Heat and Power Producing Co., Ltd. (“CHPP-S”), (4) GLOW Energy Solar PV Rooftop (Project 1 and 2) (“GE-RT”), and (5) Glow Energy Solar (“GE Solar”), which can be summarized as follows:

Table of Solar Power Plants of GPSC

Power Plant	Capacity	COD / Tenor	Power Purchaser	Tariff (Baht/kWh)
GRP	39.5 MW	2557 / 25 years	PEA	5.7
ISP	20.8 MW	2560 / 20 years	Tohoku Electric Power	4.3
CCHP-S	5.0 MW	2559 / 25 years	PEA	5.7
GE-RT	1.9 MW	2561 – 2562 / 25 years	IUs	5.7
GE-Solar	1.6 MW	2555 / 25 years	PEA	5.7

Source: Projection of the IFA and 56-1 Report of GPSC

The IFA projected revenue from solar power plants based on tariff according to Feed-in Tariff scheme of EGAT for power plants that distribute power to PEA and applied the same tariff to power plants that distribute power to IUs. Moreover, for ISP, the IFA projected tariff based on 56-1 report of GPSC.

Additionally, the IFA projected operation of solar power plants in Thailand with average solar irradiation of 5.0 kWh/day and 4.3 kWh/day for power plants in Japan and projected photovoltaics modules' performance to degrade 1.5% annually. The details are as follow:

Table of Revenue from Solar Power Plants of GPSC

Unit: Baht million	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F
Revenue from GRP	178.6	349.0	343.8	338.7	334.5	328.6	323.6	318.8	314.9	309.3
Revenue from ISP	169.7	331.7	326.7	321.8	317.8	312.2	307.5	302.9	299.2	293.9
Revenue from CCHP-S	19.8	38.7	38.1	37.6	37.1	36.4	35.9	35.3	34.9	34.3
Revenue from GE-RT	6.4	12.5	12.3	12.1	12.0	11.8	11.6	11.4	11.3	11.1
Revenue from GE-Solar	8.5	16.5	16.3	16.0	15.8	15.5	15.3	15.1	14.9	14.6
Total revenue from solar power plants	383.0	748.4	737.2	726.2	717.2	704.5	694.0	683.6	675.1	663.2

Source: Projection of the IFA

Note: Revenue from solar power plants calculated by $[\text{Capacity} \times (1 - \text{Degradation})^{\text{Years since operation}}] \times \text{Solar irradiation per day} \times \text{Days in a year} \times \text{Tariff}$

Table of Revenue from Solar Power Plants of GPSC

Unit: Baht million	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F ^{1/2/}	2038F	2039F
Revenue from GRP	304.7	300.1	296.4	291.2	286.8	282.5	279.0	274.1	270.0	265.9
Revenue from ISP	289.5	285.1	281.6	276.7	272.5	268.4	265.1	248.3	-	-
Revenue from CCHP-S	33.8	33.3	32.9	32.3	31.8	31.3	30.9	30.4	29.9	29.5
Revenue from GE-RT	10.9	10.7	10.6	10.4	10.3	10.1	10.0	5.7	-	-
Revenue from GE-Solar	14.4	14.2	14.0	13.8	13.6	13.4	13.2	13.0	12.8	12.6
Total revenue from solar power plants	653.3	643.5	635.5	624.3	614.9	605.7	598.3	571.4	312.7	308.0

Source: Projection of the IFA

Note: Revenue from solar power plants calculated by $[\text{Capacity} \times (1 - \text{Degradation})^{\text{Years since operation}}] \times \text{Solar irradiation per day} \times \text{Days in a year} \times \text{Tariff}$

1/ ISP's PPA will expire in December 2037.

2/ GE-RT's PPA will expire in July 2037.



Table of Revenue from Solar Power Plants of GPSC

Unit: Baht million	2040F ^{1/}	2041F ^{2/}	2042F	2043F	2044F	2045F	2046F	2047F	2048F	2049F ^{3/}
Revenue from GRP	262.6	-	-	-	-	-	-	-	-	-
Revenue from ISP	-	-	-	-	-	-	-	-	-	-
Revenue from CCHP-S	29.1	28.5	-	-	-	-	-	-	-	-
Revenue from GE-RT	-	-	-	-	-	-	-	-	-	-
Revenue from GE-Solar	12.4	12.2	12.0	11.8	11.7	11.5	11.3	11.2	10.2	0.5
Total revenue from solar power plants	304.2	40.7	12.0	11.8	11.7	11.5	11.3	11.2	10.2	0.5

Source: Projection of the IFA

Note: Revenue from solar power plants calculated by $[\text{Capacity} \times (1 - \text{Degradation})^{\text{Years since operation}}] \times \text{Solar irradiation per day} \times \text{Days in a year} \times \text{Tariff}$

1/ GRP's PPA will expire in December 2040.

2/ CCHP-S' PPA will expire in December 2041.

3/ GE-Solar's PPA will expire in January 2049.

(2) Refuse-derived Fuel Power Plant

Refuse-derived fuel power plant is Waste to Energy plant (“WTE”) with Refused Derived Fuel plant (“RDF”) located nearby. RDF is a plant that produces refuse-derived fuel by sorting out flammable wastes and processing physical and chemical properties of wastes to transform into refuse-derived fuel. Then, WTE will use fuel produced by RDF to produce power. Currently, WTE is under construction and will commence commercial operation in April 2021 and the PPA will expire in March 2039 with total period of 18 years with power capacity of 9.8 MW distributing to PEA.

- **Revenue from Power Dispatch**

The IFA projected revenue from refuse-derived fuel based on tariff according to Feed-in Tariff scheme of EGAT: (1) Fixed tariff of Baht 2.39/kWh and (2) Variable tariff of Baht 2.80/kWh, which will increase annually at inflation rate that the IFA projected at 2.0 percent throughout the projection.

Moreover, the IFA projected power dispatch based on dispatch rate by projection of the Company at 78.7 percent throughout the projection.

- **Other Revenue from Operation**

Apart from revenue from power dispatch, WTE that has RDF who is responsible for processing waste into refuse-derived fuel for power production. RDF also has revenue from disposing of waste based on the waste disposal contract with Rayong Provincial Administrative Organization (“Rayong P.A.O.”) at least 500 tons per day. RDF has been disposing waste since April 2018 and waste disposal fee will increase 10.0 percent every 3 years.

Table of Revenue from Refuse-derived fuel of WTE

Unit: Baht million	2Q2020F ^{4/}	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F
Power dispatch (MWh) ^{1/}	-	47,333.1	62,698.3	62,572.9	62,447.7	62,322.8	62,198.2	62,073.8	61,949.6	61,825.7
Tariff (Baht/kWh)	-	5.2	5.2	5.3	5.4	5.4	5.5	5.5	5.6	5.7
Revenue from power ^{2/}	-	245.6	328.8	331.7	334.7	337.8	340.8	344.0	347.2	350.5
Other revenue ^{3/}	8.5	17.0	18.7	18.7	18.7	20.6	20.6	20.6	22.6	22.6
Total revenue from WTE	8.5	262.6	347.5	350.4	353.4	358.3	361.4	364.6	369.8	373.1

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Power dispatch x Tariff

3/ Waste disposal fee grows 10.0% every 3 years

4/ RDF has operated since April 2018.

Table of Revenue from Refuse-derived fuel of WTE

Unit: Baht million	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F ^{4/}
Power dispatch (MWh) ^{1/}	61,702.1	61,578.7	61,455.5	61,332.6	61,209.9	61,087.5	60,965.4	60,843.4	60,721.7	14,965.1
Tariff (Baht/kWh)	5.7	5.8	5.9	5.9	6.0	6.1	6.2	6.2	6.3	6.4
Revenue from power ^{2/}	353.8	357.3	360.7	364.3	367.9	371.6	375.3	379.2	383.1	95.6
Other revenue ^{3/}	22.6	24.9	24.9	24.9	27.4	27.4	27.4	30.1	30.1	7.4
Total revenue from WTE	376.5	382.1	385.6	389.2	395.3	399.0	402.7	409.3	413.2	103.0

Source: Projection of the IFA

Note: 1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Power dispatch x Tariff

3/ Waste disposal fee grows 10.0% every 3 years

4/ WTE's PPA will expire in March 2039.

(3) Petroleum Pitch Power Plant

Petroleum pitch power plant is Energy Recovery Unit (“ERU”) that produces power from petroleum pitch which is a by-product from crude oil refining. Currently, REU is under construction and will commence commercial operation in 2023 and its PPA will end in 2047 with total period of 25 years and power capacity of 250.0 MW and steam capacity of 175.0 tons/hour for distribution to the Company. The revenue projection is based on Opinion of the Independent Financial Advisor Concerning the Asset Acquisition and Connected Transactions of GPSC by Capital Advantage Co., Ltd. dated February 22, 2019.

Revenue of ERU can be categorized into 2 categories: CP and EP. The IFA projected the revenue based on publicly available information, PPA of ERU, as well as projection of the Company and assumptions that the IFA deems appropriate as follow:

- **Capacity Payment**

The IFA projected CP based on the PPA of ERU. CP of ERU based on PPA is as follows:

Capacity Payment = Base Capacity Payment + Adjustment Charge	
Base Capacity Payment	Tariff which refer to investment cost of the ERU (US Dollar 69.2 million per year in year 1 - 25)
Adjustment Charge	Adjustment of tariff as a result of additional investment cost incurred during the operation phase (US Dollar 6.8 million per year in year 1 – 8 and US Dollar 2.8 million per year in year 9 – 15)

- **Energy Payment**

EP is fuel fee of ERU charged to TOP for power dispatch. The assumptions are as follow:

Power Dispatch

The IFA projected power dispatch according to contracted capacity, which is 250.0 MW, and dispatch rate based on projection of the Company. The details are as follow:

Tariff

The IFA projected tariff as a remuneration for power dispatched to the Company for each kWh. The calculation of EP is based on the net cost of power and by-product generation (after deducting revenue from sale of by-product of the ERU) such as fuel cost, operating expenses, and maintenance cost. EP is, therefore, the tariff that take net operating cost of ERU into consideration.

- **Other Revenue from Operation**

Apart from sale of power, ERU also sells steam, condensate water, and sulfuric acid, which are by-products of power production. The prices of the by-products are agreed in PPA and/or referred to the market prices of comparable products in nearby areas.



Table of Revenue from Petroleum Pitch Power Plant of ERU

Unit: Bhat million	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F
Base CP	-	-	-	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3
Adjustment charge	-	-	-	215.8	215.8	215.8	215.8	215.8	215.8	215.8	215.8	88.5	88.5	88.5
Capacity payment	-	-	-	2,403.1	2,403.1	2,403.1	2,403.1	2,403.1	2,403.1	2,403.1	2,403.1	2,275.7	2,275.7	2,275.7
Power dispatch (MWh) ^{1/}	-	-	-	2,190,000	2,196,000	2,190,000	2,190,000	2,190,000	2,196,000	2,190,000	2,190,000	2,190,000	2,196,000	2,190,000
Tariff (Baht/kWh)	-	-	-	1.2	1.2	1.0	1.2	1.2	1.1	1.3	1.3	1.2	1.4	1.4
Energy payment^{2/}	-	-	-	2,551.9	2,595.3	2,291.6	2,680.3	2,725.0	2,370.4	2,880.0	2,943.7	2,600.3	3,030.3	3,091.7
Other revenue	-	-	-	1,938.1	1,972.2	1,692.1	2,036.0	2,069.4	1,741.8	2,195.4	2,245.7	1,927.5	2,309.2	2,358.3
Revenue from ERU	-	-	-	4,954.9	6,970.6	6,386.7	7,119.3	7,197.5	6,515.3	7,478.5	7,592.4	6,803.5	7,615.2	7,725.7

Source: Based on Opinion of the Independent Financial Advisor Concerning the Asset Acquisition and Connected Transactions of GPSC by Capital Advantage Co., Ltd. dated February 22, 2019

Note : The IFA projected exchange rate at Baht 31.6/US Dollar based on average exchange rate in 2019 from Capital IQ

1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Power dispatch x Tariff

Table of Revenue from Petroleum Pitch Power Plant of ERU

Unit: Bhat million	2034F	2035F	2036F	2037F	2038F	2039F	2040F	2041F	2042F	2043F	2044F	2045F	2046F	2047F ^{3/}
Base CP	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3
Adjustment charge	88.5	88.5	88.5	88.5	-	-	-	-	-	-	-	-	-	-
Capacity payment	2,275.7	2,275.7	2,275.7	2,275.7	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3	2,187.3
Power dispatch (MWh) ^{1/}	2,190,000	2,190,000	2,196,000	2,190,000	2,190,000	2,190,000	2,196,000	2,190,000	2,190,000	2,190,000	2,196,000	2,190,000	2,190,000	2,190,000
Tariff (Baht/kWh)	1.2	1.5	1.5	1.3	1.5	1.6	1.4	1.6	1.7	1.5	1.7	1.8	1.5	2.1
Energy payment^{2/}	2,669.1	3,213.9	3,265.1	2,895.5	3,385.4	3,455.4	2,976.6	3,574.1	3,639.2	3,236.4	3,772.4	3,840.7	3,317.4	4,581.7
Other revenue	1,965.3	2,447.0	2,482.7	2,138.2	2,569.3	2,620.5	2,177.9	2,704.3	2,750.9	2,376.7	2,846.5	2,895.6	2,412.6	2,412.6
Revenue from ERU	6,910.1	7,936.7	8,023.5	7,309.5	8,142.0	8,263.2	7,341.8	8,465.7	8,577.3	7,800.4	8,806.2	8,923.6	7,917.3	9,181.7

Source: Based on Opinion of the Independent Financial Advisor Concerning the Asset Acquisition and Connected Transactions of GPSC by Capital Advantage Co., Ltd. dated February 22, 2019

Note : The IFA projected exchange rate at Baht 31.6/US Dollar based on average exchange rate in 2019 from Capital IQ

1/ Calculated by Capacity x Hours in a year x Dispatch rate

2/ Calculated by Power dispatch x Tariff

3/ ERU's PPA will expire in December 2047

1.4 Other Revenue from Operation

Other revenue from operation of GPSC consists of revenue from sales of industrial water, sale of nitrogen, and solar panel installation service. The IFA projected Other revenue from operation based on historical average of other revenue from operation-to-revenue from operation ratio for the past 1 year and 6 months during 2019 – June 30, 2020, which is the operation period after acquisition of GLOW. The projected other revenue from operation is 1.4% of revenue from operation throughout the projection.

Table of Projection of Other Revenue from Operation

Unit: percent	2017A	2018A	2019A	2Q2020A	Projection
Other Revenue from Operation	2.3%	2.5%	1.4%	1.5%	1.4%

Source: Financial statements of GPSC and projection of the IFA

Summary of Projection of Revenue

According to the assumptions and projections of revenue from operation of GPSC which can be categorized in to 4 categories: (1) Revenue from IPP, (2) Revenue from SPP, (3) Revenue from other power plants, and (4) Other revenue from operation, which can be summarized as follow:

Table of Summary of Projection of Revenue from Operation of GPSC

Unit: Baht million	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F
Revenue from IPP	8,899.0	15,404.9	14,609.9	15,103.9	14,459.2	13,328.1	12,095.6	12,390.0	10,403.1	10,458.6
Revenue from SPP – Power	18,230.0	35,089.6	35,113.0	36,148.0	35,049.4	33,689.4	32,969.9	33,210.9	33,505.9	33,563.2
Revenue from SPP – Steam	5,376.9	10,701.6	10,815.2	12,846.6	13,001.2	12,777.1	13,211.3	13,354.6	13,153.6	13,646.0
Revenue from other power plants	350.8	1,011.0	1,084.7	7,969.6	8,041.2	7,449.6	8,174.7	8,245.6	7,560.3	8,514.8
Other revenue from operation	473.4	896.2	887.8	1,038.2	1,016.4	968.8	957.3	968.1	931.0	953.5
Total Revenue	33,330.1	63,103.3	62,510.6	73,106.3	71,567.4	68,213.0	67,408.7	68,169.3	65,553.9	67,136.1

Source: Projection of the IFA

Table of Summary of Projection of Revenue from Operation of GPSC

Unit: Baht million	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F
Revenue from IPP	9,284.3	9,844.7	9,693.5	10,068.2	9,694.1	10,169.0	9,994.3	6,419.1	-	-
Revenue from SPP – Power	32,708.3	32,865.2	33,147.6	33,206.0	33,470.7	33,695.4	33,994.4	34,044.5	33,028.0	33,234.6
Revenue from SPP – Steam	13,819.7	13,599.5	14,108.6	14,200.1	13,932.6	14,523.1	14,694.3	14,419.7	14,954.8	15,111.1
Revenue from other power plants	8,622.2	7,829.1	8,636.3	8,739.2	7,920.3	8,941.3	9,024.5	8,290.2	8,867.9	8,674.2
Other revenue from operation	928.3	924.0	944.9	953.9	936.7	970.0	975.4	910.1	819.0	821.5
Total Revenue	65,362.8	65,062.4	66,531.0	67,167.5	65,954.4	68,298.7	68,682.8	64,083.5	57,669.7	57,841.3

Source: Projection of the IFA



Table of Summary of Projection of Revenue from Operation of GPSC

Unit: Baht million	2040F	2041F	2042F	2043F	2044F	2045F	2046F	2047F	2048F	2049F	2050F
Revenue from IPP	-	-	-	-	-	-	-	-	-	-	-
Revenue from SPP – Power	33,531.2	33,652.4	33,172.2	29,457.5	29,718.5	29,824.6	30,010.2	30,010.3	29,338.4	29,442.4	27,295.1
Revenue from SPP – Steam	14,809.5	15,407.5	15,438.9	14,474.1	15,080.4	15,200.1	14,821.9	14,927.7	12,656.4	12,729.4	12,838.0
Revenue from other power plants	7,646.0	8,506.4	8,589.4	7,812.2	8,817.9	8,935.1	7,928.6	9,192.8	10.2	0.5	-
Other revenue from operation	806.6	829.3	824.1	745.4	772.4	777.4	760.1	779.8	605.1	607.6	578.2
Total Revenue	56,793.3	58,395.6	58,024.6	52,489.3	54,389.3	54,737.1	53,520.9	54,910.7	42,610.0	42,779.9	40,711.2

Source: Projection of the IFA

2. Cost of Goods Sold and Operating Expenses

The IFA projected cost of goods sold and operating expenses of GPSC consisting natural gas cost, coal cost, petroleum pitch, gas pipeline fee, and other cost and operating expenses. The assumptions are as follows:

- **Natural Gas Cost**

Natural gas cost is variable cost for power production of power plants of GPSC that use natural gas as fuel. The IFA projected natural gas price based on the projection of the Company which reflects the decrease of natural gas market price in 2020. The natural gas price in 2020 will increase 1.0 percent annually based on the compounded annual growth rate (CAGR) of natural gas price at Henry Hub during 1998 – 2019.

Moreover, the IFA projected natural gas usage according to historical average heat rate and the projection of the Company. The details are as follow:

Table of Assumptions of Projection of Heat Rate of Natural Gas

Power Plant	Type / System	Heat Rate
Sriracha Power Plant (SRC)	IPP / Combine Cycle	7,733.5
GLOW IPP	IPP / Combine Cycle	- ^{1/}
Central Utility Plant (CUP)	SPP / Cogeneration	13,094.4
IRPC Clean Power Co., Ltd.	SPP / Cogeneration	9,443.4
Natural gas-fired SPPs of GLOW ^{2/}	SPP / Cogeneration	10,417.4

Source: Historical average heat rate and the projection of the Company

Note: 1/ GLOW IPP will not produce any power throughout the projection

2/ Such as GLOW Energy, GLOW SPP 2 and GLOW SPP 11

- **Coal Cost**

Coal cost is variable cost for power production of power plants of GPSC that use coal as fuel. The IFA projected coal price based on the projection of the Company which reflects the decrease of coal market price in 2020. The coal price in 2020 will increase 1.4 percent annually based on the compounded annual growth rate (CAGR) of coal price at New Castle during 1999 – 2019.

Moreover, the IFA projected coal usage according to historical average heat rate and the projection of the Company. The details are as follow:

Table of Assumptions of Projection of Heat Rate of Coal

Power Plant	Type / System	Heat Rate
GHECO-1	IPP / Combine Cycle	9,164.7
Coal-fired SPPs of GLOW ^{1/}	SPP / Cogeneration	10,734.2

Source: Historical average heat rate and the projection of the Company

Note: 1/ Such as GLOW SPP 3 and GLOW CFB3

- **Petroleum Pitch Cost**

Petroleum pitch cost is variable cost for power production of Energy Recovery Unit (ERU) that uses petroleum pitch as fuel. The petroleum pitch is a by-product of crude oil refining. GPSC will supply fuel and other raw materials for power production of ERU under Fuel and Utilities Supply Agreement (“FUSA”). Therefore, fuel and other raw materials will be according to the price specified in FUSA and will be adjusted periodically as agreed. The IFA projected petroleum pitch cost based on Opinion of the Independent Financial Advisor Concerning the Asset Acquisition and Connected Transactions of GPSC by Capital Advantage Co., Ltd. dated February 22, 2019, which is based on FUSA.

- **Gas Pipeline Fee**

Gas gas pipeline fee is an expense that SRC and GIPP have to pay for gas pipeline for gas transportation. The IFA projected gas pipeline fee based on the historical average and the projection of the Company, which are Baht 902.6 million per year for SRC and Baht 907.6 million per year for GIPP throughout the projection. However, the gas pipeline fee of SRC and GIPP will be reimbursed by EGAT due to high reserved electricity capacity in Thailand. The reimbursement is shown in revenue of SRC and GIPP sections.

- **Other Costs and Operating Expenses**

Other costs and operating expenses consist of operation and maintenance expenses utility expenses, chemical, and other expenses. The IFA projected other costs and operating expenses as a proportion of capacity (MW) based on the historical average for the past 1 year and 6 months during 2019 – June 30, 2020, which is the operation period after acquisition of GLOW, which is Baht 1.4 million/MW/year and will grow 2.0 percent annually based on medium-term target inflation of Bank of Thailand¹

¹ Medium-term target inflation of Bank of Thailand in June 2020 is 1.0% - 30%.



Summary of Cost of Goods Sold and Operating Expenses

According to assumptions of cost of goods sold and operating expenses by the IFA, the summary of the projection of cost of goods sold and operating expenses during July 1, 2020 – 2050 is as follows:

Table of Summary of Cost of Goods Sold and Operating Expenses

Unit: Baht million	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F
Natural gas cost ^{1/}	14,901.2	25,899.7	25,357.6	26,317.7	25,367.1	25,670.7	25,181.4	25,504.5	25,781.2	25,922.7
Coal cost ^{2/}	3,816.9	7,676.5	7,783.0	7,890.9	7,938.2	7,168.9	7,268.3	7,369.0	7,491.7	7,574.8
Petroleum pitch cost ^{3/}	-	-	-	4,090.1	4,159.6	3,567.6	4,291.9	4,361.6	3,670.7	4,625.1
Gas pipeline fee ^{4/}	912.5	1,810.2	1,810.2	1,810.2	1,815.1	1,466.5	907.6	907.6	77.1	-
Other costs and operating expenses ^{5/}	3,352.8	6,689.0	6,795.9	7,411.6	7,401.0	6,931.3	6,218.7	6,343.1	5,317.4	5,223.5
COGS and operating expenses	22,983.4	42,075.4	41,746.6	47,520.5	46,681.0	44,805.0	43,867.8	44,485.8	42,338.1	43,346.0

Source: Projection of the IFA

Note: 1/ Calculated by natural gas cost x power dispatch x heat rate

2/ Calculated by coal cost x power dispatch x heat rate

3/ Based on Opinion of the Independent Financial Advisor Concerning the Asset Acquisition and Connected Transactions of GPSC by Capital Advantage Co., Ltd. dated February 22, 2019 based on FUSA

4/ Based on gas pipeline fee in the past and projection of the Company

5/ Projection of Baht 1.4 million/MW/year per total operating capacity and escalating at inflation rate of 2.0%

Table of Summary of Cost of Goods Sold and Operating Expenses

Unit: Baht million	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F
Natural gas cost ^{1/}	25,052.3	25,277.6	25,596.9	25,716.2	26,010.8	26,305.0	26,632.9	26,758.4	25,984.2	26,236.3
Coal cost ^{2/}	7,679.8	7,786.3	7,915.9	8,003.7	8,114.7	8,227.2	8,364.1	5,941.0	2,488.9	2,523.4
Petroleum pitch cost ^{3/}	4,730.0	4,059.2	4,861.5	4,962.5	4,137.2	5,153.8	5,230.4	4,506.1	5,416.5	5,527.0
Gas pipeline fee ^{4/}	-	-	-	-	-	-	-	-	-	-
Other costs and operating expenses ^{5/}	5,005.9	5,100.5	5,202.5	5,306.6	5,412.7	5,521.0	5,631.4	5,146.3	4,188.7	4,252.9
COGS and operating expenses	42,468.1	42,223.7	43,576.9	43,989.0	43,675.4	45,206.9	45,858.8	42,351.8	38,078.4	38,539.6

Source: Projection of the IFA

Note: 1/ Calculated by natural gas cost x power dispatch x heat rate

2/ Calculated by coal cost x power dispatch x heat rate

3/ Based on Opinion of the Independent Financial Advisor Concerning the Asset Acquisition and Connected Transactions of GPSC by Capital Advantage Co., Ltd. dated February 22, 2019 based on FUSA

4/ Based on gas pipeline fee in the past and projection of the Company

5/ Projection of Baht 1.4 million/MW/year per total operating capacity and escalating at inflation rate of 2.0%

Table of Summary of Cost of Goods Sold and Operating Expenses

Unit: Baht million	2040F	2041F	2042F	2043F	2044F	2045F	2046F	2047F	2048F	2049F	2050F
Natural gas cost ^{1/}	26,563.4	26,747.7	26,411.7	23,279.1	23,569.3	23,732.9	23,963.1	24,008.8	23,365.7	23,527.9	22,605.7
Coal cost ^{2/}	2,565.4	2,593.9	2,629.9	2,666.3	2,710.7	2,740.8	2,778.8	2,817.3	2,864.2	2,896.0	2,271.3
Petroleum pitch cost ^{3/}	4,594.6	5,707.3	5,807.5	5,018.9	6,012.8	6,118.1	5,099.4	6,351.2	-	-	-
Gas pipeline fee ^{4/}	-	-	-	-	-	-	-	-	-	-	-
Other costs and operating expenses ^{5/}	4,332.5	4,328.9	4,319.6	3,921.5	3,999.9	4,079.9	4,161.5	4,219.0	3,515.8	3,581.7	3,325.5
COGS and operating expenses	38,055.9	39,377.8	39,168.7	34,885.8	36,292.8	36,671.7	36,002.9	37,396.3	29,745.7	30,005.6	28,202.5

Source: Projection of the IFA

Note: 1/ Calculated by natural gas cost x power dispatch x heat rate

2/ Calculated by coal cost x power dispatch x heat rate

3/ Based on Opinion of the Independent Financial Advisor Concerning the Asset Acquisition and Connected Transactions of GPSC by Capital Advantage Co., Ltd. dated February 22, 2019 based on FUSA

4/ Based on gas pipeline fee in the past and projection of the Company

5/ Projection of Baht 1.4 million/MW/year per total operating capacity and escalating at inflation rate of 2.0%

3. Selling, General and Administration Expenses (SG&A)

Selling, general and administration expenses consist of operating expenses, professional personnel fees, consulting fees, business development expenses, utilities, insurance premium, and other expenses. The IFA projected SG&A expenses as a proportion of Revenue from Operation based on historical average of SG&A expenses-to-Revenue from Operation ratio for the past 1 year and 6 months during 2019 – June 30, 2020, which is the operation period after acquisition of GLOW. The projected SG&A expenses is 2.9 percent of Revenue from Operation throughout the projection.

Table of Projection of SG&A Expenses

Unit: %	2017A	2018A	2019A	2Q2020A	Projection
SG&A expenses	4.3%	3.8%	3.3%	2.6%	2.9%

Source: GPSC's financial statement and the IFA's projection

4. Share of Profit from Investments in Associates and Joint Ventures

GPSC receives share of profit from investments in associates and joint ventures in proportion of shareholding in associates and joint ventures. The IFA projected share of profit based on share of profit in 2019 to grow at power business' long-term growth rate of 1.0 percent throughout the operation of each associates and joint ventures.

Table of Share of Profit from Investments in Associates and Joint Ventures

Associates and JVs	Business Description	Shareholding (%)	Share of Profit ^{1/} (Baht m)	COD/Tenor/ Capacity
Investments in Associates				
Bangpa-in Cogeneration Co., Ltd.	Generate and supply electricity (Cogeneration power plant)	25.0	117	June 2013, June 2017 / 25 years/ 234 MW
Xayaburi Power Co., Ltd.	Generate and supply electricity (Hydro power plant)	25.0	1,542 ^{2/}	October 2019 / 25 years/ 1,285 MW
Eastern Seaboard Clean Energy Co., Ltd. and subsidiaries	Studying, generating and supply electricity for industrial use including generating electricity from renewable energy	33.0	33.8 ^{2/}	November 2019 / 20 years / 8.6 MW
Investments in Joint Ventures				
Thai Solar Renewable Co., Ltd.	Invest in solar power plant-related businesses	40.0	345 ^{3/}	July 2013 / 5 years ^{3/} / 80 MW
Navanakorn Electricity Generating Co., Ltd.	Generate and supply electricity (Cogeneration power plant)	30.0	113	June 2016 / 25 years / 125 MW
Nam Lik 1 Power Co., Ltd.	Generate and supply electricity (Hydro power plant)	40.0	130 ^{2/}	July 2019/ 25 years / 65 MW

Source: GPSC's financial statement and the IFA's projection

Note: 1/ Share of profit in 2019

2/ Share of profit from Xayaburi Power Co., Ltd., Eastern Seaboard Clean Energy Co., Ltd. and subsidiaries, and Nam Lik 1 Power Co., Ltd. started commercial operation in 2019 and the operations don't account for full year. The IFA annualized share of profit in 2019.

3/ Thai Solar Renewable Co., Ltd. will be able to renew its PPAs every 5 year; however, the useful life of its power plants and equipment is 30 years. Therefore, The IFA projected the operation period to be 30 years.

5. Other Income

Other Income of GPSC consists of revenue from consulting fees for Solar Floating System and revenue from rent of pipe-rack. The IFA projected Other Income as a proportion of Revenue from Operation based on historical average of Other Income-to-Revenue from Operation ratio for the past 1 year and a half during 2019 – June 30, 2020, which is the operation period after acquisition of GLOW. The projected Other Income is 1.3 percent of Revenue from Operation throughout the projection.

Table of Projection of Other Income

Unit : %	2017A	2018A	2019A	2Q2020A	Projection
Other Income	2.4%	1.2%	1.1%	1.4%	1.3%

Source: GPSC's financial statement and the IFA's projection

6. Corporate Income Tax (“CIT”)

GPSC and subsidiaries have received tax privileges from the Board of Investment (“BOI”) under the Investment Promotion Act (BE 2520) for power business; CIT of GPSC and subsidiaries on net profits are exempted for 4 – 8 years from commercial operation date. In addition, GPSC and its subsidiaries will also receive 50.0 percent CIT reduction for 5 years after the expiration of the exemption period.

In this regard, the IFA projected CIT of GPSC based on tax privileges given by BOI and the projection of the Company and the IFA. The effective CIT rate in 2020 is projected to be 10.0 percent and will gradually increase in accordance with the expiration of the tax privileges and tax reduction, and tax privileges are assumed to expire in 2034

Table of Projection of Effective CIT Rate

CIT	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F
CIT (%) ^{1/}	10.0%	10.0%	11.0%	11.0%	11.0%	11.0%	12.0%	16.0%
	2028F	2029F	2030F	2031F	2032F	2033F	2034F onward	
	16.0%	16.0%	16.0%	16.0%	16.0%	17.0%	20.0%	

Source: The Company’s projection and the IFA’s projection

Note: 1/ The projection of tax rate is effective tax rate because the power business are given tax privileges from BOI, whose effective tax rate will gradually increase each year due to the expiration of tax privileges of each power plant and the tax privileges are assumed to expire in 2034

7. Working Capital

The IFA projected the assumptions of Trade Receivables, Inventory, and Trade Payables based on the historical average of Days Sales Outstanding (“DSO”), Days Inventories Outstanding (“DIO”), and Days Payables Outstanding (“DPO”) for the past 1 year and a half during 2019 – June 30, 2020, which is the operation period after acquisition of GLOW. The projected DSO, DIO, and DPO are 51.3, 49.7, and 31.2 respectively throughout the projection.

Table of Projection of Working Capital

Unit : Days	2017A	2018A	2019A	2Q2020A	Projection
DSO	67.1	63.5	55.3	47.4	51.3
DIO	11.8	12.4	51.3	48.1	49.7
DPO	39.4	37.7	34.9	27.5	31.2

Source: GPSC’s financial statement and the IFA’s projection

8. Capital Expenditure (“CAPEX”)

The IFA projected CAPEX of GPSC for projects under construction and projects whose PPAs will be renewed according to CAPEX plan of GPSC. The details are as follow:

- **CAPEX for projects under construction**

The IFA projected CAPEX of GPSC for the projects under construction and unpaid accrued CAPEX for projects that are completed based on the projection of the Company, whose total value is

Baht 30,985.3 million. The CAPEX will be paid throughout 2020 – 2023, which consists CAPEX for Central Utility Plant (CUP), Global Renewable Power Co., Ltd (GRP), Energy Recovery Unit (ERU), and Waste to Energy (WTE)

- **CAPEX for projects whose PPAs will be renewed**

The IFA projected CAPEX for projects whose PPAs will be renewed based on pending SPP Replacement of EGAT. GPSC has received 6 PPAs for 3 operating power plants, such as, GLOW Energy Phase 2, GLOW SPP 2, and GLOW SPP 3; and EGAT will buy up to 30 MW of power per PPA for a period of 25 years.

Moreover, the IFA projected that once the PPAs with IUs in Map Ta Phut area have expired, GPSC will be able to maintain power and steam dispatch volume for IUs because 90.00 percent of IUs is in petrochemical business in Map Ta Phut area where GPSC has connected the operation of the cogeneration power plant and steam throughout Map Ta Phut Industrial Estate to continuously produce and distribute electricity and steam to industrial customers. The IFA believes that abovementioned strengths would help GPSC continue to supply power to all the current IUs. Thus, GPSC would have a replacement cost of obsoleted main equipment replacement such as gas Turbine and boiler etc.

In this regard, the IFA projected CAPEX for replacement of the existing cogeneration power plants to be Baht 23.5 million/MW based on the Company's interview and projection of the IFA, and CAPEX would grow at inflation rate of 2.0 percent throughout the projection and will be divided into 3 years before each power plant starts commercial operation.

Table of CAPEX for Projects whose PPAs will be renewed

Power Plant	CAPEX (Baht m)	CAPEX period	Capacity (MW)
Projects whose PPA with EGAT will be renewed (SPP Replacement – Firm)			
GLOW Energy Phase 2	1,420.1	2020 – 2021	60.0
GLOW SPP 2	1,497.2	2022 – 2024	60.0
GLOW SPP 3	1,497.2	2022 – 2024	60.0
Projects whose PPA with IU in Map Ta Phut area will be renewed			
CUP-1	7,011.9	2033 – 2035	40.0 ^{1/} / 186.0
CUP-2	3,576.1	2034 – 2036	60.0 ^{1/} / 53.0
CUP-3	493.9	2036 – 2038	15.0
CUP-4	1,806.1	2046 – 2048	45.0
GLOW Energy Phase 2	2,520.3	2022 – 2024	101.0
GLOW Energy Phase 5	11,235.8	2038 – 2040	328.0
GLOW CFB3	2,854.6	2037 – 2039	85.0
GLOW SPP 2	2,512.0	2026 – 2028	93.0
GLOW SPP 3	3,241.2	2026 – 2028	120.0
GLOW SPP 11 Phase 1	826.5	2027 – 2029	30.0
GLOW SPP 11 Phase 2	698.8	2039 – 2041	20.0
GLOW SPP 11 Phase 3	713.6	2033 – 2035	23.0
GLOW SPP 11 Phase 3 (Expansion)	704.5	2043 – 2045	19.0

Source: GPSC's 56-1, SPP status by EGAT, and projection of the IFA

Note: 1/ PPA with EGAT under SPP Non-firm contract for a period of 5 years, which will be automatically renewed every 5 years.

9. Depreciation

The IFA projected that each asset class is depreciated at a fixed rate using the straight-line method. Depreciation of each asset is its useful life. The details are as follow

Table of Assumption of Depreciation

PPE	Depreciation Period (Years)
Power and water plants	30
Grid connection	30
Furniture, fixtures and office equipment	5
Motor vehicles	5

Source: GPSC's financial statement and the IFA's projection

10. Investments in Other Non-marketable Securities

The IFA projected Investments of GPSC, such as, long-term loans to related parties of Baht 92.2 million and investments in other non-marketable equity securities both domestically and internationally: namely, Ratchaburi Power Company Limited, Sarn Palung Social Enterprise Company Limited, Eastern Fluid Transport Company Limited, Business Services Alliance Company Limited, and 24M Technologies, Inc., based on value in financial statements of GPSC as of June 30, 2020, which is

valued by fair value through other comprehensive income. The detail of investments in other non-marketable equity securities are as follows:

Table of investments in Other Non-marketable Equity Securities

Investment	Business Description	Shareholding	Fair Value ^{1/} (Baht m)
Ratchaburi Power Company Limited	Generate and supply power from combined - cycle power plant to EGAT as an IPP	15.0	1,167
Sarn Palung Social Enterprise Company Limited	Produce and sell goods and service for the benefit of society, communities, and the environment	10.0	1
Eastern Fluid Transport Company Limited	Provide pipe - laying structures services in industrial estate where this structure was located	15.0	63
Business Services Alliance Company Limited	Manage human resources outsourcing for PTT Group	25.0 ^{2/}	-
24M Technologies, Inc.	Located in the USA, Carry out research and development of batteries for energy storage in the industrial sector and for enhancement of power distribution and power network security	29.7 ^{2/}	1,376

Source: GPSC's financial statements

Note: 1/ Measured at fair value through other comprehensive income method

2/ Investment in preferred shares

11. Discount Rate

In calculating of discount rate to be used in the Discounted Cash Flow Approach, the IFA used GLOW's Weighted Average Cost of Capital ("WACC") which is an average between Cost of Equity ("Ke") and Cost of Debt ("Kd") adjusted with tax benefits from interest payment, weighted by portion of equity ("We") and interest-bearing debt ("Wd"). The details of calculation formula can be shown as follows

WACC Calculation

$$\text{WACC} = \text{Ke} \times \text{We} + \text{Kd} \times (1 - t) \times \text{Wd}$$

Whereas

$$\text{Ke} = \text{GPSC's Cost of Equity of 8.5\%}$$

$$\text{Kd} = \text{GPSC's Cost of Debt based on average interest expense of Interest-bearing Debt in 2017 - 2019, which is 3.4\%}$$

$$T = \text{CIT of 20.0\%}$$

$$\text{We} = \text{GPSC's portion of Equity of 50.7\%}$$

$$\text{Wd} = \text{GPSC's portion of Interest-bearing Debt of 49.3\%}$$

Ke Calculation

$$\text{Ke} = \text{Rf} + \beta \times (\text{Rm} - \text{Rf})$$

Whereas

Risk Free Rate (Rf)	Based on the 15-year government bond as of August 20, 2020 of 1.6%
Market Return (Rm)	Based on 15-year CAGR of SET's Total Return Index between August 2005 – August 2020 of 9.3%
Adjusted Beta (β)	Leverage Beta of comparable companies that have the revenue contribution from power production and distribution business in SET over the past 5 years (Source: Capital IQ ¹) to be used in calculation of Cost of Equity (Ke), the adjusted beta equals to 0.9 according to Ratch Group Public Company Limited, Electricity Generating Public Company Limited, Banpu Power Public Company Limited, B.Grimm Power Public Company Limited, and Gulf Energy Development Public Company Limited. In this regard, the IFA did not include GPSC in adjusted beta calculation because GPSC share price had been volatile during the past 2 years due to the acquisition of GLOW as a subsidiary.

Whereas

$$K_e = 1.6\% + [0.9 \times (9.3\% - 1.6\%)] = 8.5\%$$

The IFA calculated the weighted average cost of capital (WACC) of 5.7% based on TP's capital structure as follows:

$$\begin{aligned} \text{WACC} &= (8.5\% \times 50.7\%) + [3.4\% \times (1 - 20\%) \times 49.3\%] \\ &= 5.7\% \end{aligned}$$

¹ S&P Capital IQ is a company that specializes in providing information to conduct the analysis and uses same standard principles and criteria of the preparation as those of listed companies worldwide. With a professional team of over 4,000 employees worldwide, the company covers the basics in depth both in Thailand and abroad. The offered information consists of financial information, development of companies and other information that has international quality for fundamental analysis.

12. Summary of Financial Projection of GPSCC

The IFA summarized financial projection of GPSC with detail as follows:

Table of Summary of Free Cash Flow to Firm of GPSC

Unit: Baht million	2Q2020F	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F
EBIT x (1- Tax rate)	6,498.6	13,252.1	12,790.3	16,268.2	15,482.2	14,108.4	14,041.1	13,467.4	13,068.0	13,539.4
Depreciation and amortization	3,774.8	7,578.8	7,701.4	8,462.4	8,514.1	8,510.8	8,574.5	8,648.7	8,721.3	8,729.7
Changes of working capital	1,905.2	1,405.5	904.1	(977.7)	1,096.9	1,336.7	964.5	665.9	1,311.4	113.2
Cash flow from operation	12,178.7	22,236.4	21,395.7	23,752.8	25,093.2	23,955.9	23,580.1	22,782.0	23,100.8	22,382.3
CAPEX	(7,119.1)	(1,759.1)	(3,487.3)	(22,419.5)	(1,955.2)	(76.7)	(1,955.6)	(2,264.2)	216.9	(356.4)
Cash flow from investment	(7,119.1)	(1,759.1)	(3,487.3)	(22,419.5)	(1,955.2)	(76.7)	(1,955.6)	(2,264.2)	216.9	(356.4)
Free cash flow to firm	5,059.6	20,477.3	17,908.4	1,333.4	23,138.1	23,879.3	21,624.5	20,517.9	23,317.8	22,025.9
Discount factor	1.0	0.9	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.6
Present value of free cash flow to firm	4,921.6	18,853.5	15,606.0	1,099.8	18,062.8	17,643.9	15,122.8	13,581.0	14,608.2	13,060.4

Source: Projection of the IFA

Table of Summary of Free Cash Flow to Firm of GPSC

Unit: Baht million	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F
EBIT x (1- Tax rate)	12,830.9	12,807.0	12,902.3	12,874.6	11,624.4	12,159.4	11,921.0	11,098.4	9,364.4	11,542.9
Depreciation and amortization	8,729.1	8,728.5	8,728.2	8,812.7	8,937.2	9,065.1	9,111.8	9,147.9	9,305.4	6,307.5
Changes of working capital	293.7	54.6	(243.3)	(141.9)	186.4	(407.1)	(54.2)	791.3	1,117.9	(47.4)
Cash flow from operation	21,853.7	21,590.1	21,387.2	21,545.3	20,748.0	20,817.4	20,978.7	21,037.6	19,787.7	17,802.9
CAPEX	(73.5)	(73.1)	(74.8)	(2,599.8)	(3,817.5)	(3,895.0)	(1,454.3)	(1,169.4)	(4,855.5)	(5,008.6)
Cash flow from investment	(73.5)	(73.1)	(74.8)	(2,599.8)	(3,817.5)	(3,895.0)	(1,454.3)	(1,169.4)	(4,855.5)	(5,008.6)
Free cash flow to firm	21,780.3	21,517.0	21,312.4	18,945.5	16,930.6	16,922.4	19,524.4	19,868.2	14,932.2	12,794.3
Discount factor	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3
Present value of free cash flow to firm	12,223.6	11,429.6	10,715.0	9,015.2	7,625.3	7,213.7	7,877.4	7,587.1	5,397.1	4,376.9

Source: Projection of the IFA

Table of Summary of Free Cash Flow to Firm of GPSC



Unit: Baht million	2040F	2041F	2042F	2043F	2044F	2045F	2046F	2047F	2048F	2049F	2050F
EBIT x (1- Tax rate)	12,499.1	12,709.1	12,481.7	12,818.1	13,174.5	11,758.3	11,321.7	11,284.8	7,714.1	7,641.9	7,642.8
Depreciation and amortization	4,553.9	4,487.2	4,493.5	2,873.0	2,455.9	2,455.5	2,474.0	2,493.4	2,511.6	2,509.0	2,276.8
Changes of working capital	198.9	(319.2)	62.8	994.8	(312.4)	(94.0)	204.8	(265.8)	2,136.9	(57.5)	382.0
Cash flow from operation	17,251.9	16,877.1	17,038.0	16,686.0	15,318.0	14,119.8	14,000.5	13,512.3	12,362.7	10,093.5	10,301.6
CAPEX	(4,116.4)	(303.2)	(295.4)	(293.8)	(300.6)	(61.5)	(650.3)	(663.7)	(661.9)	(48.1)	(1,774.8)
Cash flow from investment	(4,116.4)	(303.2)	(295.4)	(293.8)	(300.6)	(61.5)	(650.3)	(663.7)	(661.9)	(48.1)	(1,774.8)
Free cash flow to firm	13,135.5	16,573.9	16,742.6	16,392.2	15,017.4	14,058.3	13,350.2	12,848.7	11,700.8	10,045.4	8,526.8
Discount factor	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Present value of free cash flow to firm	4,253.1	5,079.2	4,856.3	4,500.2	3,902.1	3,457.4	3,107.5	2,830.7	2,439.9	1,982.6	-
Terminal value	-	-	-	-	-	-	-	-	-	183,196.0	-
Present value of terminal value	-	-	-	-	-	-	-	-	-	36,156.0	-

Source: Projection of the IFA

The terminal value is the value of cash flow after the projection period. The formula is calculated as follows.

Table of Terminal Value Calculation

Normalized FCFF	=	$FCFF / (WACC - G) = 183,196.0$
G (Terminal growth rate)	=	FCFF in 2050F is Baht 36,156.0 million ^{1/}
WACC	=	FCFF are projected to grow based on going concern basis at 1.0% ^{2/}
Normalized FCFF	=	Weighted Average Cost of Capital at 5.7%

Note: 1/ FCFF after expiration of all PPAs with EGAT

2/ Power business long-term growth rate

Table of Calculation of Fair Value of GPSC

Unit: Baht m	June 30, 2020
NPV of free cash flow to firm of GPSC in 2Q2020– 2049	252,429.5
NPV of free cash flow to firm of GPSC from 2050 onward	36,156.0
Enterprise value of GPSC	288,585.5
Add: Cash and cash equivalent ^{1/}	17,393.3
Add: Investment in other non-marketable securities ^{2/}	2,698.6
Deduct: Interest-bearing liabilities ^{3/}	(105,518.8)
Deduct: Non-controlling interests ^{4/}	(13,013.7)
Equity value of GPSC	190,144.9
Equity value of GPSC per the Transaction of 8.9%	16,937.6

Note: 1/ Cash and cash equivalent consist of deposits at financial institutions and short-term fixed deposits.

2/ Long-term loans to related parties and investments in other non-marketable equity securities both domestically and internationally: namely, Ratchaburi Power Company Limited, Sarn Palung Social Enterprise Company Limited, Eastern Fluid Transport Company Limited, Business Services Alliance Company Limited, and 24M Technologies, Inc.

3/ Interest-bearing liabilities consist of short-term loans from related parties, long-term loans from financial institutions, debentures, and lease liabilities.

4/ Non-controlling interests are shares in Glow IPP Co., Ltd., GHECO-One Co., Ltd., Houay Ho Power Co., Ltd. and IRPC PCL that are not held directly or indirectly by GPSC. The IFA projected Enterprise Value of the subsidiaries according to %age of GPSC's shareholding based on DCF approach with WACC equal to the WACC of GPSC.

The fair value of GPSC calculated by DCF approach in base case is Baht 190,144.9 million or equivalent to the Transaction of 8.9 percent is Baht 16,937.6 million.

13. Sensitivity Analysis of Discount Rate and Terminal Growth Rate

The IFA also performed sensitivity analysis of (1) discount rate and (2) terminal growth rate by the increase and the decrease of 3.0 percent in both factors, which are important factors directly affecting the valuation. The determined range reflects most-likely sensitivity range due to its business nature; the cash flow volatility is relatively low. Sensitivity assumption can be summarized as follows.

Table of Sensitivity Analysis

Factor	The Range of Sensitivity
WACC	+/- 3.0% (WACC = 5.5% – 5.8%)
Terminal growth rate	+/- 3.0% (Terminal Growth = 0.97% – 1.03%)

From the abovementioned assumption, the sensitivity of 8.9% equity value of GPSC can be summarized as follows:

Table of Sensitivity of 8.9% Equity Value (Baht million)

Sensitizing Factors		WACC				
		-3.0%	-1.5%	Base	+1.5%	+3.0%
Terminal Growth Rate	-3.0%	17,579.8	17,243.5	16,916.9	16,599.7	16,291.3
	-1.5%	17,591.4	17,254.4	16,927.2	16,609.4	16,300.4
	Base	17,603.0	17,265.4	16,937.6	16,619.1	16,309.6
	+1.5%	17,614.8	17,276.4	16,948.0	16,628.9	16,318.8
	+3.0%	17,626.6	17,287.6	16,958.5	16,638.8	16,328.1

Source: Projection of the IFA

From above table, sensitivity analysis indicates 8.9 percent equity value of GPSC range between Baht 16,291.3 million – Baht 17,626.6 million, which is less than the Transaction Value of Baht 16,882 million by Baht 590.9 million or 3.5 percent and more than the Transaction Value of Baht 16,882 million by Baht 744.4 million or 4.4 percent.

In this regard, DCF approach reflects business operation plan, ability to generate profit and growth prospect as well as return of equity in the future, which is estimated from GPSC's revenues and expenses which the IFA considered appropriate. Thus, DCF approach reflects the fair value.

3.7.7 Summary of GPSC's Valuation

The IFA projected GPSC's equity value by valuation approaches which can be summarized as follows:

Table of Summary of GPSC's share value

Approaches	Equity Value (8.9%) (Baht million)	Details
1. Book Value Approach	8,896.6	The Book Value is the approach that reflect the financial position at one point in time without take into account of market value of certain assets and significant events after the date of financial statement. Moreover, it will not be able to reflect the ability of asset to generate profit from GPSC's business in the future. <u>Hence, the IFA does not select this valuation approach.</u>
2. Adjusted Book Value Approach	8,896.6	The Adjusted Book Value Approach is a method that reflects a more approximate net asset value than the book value approach and takes into account significant events occurring after the date of the reference financial statements as well as the ability to generate profit in the future however, it does not into account of the trends of the related industrial economy as well as other external factors that may affect business operations in the future. <u>Hence, the IFA does not select this valuation approach as the Company's assets were not appraised by independent appraisers.</u>
3. Market Value Approach	16,963.1 – 18,946.7	The Market Value Approach is a way that reflects the net asset value that is closest to the present, rather than the book value method, as well as taking into account the important events that occur after the date in the underlying financial statements. GPSC's shares are listed on the SET50 Index which is one of the stock price indices on the Stock Exchange of Thailand to represent the movement of the top 50 volatile shares which also reflects the level of demand and supply of the investors and investor sentiment on various factors. <u>Hence, the IFA has an opinion that this valuation approach is appropriate for the share valuation of the company.</u>
4.1 P/BV	12,562.7 – 14,574.7	The Price to Book Value Ratio reflects financial position at a point of time, from comparing with the average ratio of comparable companies. The IFA concludes that the P/BV ratio is not the appropriate approach for the valuation, since it does not reflect the market value of certain assets and significant events after the date of referred financial statement as well as the ability to make profits from the assets for GPSC's business in the future. Therefore, it is not an appropriate approach. <u>Hence, the IFA does not select this valuation approach.</u>
4.2 P/E	9,375.4 – 11,698.2	The Price to Earnings Ratio refers to the earnings per share for over the past 12 months and multiplied by the P/E ratio. The IFA concludes that this approach does not taking into account of the difference of business structure, such as, revenue structure and cost structure; therefore, this approach might not fully reflect the actual value. <u>Hence, the IFA does not select this valuation approach.</u>

Approaches	Equity Value (8.9%) (Baht million)	Details
4.3 EV/EBITDA	19,761.2 – 21,664.9	<p>The EV to EBITDA ratio refers to the EBITDA for over the past 12 months and multiplied by the EV to EBITDA ratio. The IFA concludes that this approach does not taking into account of the difference of business structure, such as, revenue structure and cost structure; therefore, this approach might not fully reflect the actual value.</p> <p>Hence, the IFA does not select this valuation approach</p>
5. Transaction Comparable	8,509.1	<p>The Transaction Comparable Approach reflects the ability to generate cash flow from operation deducted by the effects of capital structure in different enterprise. The IFA views that this valuation approach contains uncertainty of various factors such as transaction size and time of transaction, which might indicate the misleading share value from the valuation. Hence, the IFA does not select this valuation approach.</p>
6. Discounted Cash Flow	16,291.3 – 17,626.6	<p>DCF approach reflects business operation plan, ability to make profit and growth prospect as well as return of equity in the future, which is estimated from the GPSC's revenues and expenses based on an assumption that is considered to be fair and appropriate by the IFA. Hence, the IFA concludes that this valuation approach is appropriate for the share valuation of GPSC.</p>

3.8 Appropriateness of the EBT Transaction for TP

To evaluate the fair value of TP, the IFA has gathered and considered information based on TP's financial statements for the past 3 years ending December 31, 2019 which were audited by PricewaterhouseCoopers ABAS Ltd. as well as information from TP, management interview, and other publicly available information. However, the opinion of the IFA is based upon the assumption that such information is correct, complete, and credible under the current circumstances. Significant changes in business operation may alter the fair value of TP's share price and shareholders' decision considered in the Transaction.

The IFA has valued TP through 5 approaches as follows:

- 1) Book Value Approach
- 2) Adjusted Book Value Approach
- 3) Market Comparable Approach which consists of 3 approaches:
 - Price to Book Value Ratio: "P/BV"
 - Price to Earnings Ratio: "P/E"
 - Enterprise Value/Earnings Before Interest Tax Depreciation and Amortization "EV/EBITDA"
- 4) Transaction Comparable Approach
- 5) Discounted Cash Flow Approach

3.8.1 Book Value Approach

Book Value Approach is the approach that values the net asset value or total equity of TP at a moment in time. The IFA used the value with regards to TP's consolidated financial statement as of December 31, 2019.

Table: Book Value Approach

Equity (Financial Statement) Unit: Baht million	December 31, 2019
Issued and paid-up share capital	2,810.0
Retain earnings (appropriated)	281.0
Retain earnings (unappropriated)	1,072.1
Total Equity Value of TP	4,163.1

The fair valuation under book value approach for TP as of December 31, 2019 results in a total equity value of Baht 4,163.1 million which is lower than the value of the EBT Transaction for TP of Baht 26,773 million by Baht 22,609.6 million or 84.5 percent lower than the value of EBT Transaction for TP.

3.8.2 Market Comparable Approach

The Market Comparable Approach is the share valuation based on the assumption that companies with similar or identical business should contain similar market value ratio. The comparable company selection to value enterprise value of TP, the selected comparable companies may have some differences such as accounting, policy, investment policy, size of the company, revenue structure, source of non-core revenue, quality of the business, etc. Therefore, the comparable companies with similar business nature might not cover all the similarities, which might have some differences as mentioned above.

To determine the fair value of TP's common stock through market ratio comparisons, the IFA used the following ratios:

4. Price to Book Value Ratio ("P/BV")
5. Price to Earnings Ratio ("P/E")
6. Enterprise Value to Earnings Before Interest, Tax, Depreciation, and Amortization ("EV/EBITDA")

Table: Comparable Companies

Company	Business Description	Country of the Stock Exchange	(Baht million)			
			Market Capitalization	Revenue	Asset	Total Debt
Ratch Group Public Company Limited	RATCH Group Public Company Limited engages in electricity generation and distribution in Thailand, Australia and other foreign countries through natural gas, coal and fuel oil, including solar, wind and biomass with a production capacity of 7,159.2 MW.	Thailand	80,837.5	33,046.9	105,446.2	37,055.9
Electricity Generating Public Company Limited	Electricity Generating Public Company Limited engages in the business of generating and distributing electricity to the government sector and industrial users especially in Thailand, the Philippines and Australia through natural gas, liquefied natural gas, coal, biomass, hydroelectric, solar energy, wind energy, geothermal energy and fuel cells with a total capacity of 5,475.0 MW.	Thailand	123,192.8	35,918.6	215,564.6	96,844.6
Banpu Power Public Company Limited	Banpu Power Public Company Limited engages in the production and distribution of electricity to the government sector. And industrial users especially in Thailand, Japan, China, Lao, and Vietnam through solar and wind power with a total production capacity of 2,247.0 MW.	Thailand	41,466.2	5,544.6	52,141.4	10,599.8
B.Grimm Power Public Company Limited	B.Grimm Power Public Company Limited engages in electricity generation and distribution in Thailand, Lao, and Vietnam through natural gas, liquefied natural gas, hydroelectric, solar energy, wind power and waste energy with a total capacity of 3,019.0 MW.	Thailand	121,220.9	45,475.1	126,166.7	64,604.6
Gulf Energy Development Public Company Limited	Gulf Energy Development Public Company Limited engages in the production and distribution of electricity to the government sector and industrial users through natural gas, liquefied natural gas, solar, wind and biomass energy with a total production capacity of 11,910.0 MW.	Thailand	333,328.1	31,928.8	152,603.8	31,982.8

Source: Capital IQ as of August 20, 2020 whereby financial information is as of the financial statement ending June 30, 2020

Source: 1/ Market Capitalization as of August 20, 2020

1. Price to Book Value Approach (“P/BV”)

The share valuation under P/BV is based on the book value of TP as of December 31, 2019 as stated in the book value approach which is Baht 4,163.1 million multiplied by the median of the P/BV ratio of comparable companies for the past 7 – 360 working days.

Table: P/BV of Comparable Companies

Company	P/BV Ratio (Times)								
	7 days	15 days	7 days	60 days	7 days	120 days	7 days	270 days	360 days
Ratch Group Public Company Limited	1.4	1.4	1.5	1.6	1.6	1.5	1.6	1.6	1.6
Electricity Generating Public Company Limited	1.3	1.3	1.3	1.4	1.4	1.3	1.5	1.6	1.6
Banpu Power Public Company Limited	1.0	1.1	1.1	1.2	1.1	1.1	1.1	1.2	1.3
B.Grimm Power Public Company Limited	3.5	3.5	3.7	3.8	3.6	3.4	3.6	3.5	3.2
Gulf Energy Development Public Company Limited	10.9	11.2	11.8	12.2	12.4	11.9	12.0	11.4	10.3
Median of P/BV	1.4	1.4	1.5	1.6	1.6	1.5	1.6	1.6	1.6
Book Value (Baht million)	4,163.1	4,163.1	4,163.1	4,163.1	4,163.1	4,163.1	4,163.1	4,163.1	4,163.1
Equity Value (Baht million)	5,878.6	5,986.3	6,216.4	6,467.9	6,474.2	6,301.9	6,556.9	6,820.1	6,685.3

Source: Capital IQ as of August 20, 2020

Median of P/BV ratio of comparable companies over the past 12 months is 1.4 – 1.6 times which indicates that the equity value with the range of Baht 5,878.6 million – Baht 6,820.1 million which is lower than the value of the EBT Transaction for TP of Baht 26,773 million by Baht 19,952.6 million – Baht 20,894.1 million or 74.5 – 78.0 percent lower than the value of EBT Transaction for TP.

Nonetheless, the P/BV ratio reflects financial position at a point in time which does not reflect the market value of some assets and events which occurred after the financial statement's date and the asset's ability to generate profit in the future. Thus, this valuation approach may not reflect the fair value of TP.

2. Price to Earnings Approach (“P/E”)

The share valuation under P/E ratio is based on the financial statement for the past 12 months as of December 31, 2019 which equates to Baht 657.5 million multiplied by the median of the P/E ratio of the comparable companies.

Table: P/E of Comparable Companies

Company	P/E Ratio (Times)								
	7 days	15 days	7 days	60 days	7 days	120 days	7 days	270 days	360 days
Ratch Group Public Company Limited	17.7	18.0	18.7	19.5	19.5	19.0	19.8	20.5	20.1
Electricity Generating Public Company Limited	12.3	12.3	12.7	13.2	13.4	13.1	14.4	15.6	15.6
Banpu Power Public Company Limited	19.1	19.5	20.4	21.5	20.9	19.5	20.4	22.2	23.8
B.Grimm Power Public Company Limited	31.9	32.2	33.7	34.6	32.8	31.5	33.4	31.7	29.2
Gulf Energy Development Public Company Limited	65.6	67.1	71.2	73.7	74.3	71.5	72.0	68.5	62.0
Median of P/E	19.1	19.5	20.4	21.5	20.9	19.5	20.4	22.2	23.8
Earnings of TP (Baht million)	657.5	657.5	657.5	657.5	657.5	657.5	657.5	657.5	657.5
Equity Value (Baht million)	12,551.1	12,844.0	13,397.3	14,151.9	13,723.7	12,844.0	13,399.7	14,586.6	15,660.6

Source: Capital IQ as of August 20, 2020

Median of P/E ratio of comparable companies over the past 12 months is 19.1 – 23.8 times which indicates that the equity value with the range of Baht 12,551.1 million – Baht 15,660.6 million. Therefore, the fair value from the P/E approach (8.9 percent) ranges between Baht 9,375.4 million – Baht 11,698.2 million which is lower than the value of the EBT Transaction for TP of Baht 26,773 million by Baht 11,112.1 million – Baht 14,221.6 million or 41.5 – 53.1 percent lower than the value of EBT Transaction for TP.

The P/E approach does not take into account of the following differences for each company – revenue structure, capital structure, future performance, as well as the current and future production capacity. Thus, this valuation approach may not reflect the fair value of TP.

1. Enterprise Value/Earnings Before Interest, Tax, Depreciation, and Amortization Ratio (“EV/EBITDA”)

The share valuation under EV/EBITDA of TP from enterprise value in Consolidated Financial Statement for the past 12 months as of December 31, 2019 is Baht 1,085.9 million multiplied by median of EV/EBITDA of comparable companies.

Table: EV/EBITDA of comparable companies

Company	EV/EBITDA Ratio (Times)								
	7 days	15 days	7 days	60 days	7 days	120 days	7 days	270 days	360 days
Ratch Group Public Company Limited	21.0	21.3	21.9	22.5	22.6	22.1	22.8	23.5	23.1
Electricity Generating Public Company Limited	13.1	13.1	13.4	13.8	13.8	13.7	14.5	15.4	15.4
Banpu Power Public Company Limited	12.9	13.2	13.7	14.4	14.0	13.2	13.7	14.8	15.8
B.Grimm Power Public Company Limited	15.2	15.3	15.8	16.1	15.5	15.1	15.7	15.2	14.4
Gulf Energy Development Public Company Limited	38.3	39.0	40.9	42.1	42.4	41.1	41.3	39.6	36.5
Median of P/E	15.2	15.3	15.8	16.1	15.5	15.1	15.7	15.4	15.8
EBITDA of TP (Baht million)	1,085.9	1,085.9	1,085.9	1,085.9	1,085.9	1,085.9	1,085.9	1,085.9	1,085.9
Enterprise Value (Baht million)	16,529.7	16,634.8	17,161.1	17,484.3	16,870.2	16,385.7	17,075.0	16,678.0	17,170.2
Add: Cash and Cash Equivalent (Baht million)	615.6	615.6	615.6	615.6	615.6	615.6	615.6	615.6	615.6
Minus: Net Debt (Baht million)	15,380.2	15,380.2	15,380.2	15,380.2	15,380.2	15,380.2	15,380.2	15,380.2	15,380.2
Equity Value (Baht million)	1,765.2	1,870.2	2,396.5	2,719.7	2,105.6	1,621.1	2,310.4	1,913.5	2,405.6

Source: Capital IQ as of August 20, 2020

Median of EV/EBITDA ratio of comparable companies over the past 12 months is 15.1 – 16.1 times which indicates that the equity value with the range of Baht 1,621.1 million – Baht 2,719.7 million which is lower than the value of the EBT Transaction for TP of Baht 26,773 million by Baht 24,053.0 million – Baht 25,151.6 million or 89.8 – 93.9 percent lower than the value of EBT Transaction for TP.

The EV/EBITDA approach does not take into account of the following differences for each company – revenue structure and future performance, as well as the current and future production capacity. Thus, this valuation approach may not reflect the fair value of GPSC.

3.8.3 Transaction Comparable Approach

The Transaction Comparable Approach is the valuation approach that uses the median of EV/EBITDA ratio for the period of during the past 12 months of comparable companies whereby their target companies conduct their business operations in power industry. The median of the EV/EBITDA is multiplied by the EBITDA of TP for the last period of last 12 months ending December 31, 2019. For this approach of the valuation, there are some differences between each transaction and the Company's Transactions such as transaction value and transaction date which might result in inaccurate valuation. The details of each transaction are as follows:

Table: Comparable Transactions

Date	Target Company	Country	Transaction Proportion (%)	Transaction value (Baht million)	EV/EBITDA (Times)
June 2018	Glow Energy Public Company Limited	Thailand	69.1	139,034.1	10.3
August 2017	Energy Development Corporation	Thailand	47.5	42,649.1	9.2
October 2015	TPC Power Holding Public Company Limited	Thailand	0.6	41.0	107.3
December 2013	Aboitiz Power Corporation	Philippines	0.1	86.7	9.1
October 2011	Eastern Power Group Public Company Limited	Thailand	13.8	137.8	6.0
November 2010	Ratch Group Public Company Limited	Thailand	14.0	6,679.2	6.1
				Median	9.1

Source: Capital IQ as of August 20, 2020

Table: Information on Transaction Comparable Companies

Target Company	Business Description	Country of the Stock Exchange	(Baht million)			
			Market Capitalization	Revenue	Asset	Total Debt
Glow Energy Public Company Limited	Glow Energy Public Company Limited and its subsidiaries produce and distribute electricity, steam and processed water to industrial customers, EGAT and Provincial Electricity Authority (PEA) with IPP and SPP contracts with a total production capacity of 3,084 MW.	Thailand	-	50,182.7	107,245.3	30,134.2
Energy Development Corporation	Energy Development Corporation and its subsidiaries produce and distribute electricity through geothermal energy and other types of renewable energy as well as steam in the Philippines with a total capacity of 63 megawatts	Philippines	-	24,756.3	88,141.7	36,362.1
TPC Power Holding Public Company Limited	TPC Power Holding Public Company Limited, a subsidiary of Thai Polycons Public Company Limited, engages in the production and distribution of biomass power in Thailand with a total production capacity of 119 MW.	Thailand	5,095.2	1,669.6	8,513.7	4,006.1
Aboitiz Power Corporation	Aboitiz Power Corporation engages in the production and distribution of electricity in the Philippines through hydroelectric power plant, geothermal energy, solar, coal and oil with a total production capacity of 3,350 MW.	Philippines	125,285.1	73,282.6	265,492.1	239,875.9
Eastern Power Group Public Company Limited	Eastern Power Group Public Company Limited engages in solar power plants in Thailand and Japan with a total capacity of 500 MW.	Thailand	3,336.1	1,574.5	10,682.5	6,736.7
Ratch Group Public Company Limited	RATCH Group Public Company Limited engages in electricity generation and distribution in Thailand, Australia and other foreign countries through natural gas, coal and fuel oil, including solar, wind and biomass with a production capacity of 7,159.2 MW.	Thailand	80,837.5	33,046.9	105,446.2	37,055.9

Source: Capital IQ as of August 20, 2020 whereby financial information is as of the financial statement ending June 30, 2020

Median of the EV/EBITDA ratio of other trading transaction in the past is 9.1 times.

Table: Calculation of Share Price by Using Transaction Comparable Approach

Unit: Baht million	Last 12 months period	
	Median	
Median of EV/EBITDA (Times)	9.1	
EBITDA of TP	1,085.9	
Enterprise Value	9,892.1	
Add: Cash and Cash Equivalent	615.6	
Minus: Interest Bearing Debt ^{1/}	(15,380.2)	
Equity Value (Baht million)	(4,872.5)	

Source: TP's financial statement ending December 31, 2019

Source: 1/ Interest Bearing Debt from Investment

The total equity value of TP from transaction comparable approach is Baht (4,872.5) million which is lower than the value of the EBT Transaction for TP of Baht 26,773 million by Baht 31,645.2 million or 118.2 percent lower than the value of EBT Transaction for TP.

Nonetheless, this approach that does not take into account the differences of individual transactions such as the size of the transaction and timing of the transaction. Thus, this valuation approach might not reflect the fair value of TP.

3.8.4 Discounted Cash Flow Approach

Under the Discounted Cash Flow Approach, the IFA estimated net free cash flow that is expected from TP's performance (Free Cash Flow to Firm) ("FCFF"). FCFF is obtained from the Company's future cash flow projection for the period of 3 years and 9 months (1 July 2020 – 31 March 2024) to reflect the remaining SPP-PPA life between TP and EGAT which will be expiring on the March 31, 2023, and the additional one-year operation period to support the power demand within the Company's group according to the PPA between TP and industrial users, since the development of the investment project to replace the TP power plant has been postponed from the planned timeline as a result from the COVID-19 situations and other necessary factors. The IFA estimated various assumptions, for example, the assumptions regarding the power dispatch volume, electricity tariffs, and other assumptions essential to the valuation of TP based on the analysis on the publicly-published news and information and the management interview. The details are as follows:

- Estimation of revenues, costs, expenses in order to forecast financial projection is under the current economic condition and situation.
- The IFA discounted FCFF under current economic condition and situation at the weighted average cost of capital (WACC) across the projection period. The sum of discounted FCFF will be added by cash and subtracted by interest-bearing liabilities. In this regard, the IFA sets out

the variables used to calculate the WACC on August 20, 2020, which is the date of the Board of Directors' Meeting No. 8/2020 of the Company.

- The IFA projected GPSC's FCFE based on public information, publicly available news, as well as the interview with the Company.

TP's historical revenue structure according to the accounting periods ending December 31, 2017 to December 31, 2019 has the details as the following table:

Table of TP's Revenue Structure 2017 – 2019

	2017		2018		2019	
	Baht m	%	Baht m	%	Baht m	%
Revenue from sales of power to EGAT	802.0	19.3	846.0	19.2	917.0	20.9
Revenue from sales of power industrial users	1,725.0	41.6	1,866.0	42.3	1,798.0	40.9
Revenue from sales of steam	1,623.0	39.1	1,697.0	38.5	1,676.0	38.2
Total	4,150.0	100.0	4,409.0	100.0	4,391.0	100.0

Source: Information from TP

The IFA estimated the equity value of TP by using the sum of its parts method: combining TP's equity value alone with TP's shares in GPSC of 586,071,567 shares which equals Baht 39,521.0 million. The said GPSC value is based on the IFA's valuation of GPSC using the Discounted Cash Flow method as seen in this report on the topic of 3.7.5.

The details of financial projections and all related assumptions of TP are as follows:

1. Revenue

The IFA estimated the revenue of TP, where TP's revenues can be divided into 3 groups: (1) revenue from sales of power to EGAT by SPP, (2) revenue from sales of power to industrial users, (3) revenue from sales of steam. The assumptions are as follows:

(1) Revenue from Sales of Power to EGAT

Revenue from sales of power to EGAT consists of 2 main components: power dispatch volume and electricity tariff. The assumptions' details are as follows:

Power Dispatch Volume

The IFA estimated the power dispatch volume based on the contracted capacity on the SPP-PPA between TP and EGAT, ending on March 31, 2023, which is 41.0 MW and the 3-year historical average dispatch rate which is 79.7 percent.

Table of Power Dispatch Volume to EGAT

Item	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F
Contracted capacity (MWh) ^{1/}	359,160.0	359,160.0	359,160.0	360,144.0	359,160.0	359,160.0	88,560.0	-
Dispatch rate (%)	78.7	77.8	82.6	79.7	79.7	79.7	79.7	-
Dispatch volume to EGAT (MWh)	282,662.6	279,422.4	296,569.1	287,002.2	286,218.0	286,218.0	70,574.3	-

Source: Information from TP and projection of the IFA

Note: 1/ Calculated from the contracted capacity of 41.0 MW x total hours in each year

Electricity Tariff

The IFA estimated the electricity tariff with the 2020 natural gas cost based on TP's projection which equals 243.7 Baht/m BTU, reflecting the drop in the market price of natural gas in 2020. For the year 2021 – 2024, the IFA estimated the natural gas cost with 1.0 percent growth per year based on the average growth of Henry Hub natural gas price during 1998 – 2019. The IFA analyses this natural gas growth together with the EGAT's pass-through rate of electricity tariff in the year 2018, which equals 67.0 percent, since at some point in 2019, TP has sold more power to EGAT than specified in the contract. As a result, TP's revenue per unit of sales of power to EGAT decreased in 2019 due to not receiving any excess revenue from those additional power distributions, resulting in the usually low pass-through rate of 35.5 percent in 2019.

Table of Electricity Tariff of EGAT

Items	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F
Natural gas cost (Baht/m BTU)	235.1	258.6	274.1	243.7 ^{1/}	246.1	248.5	250.9	253.3
Growth of natural gas cost (%)	-	10.0	6.0	(11.1)	1.0	1.0	1.0	1.0
Pass-through rate (%)	N/A	67.0	35.5	67.0	67.0	67.0	67.0	67.0
Electricity tariff of EGAT (m Baht/kWh) ^{2/}	2.8	3.0	3.1	2.9	2.9	2.9	2.9	2.9

Source: Information from TP and projection of the IFA

Note: 1/ Natural gas cost in the year 2020 is based on the Company's estimation

2/ Forecast calculated from Previous year's tariff x (1+ (Pass-through rate x Growth of Natural gas cost))

From the assumptions made in the estimates mentioned above, the IFA can summarize the projections of revenue from sales of power to EGAT as follows:

Summary of Revenue from Sales of Power to EGAT

Item	Unit	2020F	2021F	2022F	2023F	2024F
Dispatch volume of EGAT	MWh	287,002.2	286,218.0	286,218.0	70,574.3	-
Electricity tariff of EGAT	m Baht/kWh	2.9	2.9	2.9	2.9	2.9
Revenue from sales of power to EGAT ^{1/}	Baht m	821.5	824.6	830.0	206.0	-

Source: Projection of the IFA

Note: 1/ Calculated from the electricity dispatch volume x Electricity tariff / 1,000

(2) Revenue from Sales of Power to Industrial Users

Revenue from sales of power to industrial users consists of 2 main components: power dispatch volume and electricity tariff. The assumptions' details are as follows:

Power Dispatch Volume

The IFA estimated the power dispatch volume based on the contracted capacity on the PPA between TP and industrial users which is 75.5 MW, and the 3-year historical average dispatch rate which is 91.8 percent. However, in the year 2022, there is an estimated decrease in dispatch rate of an industrial user from their shutdown plan for major maintenance.

Table of Power Dispatch Volume to Industrial Users

Item	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F
Contracted capacity (MWh) ^{1/}	661,380.0	661,380.0	661,380.0	663,192.0	661,380.0	661,380.0	661,380.0	164,892.0
Dispatch rate (%)	92.5%	94.7%	88.1%	91.8%	91.8%	90.1% ^{2/}	91.8%	91.8%
Dispatch volume to industrial users (MWh)	612,055.8	626,420.1	582,851.7	608,772.5	607,109.2	596,159.2	607,109.2	151,361.5

Source: Information from TP and projection of the IFA

Note: 1/ Calculated from the contracted capacity of 75.5 MW x total hours in each year

2/ Dispatch rate to an industrial user will be decreased in 2022 due to their plan to shut down for major maintenance.

Electricity Tariff

The IFA estimated the electricity tariff with the 2020 natural gas cost based on TP's projection which equals 243.7 Baht/m BTU, reflecting the drop in the market price of natural gas in 2020. For the year 2021 – 2024, the IFA estimated the natural gas cost with 1.0 percent growth per year based on the average growth of Henry Hub natural gas price during 1998 – 2019. The IFA analyses this natural gas growth together with the 2-year historical average of the industrial users' pass-through rate of electricity tariff during 2018 – 2019, which equals 58.2 percent.

Table of Electricity Tariff of Industrial Users

Item	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F
Natural gas cost (Baht/m BTU)	235.1	258.6	274.1	243.7 ^{1/}	246.1	248.5	250.9	253.3
Growth of natural gas cost (%)	-	10.0	6.0	(11.1)	1.0	1.0	1.0	1.0
Pass-through rate (%)	N/A	56.9	59.4	58.2	58.2	58.2	58.2	58.2
Electricity tariff of industrial users (m Baht/kWh) ^{2/}	2.8	3.0	3.1	2.9	2.9	2.9	2.9	3.0

Source: Information from TP and projection of the IFA

Note: 1/ Natural gas cost in the year 2020 is based on the Company's estimation

2/ Forecast calculated from Previous year's tariff x (1+ (Pass-through rate x Growth of natural gas cost))

From the assumptions made in the estimates mentioned above, the IFA can summarize the projections of revenue from sales of power to industrial users as follows:

Summary of Revenue from Sales of Power to Industrial Users

Item	Unit	2020F	2021F	2022F	2023F	2024F
Dispatch volume of industrial users	MWh	608,772.5	607,109.2	596,159.2	607,109.2	151,361.5
Electricity tariff of industrial users	m Baht/kWh	2.9	2.9	2.9	2.9	3.0
Revenue from sales of power to industrial users ^{1/}	Baht m	1,756.9	1,761.9	1,739.1	1,781.9	446.8

Source: Projection of the IFA

Note: 1/ Calculated from the electricity dispatch volume x Electricity tariff / 1,000

(3) Revenue from Sales of Steam

Steam is the by-product in the electricity generation process from the remainder hot gas in the generator which then is sent to the Heat Recovery Steam Generator to boil the water and be sold to industrial users under the steam purchase agreements. Revenue from sales of steam consists of 2 main components: the volume of steam produced, and steam selling price. The assumptions' details are as follows:

Volume of Steam Sold

The IFA estimated the volume of steam sold to each industrial user based on the steam contracted capacity which totaled 180.0 tons/hour, together with the 3-year historical average dispatch rate for each industrial user which totaled 124.5%. However, in the year 2022, there is an estimated decrease in dispatch rate of an industrial user from their shutdown plan for major maintenance.

Table of Steam Dispatch Volume

Item	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F
Contracted capacity (Tons) ^{1/}	1,576,800.0	1,576,800.0	1,576,800.0	1,581,120.0	1,576,800.0	1,576,800.0	1,576,800.0	393,120.0
Dispatch rate (%)	128.1%	124.5%	119.7%	124.5%	124.5%	122.0% ^{2/}	124.5%	124.5%
Volume of steam sold (Tons)	2,020,353.5	1,962,550.7	1,887,508.4	1,968,748.6	1,963,369.5	1,923,949.5	1,963,369.5	489,497.6

Source: Information from TP and projection of the IFA

Note: 1/ Calculated from the contracted capacity of 180.0 tons/hour x total hours in each year

2/ Dispatch rate to an industrial user will be decreased in 2022 due to their plan to shut down for major maintenance.

Steam Price

The IFA estimated the steam price with the 2020 natural gas cost based on TP's projection which equals 243.7 Baht/m BTU, reflecting the drop in the market price of natural gas in 2020. For the year 2021 – 2024, the IFA estimated the natural gas cost with 1.0 percent growth per year based on the average growth of Henry Hub natural gas price during 1998 – 2019. The IFA analyses this natural gas growth together with the 2-year historical average industrial users' pass-through rate of steam price during 2018 – 2019, which equals 24.8 percent.

Table of Steam Price

Item	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F
Natural gas cost (Baht/m BTU)	235.1	258.6	274.1	243.7 ^{1/}	246.1	248.5	250.9	253.3
Growth of natural gas cost (%)	-	10.0	6.0	(11.1)	1.0	1.0	1.0	1.0
Pass-through rate (%)	N/A	35.9 ^{2/}	13.7 ^{2/}	24.8	24.8	24.8	24.8	24.8
Steam price (Baht/ton) ^{3/}	761.6	789.0	795.5	785.1	786.7	787.0	790.5	792.2

Source: Information from TP and projection of the IFA

Note: 1/ Natural gas cost in the year 2020 is based on the Company's estimation

2/ The fuel oil C (FOC) price, which is another factor affecting the steam price, were usually high in 2018. As a result, the pass-through rates during 2018 – 2019 were higher and lower than usual, respectively.

3/ Forecast calculated from Previous year's steam price x (1+ (Pass-through rate x Growth of natural gas cost))

From the assumptions made in the estimates mentioned above, the IFA can summarize the projections of revenue from sales of steam as follows:

Summary of Revenue from Sales of Steam

Items	Unit	2020F	2021F	2022F	2023F	2024F
Volume of steam sold	Tons	1,968,748.6	1,963,369.5	1,923,949.5	1,963,369.5	489,497.6
Steam price	Baht/ton	785.1	786.7	787.0	790.5	792.2
Revenue from Sales of Steam^{1/}	Baht m	1,705.6	1,705.1	1,674.5	1,713.3	428.2

Source: Projection of the IFA

Note: 1/ Calculated from the volume of steam sold x Steam price/ 1,000,000



Summary of Revenue Forecast

From the aforementioned IFA's revenue forecast, TP's revenue forecast during 2020 – March 31, 2024 are as follows:

Table of Summary of TP's Revenue Forecast

Unit : Baht million	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F
Revenue from sales of power to EGAT	802.0	846.0	917.0	821.5	824.6	830.0	206.0	-
Revenue from sales of power to industrial users	1,725.0	1,866.0	1,798.0	1,756.9	1,761.9	1,739.1	1,781.9	446.8
Revenue from sales of steam	1,623.0	1,697.0	1,676.0	1,705.6	1,705.1	1,674.5	1,713.3	428.2
Total revenue	4,150.0	4,409.0	4,391.0	4,284.0	4,291.6	4,243.6	3,701.2	874.9

Source: Information from TP and projection of the IFA

2. Cost of Sales and Services

TP's Cost of sales and services consisted of natural gas cost, imported steam cost, water cost, and other costs. The assumptions' details are as follows:

Natural Gas Cost

The natural gas cost is the variable cost of TP's power production from the use of natural gas as fuels. The IFA estimated the 2020 natural gas cost based on TP's projection which equals 243.7 Baht/m BTU, which would then grow at 1.0 percent per year during 2021 – 2024 based on the average growth of Henry Hub natural gas price during 1998 – 2019.

Moreover, the IFA estimated the natural gas consumptions based on the 3-year historical average implied heat rate during 2017 – 2019 which equals 13,054.9 BTU/kWh and estimated the power production as the aforementioned assumptions on the revenue from sales of power.

Imported Steam Cost

The imported steam cost is the production cost of TP, which is used to produce additional steam for distribution to industrial customers. The Independent Financial Advisor estimates the cost of steam at a growth rate of 2.0 percent per year, referring to the inflation rate of the Bank of Thailand. Based on the cost of steam in 2019, the IFA has estimated the amount of such steam imports from the ratio of the volume of steam imports to the average steam production volume in the past three years between 2017 – 2019, which is equal to 24.5 percent. The amount of steam produced is based on the assumption of revenue from steam distribution. Including the internal steam consumption by TP itself, the IFA has estimated the internal steam consumption with an average of the past two years between 2018 and 2019, which is 203,886.8 tons due to the adjustment of internal steam consumption. Increased 77,658.6 tons or 70.2 percent from 110,659.0 tons in 2017 to 188,317.

The imported steam cost is TP's cost in production of additional steam to be sold to industrial users. The IFA estimated the imported steam cost based on the 2019 imported steam cost and projected with 2.0 percent growth per year, referring to the inflation rate of the Bank of Thailand¹ Moreover, the IFA estimated the imported steam volume from the 3-year historical average ratio of the imported steam volume-to-volume of steam produced during 2017 – 2019, which equals 24.5 percent, together with the volume of steam produced which was previously mentioned on the topic of revenue from sales of steam. The IFA also estimated the TP's internal use of steam with the 2-year historical average of 203,886.8 tons based on the period of 2018 – 2019 as the

¹ Medium-term target inflation rate by the Bank of Thailand as of June 2020 is 1.0 – 3.0%.

steam internal use was increased by 77,658.6 tons or 70.2 percent from 110,659.0 tons in 2017 to 188,317.6 tons in 2018 due to the change in the machine's operation system in 2018.

Water Cost

Water cost is the variable production cost of TP used in the power generation process. The IFA estimated the water cost from the water cost in 2019, which is 163.2 Baht/ton, with a growth rate of 2.0 percent per year, referring to the inflation rate of the Bank of Thailand. The IFA had also estimated the volume of water from the 3-year historical average volume during 2017 – 2019, which is 1,494,223.3 tons. However, for the period after March 31, 2023 when the SPP-PPA between TP and EGAT is going to be expired, the IFA has reduced the water volume in proportion to the decreased contractual capacity which equates to 73.5 percent and 16.1 percent of the period prior to the expiration of contracts in 2023 and 2024, respectively.

Other Costs

Other costs of TP are the cost of contractual power reserve as stated in the PPA with EGAT; and the cost of Power Development Fund. The IFA estimated the contractual power reserve based on the PPA between TP and EGAT, and analyzed the cost of the Power Development Fund in accordance with the policy of the Power Development Fund, which refers to the total amount of power produced and the power dispatch volume to industrial users as previously stated in the revenue assumptions.

Summary of Cost of Sales and Services Forecast

From the aforementioned IFA's cost of sales and services forecast, TP's cost of sales and services forecast during 2020 – March 31, 2024 are as follows:

Table of Summary of TP's Cost of Sales and Services Forecast

Unit : Baht million	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F
Natural gas cost	2,373.0	2,635.0	2,717.0	2,453.0	2,470.1	2,463.7	1,914.8	432.3
Imported steam cost	470.0	499.0	519.0	551.1	560.7	561.5	583.4	148.4
Water cost	258.0	299.0	240.0	248.7	253.6	258.7	193.9	43.4
Other costs	7.0	9.0	20.0	21.3	21.2	21.1	17.1	3.6
Total cost of sales and services	3,108.0	3,442.0	3,496.0	3,274.0	3,305.7	3,305.0	2,709.1	627.7

Source: Information from TP and projection of the IFA

3. Selling and Administrative Expense

Selling and administrative expenses consist of (1) O&M, including backup fuel cost and GT specialist expense; (2) Common infrastructure; (3) Maintenance; (4) Insurance premiums; (5) Land leases; and (6) Others. The IFA estimated the O&M, maintenance, insurance premium, and other expenses with a growth rate of 2.0 percent per year, referring to the inflation rate of the Bank of Thailand. For the common infrastructure between TP and the Company, the IFA estimated the expense based on the 3-year historical average proportion of such expenses to revenue. This equals 2.0 percent of the total revenue of TP. For the land lease, the IFA estimated the expense based on the land lease agreement. However, for the period after March 31, 2023 when the SPP-PPA between TP and EGAT is going to be expired, the IFA reduced the O&M and maintenance expense in proportion to the decreased contractual capacity which equates to 73.5 percent and 16.1 percent of the period prior to the expiration of contracts in 2023 and 2024, respectively.

Table of Projection of Selling and Administrative Expense

Unit : Baht million	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F
O&M	53.0	53.0	54.0	55.1	56.2	57.3	43.0	7.1
Common infrastructure	83.0	88.0	87.0	85.4	85.5	84.6	73.7	17.4
Maintenance	47.0	39.0	54.0	55.1	56.2	57.3	43.0	7.1
Insurance premium	10.0	9.0	8.0	8.2	8.3	8.5	8.7	2.2
Land lease	3.0	3.0	3.0	2.9	2.9	2.9	2.9	0.7
Others	8.0	9.0	8.0	8.2	8.3	8.5	8.7	2.2
Total selling and administrative expense	204.0	201.0	214.0	214.7	217.4	219.1	179.9	36.7

Source: Information from TP and projection of the IFA

4. Other Revenue

TP's other revenue is interest income on bank deposits. The IFA estimated the other revenue with the 3-year historical average of the proportion of the interest income to the average cash during the year, which is equal to 0.7 percent.

Table of Projection of Other Revenue

Unit : Baht million	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F
Interest income to average cash during the year (%)	0.7	0.6	1.0	0.7	0.7	0.7	0.7	0.7
Other revenue	3.0	3.0	5.0	4.6	6.6	7.2	7.7	2.8

Source: Information from TP and projection of the IFA

5. Income Tax

The IFA estimated TP's income tax based on the corporate income tax of 20.0 percent as it reflects the corporate income tax rate announced by the Revenue Department. Although TP has previously been benefited by the Investment Promotion Act B.E. 2520 with the promotional certificates No.1387(2)/2552, No.9002(2)/2554, and No.1387(2)/2009, the corporate income tax exemption from the said investment promotion certificate has ended.

6. Working Capital

As TP's historical working capital periods was not volatile, the IFA estimated the working capital based on the 3-year historical average days sales outstanding, days inventory outstanding, and days payables outstanding during 2017 – 2019, which equals to 40.0 days, 6.4 days, and 49.2 days, respectively throughout the projection during 2020 – 2024.

Table of Projection of Working Capital

Unit : Days	2017A	2018A	2019A	2020F	2021F	2022F	2023F	2024F
DSO	38.6	39.7	41.8	40.0	40.0	40.0	40.0	40.0
DIO	6.7	6.4	6.2	6.4	6.4	6.4	6.4	6.4
DPO	54.7	61.5	31.5	49.2	49.2	49.2	49.2	49.2

Source: Information from TP and projection of the IFA

7. Capital Expenditure

The IFA estimated the capital expenditure during 2020 – 2024 based on the TP's investment plan received from the management interview. TP has planned to invest in the total of Baht 6.0 million in 2020 and has no additional investment plan during 2021 – 2024 as PPA between TP and EGAT will expire on March 31, 2023 and the power plant will end operations on March 31, 2024

Table of Projection of Capital Expenditure

Unit : Baht million	2020F	2021F	2022F	2023F	2024F
Uninterruptible power supply (UPS)	5.0	-	-	-	-
Demineralized water storage tank	1.0	-	-	-	-
Total capital expenditure	6.0	-	-	-	-

Source: Investment plan of TP

8. Depreciation

The IFA assumed that each type of fixed assets depreciates under the straight-line method. The depreciation of each type of asset will be calculated according to the accounting standard, which the details can be summarized as follow:

Table of Assumption of Depreciation

PPE	Depreciation Period (Years)
Power plants	15 – 25
Grid Connection	25
Machinery and plant equipment	5 – 20
Furniture, fixtures and office equipment	5
Motor Vehicles	5

Source: TP's financial statements

9. Profit from Sales of Machinery

As the PPA between TP and EGAT will expire on March 31, 2023, in which TP has no plans to renew the PPA, and the power plant will end its operations on March 31, 2024, therefore, the IFA estimated the selling price of machinery in 2024 according to TP's estimation of Baht 333.0 million. When deducting the machine salvage value in 2024, which is Baht 151.0. million, the profit from sales of machinery equals to Baht 182.0 million.

10. Summary of TP's Financial Projection

The IFA forecasted the financial projection of TP, which can be summarized as follows.

Table of TP's Financial Projection Summary during 2020 - 2024

Unit : Baht million	2020F	2021F	2022F	2023F	2024F
Total revenue	4,284.0	4,291.6	4,243.6	3,701.2	874.9
Cost of sales and services	(3,274.0)	(3,305.7)	(3,305.0)	(2,709.1)	(627.7)
Gross profit	1,010.0	985.9	938.6	992.0	247.3
Selling and administrative expense	(214.7)	(217.4)	(219.1)	(179.9)	(36.7)
Profit from sales of machinery	-	-	-	-	182.0 ^{1/}
EBITDA	795.3	768.6	719.5	812.1	392.6
Depreciation and amortization	(279.7)	(277.4)	(274.7)	(66.4)	-
EBIT	515.6	491.2	444.9	745.7	392.6
Interest revenue	4.6	6.6	7.2	7.7	2.8
EBT	520.2	497.8	452.1	753.4	395.4
Income tax	(104.0)	(99.6)	(90.4)	(150.7)	(79.1)
Net profit	416.2	398.2	361.6	602.8	316.3

Source: Information from TP and projection of the IFA

Note: 1/ Calculated from the selling price of machinery at Baht 333.0 million and the salvage value of Baht 151.0 million

11. Discount Rate

For the calculation of discount rate used in the Discounted Cash Flow Approach, the IFA used TP's Weighted Average Cost of Capital ("WACC") which is an average between Cost of Equity ("Ke") and Cost of Debt ("Kd"), which Kd will be adjusted by tax benefits from interest payment, weighted by equity ("We") and weight of interest bearing debt ("Wd"). The calculation formula can be shown as follows:

The Calculation of Weighted Average Cost of Capital (WACC)

$$\text{WACC} = \text{Ke} \times \text{We} + \text{Kd} \times (1 - t) \times \text{Wd}$$

Where

Ke = Cost of equity equals to 5.5%

Kd = Cost of debt based on TP's average effective cost of interest-bearing debt during 2017 – 2019 at 2.8%

T = Corporate income tax at 20.0%

We = Weight of equity equal to 100.0%

Wd = Weight of debt equal to 0.0%

The Calculation of Cost of Equity (Ke)

The IFA calculated cost of equity (Ke) from:

$$\text{Ke} = \text{Rf} + \beta \times (\text{Rm} - \text{Rf})$$

Where

Risk Free Rate (Rf) Based on interest rate of 15-year government bond as of August 20, 2020 at 1.6%

Market Return (Rm) Based on return of investment in SET TRI index over the past 15 years (from August 2005 – August 2020) at 9.3%

Adjusted Beta (β) Leverage Beta of comparable companies that have the revenue contribution from power production and distribution business in SET over the past 5 years (Source: Capital IQ¹) to be used in calculation of Cost of Equity (Ke), the adjusted beta equals to 0.5 according to Ratch Group Public Company Limited, Electricity Generating Public Company Limited, Banpu Power Public Company Limited, B.Grimm Power Public Company Limited, and Gulf Energy Development Public Company Limited.

Hence

$$\text{Ke} = 1.6\% + [0.5 \times (9.3\% - 1.6\%)] = 5.5\%$$

¹ S&P Capital IQ is a company that specializes in providing information to conduct the analysis and uses same standard principles and criteria of the preparation as those of listed companies worldwide. With a professional team of over 4,000 employees worldwide, the company covers the basics in depth both in Thailand and abroad. The offered information consists of financial information, development of companies and other information that has international quality for fundamental analysis.

The IFA calculated the weighted average cost of capital (WACC) of 5.5% based on TP's capital structure as follows:

$$\begin{aligned} \text{WACC} &= (5.5\% \times 100.0\%) + [2.8\% \times (1 - 20.0\%) \times 0.0\%] \\ &= 5.5\% \end{aligned}$$

12. Share Value Based on Discounted Cash Flow Approach

The IFA estimated TP's free cash flow to firm with details as follows:

Table of Summary of Free Cash Flow to Firm of TP during 2H2020 – 2024

Unit : Baht million	2H2020F	2021F	2022F	2023F	2024F
EBIT x (1 – income tax)	207.4	393.0	355.9	596.6	314.1
Depreciation and amortization	140.6	277.4	274.7	66.4	-
Changes of working capital	70.6	3.6	2.1	(21.8)	22.5
CAPEX	(3.0)	-	-	-	-
Machinery salvage value	-	-	-	-	151.0
Free cash flow to firm	415.5	674.0	632.7	641.2	487.6
Discount factor	1.0	0.9	0.9	0.8	0.8
Present value of free cash flow to firm	404.6	622.0	553.5	531.7	398.9

Source: Projection of the IFA

Table of Calculation of Fair Value of TP

Unit : Baht million	June 30, 2020
NPV of free cash flow to firm of TP in 2Q2020 – 2024	2,510.6
Enterprise value of TP	2,510.6
Add: Cash and cash equivalent	615.6
TP power plant business enterprise value	3,126.1
Deduct: Interest-bearing liabilities	(15,380.2)
Add: Equity value in associated company ^{1/}	39,521.0
Equity value of TP and associated company	27,267.0
Equity value of TP and associated company per the Transaction of 26.0%	7,089.4
Number of shares (million shares)	73.1
Share price (Baht/share)	97.0

Note: 1/ Calculated from the valuation of fair value of GPSC in the IFA's report under topic 3.7.5 Discounted Cash Flow Approach of GPSC

The equity value of TP calculated by DCF approach in base case is Baht 27,267.0 million or equivalent to the Transaction of 26.0 percent is Baht 7,089.4 million or equals Baht 97.0 per share.

13. Sensitivity Analysis of Discount Rate and Equity Value of GPSC

The IFA also performed sensitivity analysis of (1) discount rate of TP and (2) equity value of GPSC which calculated based on the fair value of GPSC sensitized by the discount rate and terminal growth rate as shown in the IFA's report under topic 3.7.5. Each factor is increased and the decreased by 3.0 percent. Sensitivity assumptions can be summarized as follows:

Table of Sensitivity Analysis

Factor	The Range of Sensitivity
WACC	+/- 3.0% (WACC 5.3% – 5.7%)
Equity value of GPSC	Baht 38,013.0 – 41,128.8 million

Source: Projection of the IFA

From the abovementioned assumptions, the sensitivity of equity value of TP can be summarized as follows:

Table of Sensitivity of TP's Equity Value (Baht million)

Sensitizing Factors		WACC				
		-3.0%	-1.5%	Base	+1.5%	+3.0%
Equity Value of GPSC	38,013.0	25,768.2	25,763.5	25,758.9	25,754.4	25,749.8
	Base	27,276.2	27,271.6	27,267.0	27,262.4	27,257.8
	41,128.8	28,884.0	28,879.4	28,874.8	28,870.2	28,865.6

Source: Projection of the IFA

From the table, sensitivity analysis indicates equity value of TP range between Baht 25,749.8 million – Baht 28,884.0 million, which is less than the EBT Value of Baht 26,773 million by Baht 1,022.9 million or 3.8 percent and more than the EBT Value by Baht 2,111.3 million or 7.9 percent. The equity value based on the 26.0 percent Transaction is equal to Baht 6,694.9 million – Baht 7,509.8 million, which is lower than the Transaction Value of Baht 6,961 million by Baht 266.0 million and higher by Baht 548.9 million.

In this regard, DCF approach reflects business operation plan, ability to generate profit and growth prospect as well as return of equity in the future, which is estimated from TP's revenues and expenses which the IFA considered appropriate. Thus, DCF approach reflects the fair value.

3.8.5 Summary of TP's Valuation

The IFA projected TP's equity value by valuation approaches which can be summarized as follows:

Table of Summary of TP's Share Value

Approaches	Equity Value (Baht million) ^{1/}	Details
1. Book Value	4,163.1	The Book Value is the approach that reflect the financial position at one point in time without take into account of market value of certain assets and significant events after the date of financial statement. Moreover, it will not be able to reflect the ability of asset to generate profit from TP's business in the future. Hence, the IFA does not select this valuation approach.
2. Adjusted Book Value	4,163.1	The Adjusted Book Value Approach is a method that reflects a more approximate net asset value than the book value approach and takes into account significant events occurring after the date of the reference financial statements as well as the ability to generate profit in the future however, it does not into account of the trends of the related industrial economy as well as other external factors that may affect business operations in the future. Hence, the IFA does not select this valuation approach as the Company's assets were not appraised by independent appraisers.
3.1 P/BV	5,878.6 – 6,820.1	The Price to Book Value Ratio reflects financial position at a point of time, from comparing with the average ratio of comparable companies. The IFA concludes that the P/BV ratio is not the appropriate approach for the valuation, since it does not reflect the market value of certain assets and significant events after the date of referred financial statement as well as the ability to make profits from the assets for TP's business in the future. Therefore, it is not an appropriate approach. Hence, the IFA does not select this valuation approach.
3.2 P/E	12,551.1 – 15,660.6	The Price to Earnings Ratio refers to the earnings per share for over the past 12 months and multiplied by the P/E ratio. The IFA concludes that this approach does not taking into account of the difference of business structure, such as, revenue structure and cost structure; therefore, this approach might not fully reflect the actual value. Hence, the IFA does not select this valuation approach.
3.3 EV/EBITDA	1,621.1 – 2,719.7	The EV to EBITDA ratio refers to the EBITDA for over the past 12 months and multiplied by the EV to EBITDA ratio. The IFA concludes that this approach does not taking into account of the difference of business structure, such as, revenue structure and cost structure; therefore, this approach might not fully reflect the actual value. Hence, the IFA does not select this valuation approach
4. Transaction Comparable	(4,872.5)	The Transaction Comparable Approach reflects the ability to generate cash flow from operation deducted by the effects of capital structure in different enterprise. The IFA views that this valuation approach contains uncertainty of various factors such as transaction size and time of transaction, which might indicate the misleading share value from the valuation. Hence, the IFA does not select this valuation approach.

Approaches	Equity Value (Baht million) ^{1/}	Details
4. Discounted Cash Flow	25,749.8 – 28,884.0	Based on the Discounted Cash Flow Approach, the value of TP is equal to Baht 25,749.8 – 28,884.0 million. This approach reflects business operation plan, ability to make profit and growth prospect as well as return of equity in the future, which is estimated from TP's revenues and expenses based on an assumption that is considered to be fair and appropriate by the IFA. Hence, the IFA concludes that this valuation approach is appropriate for the share valuation of the company.

Source: 1/ Total equity value of 100.0% However, as the Company currently holds 207,393,999 shares in TP which equates to 74.0% of total TP shares. Therefore, the total EBT Transaction value is equal to 26.0% of TP's equity value.

4. Summary of the Opinion of the IFA

The Board of Directors' Meeting No. 8/2020 of the Company, which was held on August 20, 2020, has resolved to approve the restructuring of the Company's shareholding in power business and the execution of relevant contracts and agreements as well as the authorization to take any arrangements necessary for and in connection with the Restructuring Plan, which shall be proposed to the shareholders' meeting for further consideration and approval, with the details as follows:

Share Disposition of Assets

The board of directors' meeting of the Company has resolved to approve the disposal of all ordinary shares directly held by the Company in GPSC to PTT in the amount of 251,173,540 shares with a par value of Baht 10 each, representing approximately 8.9 percent of all issued shares of GPSC at the total price of approximately Baht 16,882 million. Should GPSC declare its dividends and schedule the record date to determine the list of shareholders entitled to dividends before completion of the acquisition of shares in GPSC, the GPSC share price under the Share Disposal Transaction shall be reduced by the amount dividend payout to GPSC shares sold under this transaction, and the terms and conditions of the Share Disposal Transaction shall be as specified in the Share Purchase Agreement.

The Share Disposal Transaction is a connected transaction. Since PTT, as the buyer, is the Company's major shareholder. The size of the transaction is equal to 17.0 percent of the net tangible assets (NTA) of the Company and its subsidiaries (based on the Company's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020), and is thus regarded as a connected transaction under the Notifications on Connected Transactions having the aggregate transaction value exceeding Baht 20 million, and having the aggregate transaction size exceeding 3 percent of the net tangible assets (NTA) of the Company and its subsidiaries. Therefore, the Share Disposal Transaction is required to be approved by the shareholders' meeting before execution of such transaction. In this regard, the Company and PTT or PTT's related persons have not entered into any connected transactions under the Notifications on Connected Transactions during the past six months.

Moreover, the Share Disposal Transaction is regarded as a disposition of assets by the Company under the Notification of the Capital Market Supervisory Board No. TorChor. 20/2551 Re: Rules on Entering into Material Transactions Deemed as Acquisition or Disposition of Assets and the Notification of the Board of Governors of the Stock Exchange of Thailand Re: Disclosure of Information and Other Acts of Listed Companies Concerning the Acquisition or Disposition of Assets B.E. 2547 (A.D. 2004) (as amended). The Share Disposal Transaction is approximately 8.9 percent with the total value of approximately Baht 16,882 million, representing the highest transaction size equal to 8.6 percent on the basis of value of net tangible assets, which is used in the calculation of the highest transaction size (based on the Company's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020 and GPSC's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020).

Entire Business Transfer Transaction

The board of directors' meeting of the Company has resolved to approve the acceptance of the EBT from TP, the Company's subsidiary in which the Company holds 74.0 percent of all shares of TP and PTT holds the remaining 26.0 percent of all shares of TP, at the total price of business transfer of approximately Baht 26,773 million, which may be an adjust to reflect the market value at the time if EBT date assessed by an Independent appraiser which is the way that both parties mutually agreed in order to reflect the fair value of TP's net asset as of date. However, the IFA viewed that fair value on the transaction date which valued by the IFA will not result in higher fair value range that the IFA have considered. The Company will make payment in consideration of the EBT in cash and/or other means to be agreed by the parties

The EBT Transaction is a connected transaction under the Notifications on Connected Transactions since PTT, as the Company's major shareholder, holds shares representing over 10 percent of all shares in TP, the business transferor. The size of the transaction is equal to 7.0 percent of the net tangible assets (NTA) of the Company and its subsidiaries (based on the Company's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020), and is thus regarded as a connected transaction under the Notifications on Connected Transactions having the aggregate transaction value exceeding Baht 20 million, and having the aggregate transaction size exceeding 3 percent of the net tangible assets (NTA) of the Company and its subsidiaries. Therefore, the EBT Transaction is required to be approved by the shareholders' meeting before execution of such transaction. In this regard, the Company and TP or TP's related persons have not entered into any connected transactions under the Notifications on Connected Transactions during the past six months.

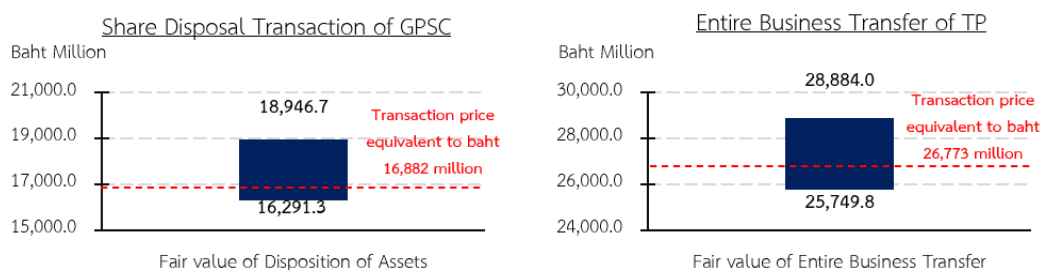
In addition, the EBT Transaction is also regarded as an acquisition of assets by the Company under the Notifications on Acquisition or Disposition of Assets. The EBT Transaction has the total value of approximately Baht 26,773 million, representing the highest transaction size equal to 2.3 percent on the basis of total value of consideration, which is used in the calculation of the highest transaction size (based on the Company's consolidated financial statements reviewed by the certified auditor for the period ended June 30, 2020 and TP's financial statements audited by the certified auditor for the period ended December 31, 2019). Since the Company currently holds approximately 74.0 percent of all shares of TP, the acquisition of assets transaction size under the EBT Transaction will be calculated only from the value of TP's entire business which will additionally be received by the Company after the acceptance of the EBT of TP under the EBT Transaction, i.e. 26.0 percent of the value of TP's entire business, the total value thereof is approximately Baht 6,961 million.

To consider the appropriateness of the Transaction, Avantgarde Capital Company Limited as the IFA of the Transaction analyzed the objectives of the Transaction, GPSC and TP's operating performance, current and future business policies and the situation of power and related industry in order to analyze advantages and disadvantages of entering into the Transaction. Entering into the Transaction is considered appropriate as it enables the Company to restructure the shareholding structure and proportion in the power business of the Company to reduce the complexity of the shareholding structure which will increase transparency, flexibility and efficiency in managing and driving the business

forward. In addition, the capacity of the connected person will benefit the Company in the long run since, PTT, as a buyer, has capacity, financial stability and business structure that benefit to GPSC's business operation from upstream to downstream, which the Company still has shareholding proportion in GPSC. However, the connected legal entity and persons will have no right to vote in such matters in an extraordinary general meeting of shareholders. Thus, the IFA has an opinion that this Transaction is **appropriate**. (shareholders can read details of the appropriateness of the Transaction additionally in section 3.1 the appropriateness and benefits of the Transaction)

Regarding the appropriateness of price, the IFA has an opinion that the fair value for accepting disposition of Assets of GPSC of approximately 8.9 percent at Baht 16,882 million is **appropriate** since it is in the IFA's valuation range of Baht 16,291.3 million – Baht 18,946.7 million by using Market Value Approach due to high liquidity of GPSC's shares and the Discounted Cash Flow approach which reflects future operating performance under business operation plan and fair assumptions of GPSC. In addition, the fair value for accepting transfer of the entire business of TP at Baht 26,773 million for payment of the Transaction is **appropriate** since it is in the IFA's valuation range of Baht 25,749.8 million – Baht 28,884.0 million by using the Discounted Cash Flow approach which reflects future operating performance under business operation plan and fair assumptions of TP. However, EBT transaction value might subject to an adjustment according to the market price thereof as of the date of entire business transfer appraised by an independent appraiser which is the way that both parties mutually agreed in order to reflect the fair value of TP's net asset as of date. The IFA viewed that fair value on the transaction date which will be valued by the independent appraiser will not result in entire business transfer value higher than the IFA's valuation range. (price before adjustment of TP's dividend payout).

Summary of fair value entering into transactions



To consider entering into the Transaction, shareholders shall consider information, opinion and other details prepared by the IFA as mentioned earlier such as assumptions for projected financial performances, the sensitivity analysis to evaluate the impact of fair value on the major assumptions such as discount rate etc. as well as advantages and disadvantages of entering into the Transaction. However, the decision to approve or disapprove for this Transaction is subject to the consideration of shareholders.

The independent financial advisor certified that the IFA carefully considered and provided financial opinions in accordance with the professional standard by taking into account the best interest of the shareholders.

The Independent Financial Advisor

Avantgarde Capital Co., Ltd

-Signed-

(Mr. Worawas Wassanont)
Supervisor

-Signed-

(Mr. Worawas Wassanont)
Managing Director

5. Appendix

5.1 Information Regarding the Company

5.1.1 Business Overview of Thai Oil Public Company Limited

Company Name	Thaoil Public Company Limited	
Location	555/1 Energy Complex Building B, 5th Floor, Vibhavadi Rangsit Road, Chatuchak Subdistrict, Chatuchak District, Bangkok	
Type of Business	Operates an oil refinery business with a modern and highly efficient production process to produce and distribute mainly petroleum products for the domestic market. It also expanded its investment to cover the production of petrochemical products, Ethanol based lubricants, including investments in the Power business as well as petroleum products transportation business and marine petrochemicals, Pipeline transportation of finished petroleum products, and energy consulting business	
Registration Number	0107547000711	
Website	www.thaioilgroup.com	
Share Capital	Baht 20,400,278,730	
Board of Director	Name	Position
	1 Professor Dr. Thosaporn Sirisumphand	Director / Chairman of the Board
	2 Miss Chularat Suteethorn	Director / Chairman of the Risk Management Committee
	3 Mr. Kanit Si ⁽¹⁾	Independent Director / Chairman of the Audit Committee
	4 Associate Professor Dr. Pasu Decharin	Independent Director / Member of the Audit Committee / Member of the Nomination and Remuneration Committee
	5 Air Chief Marshal Suttipong Inseepong	Independent Director / Chairman of the Nomination and Remuneration Committee
	6 Police General Aek Angsanant	Independent Director / Chairman of the Corporate Governance Committee / Member of the Audit Committee
	7 Mr. Yongyut Jantararotai	Director / Member of the Corporate Governance Committee
	8 General Kukiatt Srinaka	Independent Director / Member of the Corporate Governance Committee
	9 Mr. Praphon Wongtharua	Director
	10 Miss Phannalin Mahawongtikul	Director / Member of the Risk Management Committee
	11 Mr. Praphaisith Tankeyura	Independent Director / Member of the Audit Committee
	12 Mr. Preecha Pocatanawat ⁽²⁾	Director
	13 Miss Duangporn Thiengwatanatham	Director
	14 Mr. Wirat Uanarumit	Director / Member of the Risk Management Committee / Chief Executive Office and President and the Secretary to the Board of Directors

Source: Information from the Company as of 31 December 2019

Source: 1/ Mr. Kanit Si is due to retire from the position of director and member of the Audit Committee effective on September 15, 2020.

5.1.2 Background of the Company

The Company was incorporated in 1961 under the name Thai Refinery Company Limited and became a listed company on the Stock Exchange of Thailand in 2004 by listing in the energy category called TOP, opening the market at Baht 42, closing at Baht 40 value. The maximum trade is Baht 13,016,25 million, or 50 percent of the turnover on the same day.

In 1961, the Company was established by entering into a contract for building and operating an oil refinery in Sriracha with the Ministry of Industry in the form of build - manage - transfer (Build - Operate - Transfer: BOT) for a period of 20 years and started operating a refinery in 1964. When the construction of the first refinery was completed with a crude oil refining capacity of 35,000 barrels per day with a fluidized catalytic cracking unit as a conversion unit.

In 1967, the Company received government approval to expand its refinery and in 1970 the Company was able to add another 30,000 barrels of oil per day. By building a second refinery, the Thermal Cracking Unit is a conversion unit, giving the Company a total refining capacity of 65,000 barrels per day. Until the expiration of the contract on September 18, 1981, the Company has transferred the Company's assets, which are ownership of land and oil refineries Unit 1 and Unit 2 to the Ministry of Industry according to the terms of the construction and operation contract. The Company expand the oil refining business and operate such businesses by participating in the Company's shareholding at the rate of 49 percent on behalf of the government oil agency, which was later changed to PTT Plc. The shareholder structure of the company at that time was Shell Petroleum NV. (Shell Petroleum NV) holds a 15 percent stake, Caltex Trading & Transportation Corporation holds a 5 percent stake, Crown Property Bureau. The Company holds 2 percent of the shares and the existing shareholders and other minority shareholders collectively hold 29 percent of the shares.

In 1989, after the Company's molecule was installed with a co-hydrogen catalyst. (Hydrocracking Complex) and other production units, resulting in the Company's refining capacity increasing from 65,000 barrels per day to 90,000 barrels per day. On 11 September 1992, the Company purchased its own leased oil refinery which are oil refinery Unit 1 and Unit 2 from the Ministry of Industry and entered into a land lease agreement from the Treasury Department for a period of 30 years ending on September 10, 2022.

After the second refinery expansion was completed in 1993, the Company's refinery become the largest single-site refinery and one of the best Complex Refinery in the country with a crude oil refining capacity of 190,000 barrels per day. There are 2 Octane-Boosting Units (Continuous Catalyst Regeneration Platformer) and 3 Critical Molecular Modification Units to improve the quality of petroleum products, namely the Reactive Reactive Molecular Cracking Unit. Using total hydrogen (Hydrocracking Unit) Molecular Cracking Unit with Fluidized Catalytic Cracking Unit and Thermal Cracking Unit. In addition, the Company increased the production capacity of the new Crude Distillation unit to 15,000 barrels per day of oil refining capacity in 1994, after the Company has issued a new crude distillation unit. The Company also installed a molecule with catalytic cracking unit Using hydrogen together (Hydrocracking Complex),

the second unit and other production units have been completed, making the crude oil refining capacity possible. This includes the Company's intermediate refining process from 205,000 barrels per day to 220,000 barrels per day.

In 2006, the Company cooperated with Thai Lube Base Public Company Limited (TLB) to increase production efficiency together by using the heated oil from TLB to increase the temperature of the Company's crude oil to increase from before entering the furnace of the crude oil distillation unit 1. The Company's production capacity increased to 225,000 barrels per day.

The company still plans to develop the refinery continuously. The maintenance of the crude oil distillation unit 3 has been closed to expand production capacity, which includes both condition checks and modifications of equipment in the original production process. In addition, when this expansion was completed at the end of 2007, the Company's crude oil refining capacity was installed. Thus, increasing to 275,000 barrels per day and it still ranks as the largest single-site complex refinery in Thailand today.

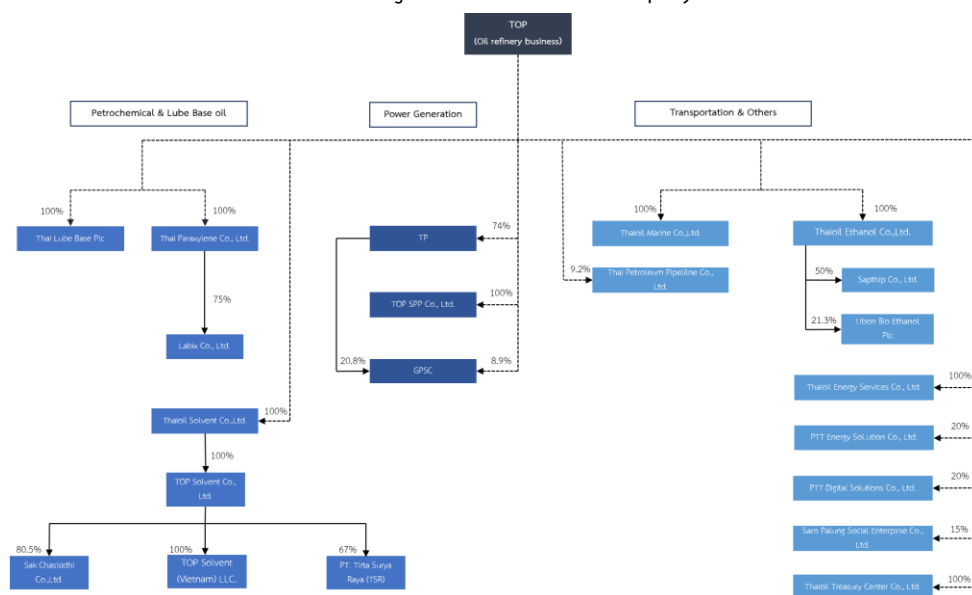
In 2012, the Independent Power Generating (Thailand) Company Limited (IPT) and PTT Utilities Company Limited (PTTUT), a company in PTT Public Company Limited's group, merged into a new company. It was named Global Power Synergy Company Limited (GPSC) and was registered on January 10, 2013 and was listed and traded on the Stock Exchange of Thailand in the resource industry under Energy and Utilities Business Division on May 18, 2015, with the first 3 major shareholders after IPO, namely PTT Public Company Limited, holding 75.00 percent of shares (PTT Global Plc. 22.73 percent PTT Plc. 22.57 percent Thai Oil Group 29.70 percent). GPSC is a comprehensive power generation and distribution company to strengthen the business growth to be able to compete effectively in the world market and add value of the power business to the Company. At present, it has a commercially operated power generation capacity of 1,315 MW and under construction 536 MW.

In 2016, the Linear Alkyl Benzene (LAB) production project with a capacity of approximately 100,000 tons per year is managed under Labix Company Limited, an indirect subsidiary, with the Company holding 75.00 percent of the shares through Thai Paraxylene. The Company started its commercial production on February 25, 2016 by LAB as the precursor for the production of cleaning agents such as bleaching powder and downstream products. In addition, two Small Power Producer (SPP) with a total production capacity of 239 MW and a total steam generating capacity of 498 tons per hour managed under TOP SPP Co., Ltd., a 100 percent owned subsidiary of the Company, began commercial operations on April 1, 2016 for Project 1 and June 1, 2016 for Project 2. The Company officially opened the LAB and SPP project on August 3, 2016.



5.1.3 Structure of the Company

Diagram illustrates TOP's company structure



Source: Annual report of TOP as of 31 December 2019

5.1.4 Connected Transactions in the Previous Year and Present Year until the Most Recent Quarter

1) Nature of Relationship

For the fiscal year 2019 until the six-month period ended June 30, 2020, the Company and/or its subsidiaries entered into significant connected transactions with the subsidiaries and related parties with common major shareholders and/or directors, the details of its relationship with these companies may be summarized as follows

Company	Relationship with the Company
PTT Public Company Limited	- It is a major shareholder, with both direct and indirect shareholding at 48.0% of shares of the Company.
Thai Paraxylene Company Limited	- The Company holds 100.0% of its shares. - Common director is Mr. Wirat Uanarumit. - The Company's executives, namely Mr. Bandhit Thamprajamchit and Mr. Saranyu Limwongse hold directorship in Thai Paraxylene Company Limited.
Thai Lube Base Public Company Limited	- The Company holds 100.0% of its shares. - The Company's executives, namely Mr. Bandhit Thamprajamchit, Mr. Nattapong Tumsaroj, Miss Rungtip Maneesarachun, Mr. Saranyu Limwongse and Mr. Anawat Chansaksoong hold directorship in Thai Lube Base Public Company Limited.

Company	Relationship with the Company
Thai Oil Marine Company Limited	<ul style="list-style-type: none"> - The Company holds 100.0% of its shares. - The Company's executives hold directorship in Thai Oil Marine Company Limited, namely, Mr. Chatapong Wungtanagorn, Mr. Viroj Meenaphant, Mr. Nattapong Tumsaroj, Mrs. Suchada Deechaiya and Miss Wanwisa Yanchinda.
Thai Oil Energy Services Company Limited	<ul style="list-style-type: none"> - The Company holds 100.0% of its shares. - The Company's executives, namely Mr. Bandhit Thamprajamchit, Miss Pattaralada Sa-ngasang, Mr. Viroj Meenaphant, Mr. Viroj Wongsathirayakhun and Mr. Surachai Saengsamran hold directorship in Thai Oil Energy Services Company Limited.
Thai Oil Solvent Company Limited	<ul style="list-style-type: none"> - The Company holds 100.0%. - The Company's executives, namely Mr. Chatapong Wungtanagorn, Mr. Nikom Kongnok and Miss Acharee Tiyaabhorn hold directorship in Thai Oil Solvent Company Limited.
Thai Oil Ethanol Company Limited	<ul style="list-style-type: none"> - The Company holds 100.0% of its shares. - The Company's executives, namely Mr. Bandhit Thamprajamchit, Miss Pattaralada Sa-ngasang, Mr. Pongpun Amornvivat, Mr. Viroj Meenaphant and Mr. Nitas Krongvanitchayakul hold directorship in Thai Oil Ethanol Company Limited.
Thai Oil Power Company Limited	<ul style="list-style-type: none"> - PTT Public Company Limited hold 26.0% of its shares. - The Company holds 74.0% of its shares. - Common director is Mr. Wirat Uanarumit. - The Company's executives, namely Mr. Bandhit Thamprajamchit, Mr. Jeerawat Pattanasomsit, Mr. Pongpun Amornvivat and Mr. Udom Wongsirinopphakhun hold directorship in Thai Oil Power Company Limited.
TOP SPP Company Limited	<ul style="list-style-type: none"> - The Company holds 100.0% of its shares. - The Company's executives, namely Mr. Pongpun Amornvivat, Mr. Udom Wongsirinopphakhun and Miss Rungtip Maneesarachun hold directorship in TOP SPP Company Limited.
TOP Solvent Company Limited	<ul style="list-style-type: none"> - Thai Oil Solvent Company Limited holds 100% of its shares. - The Company's executives, namely Mr. Chatapong Wungtanagorn, Mr. Viroj Meenaphant, Mr. Nattapong Tumsaroj, Mrs. Tarika Devahastin and Miss Acharee Tiyaabhorn hold directorship in TOP Solvent Company Limited.

Company	Relationship with the Company
Sak Chaisidhi Company Limited	<ul style="list-style-type: none"> - TOP Solvent Company Limited holds 80.5% of its shares. - The Company's executives, namely Mr. Jeerawat Pattanasomsit, Mr. Chatapong Wungtanagorn, Miss Torsang Chaipravat, Mrs. Rungnapa Janchookiat, Mrs. Tarika Devahastin, and Miss Acharee Tiyaabhorn hold directorship in Sak Chaisidhi Company Limited.
TOP Solvent (Vietnam) LLC	<ul style="list-style-type: none"> - TOP Solvent Company Limited holds 100.0% of its shares. - The Company's executives hold directorship in TOP Solvent (Vietnam) LLC, namely, Mr. Chatapong Wungtanagorn, MissMrs. Tarika Devahastin and Miss Acharee Tiyaabhorn.
PT. Tirta Surya Raya ⁽¹⁾	<ul style="list-style-type: none"> - TOP Solvent Company Limited holds 67.0% of its shares.
Thai Oil Treasury Center Company Limited	<ul style="list-style-type: none"> - The Company holds 100.0% of shares. - The Company's executives, namely Miss Pattaralada Sa-ngasang, Mr. Pongpun Amornvivat, Miss Rungtip Maneesarachun, Miss Torsang Chaipravat hold directorship in Thai Oil Treasury Center Company Limited.
TOP Ventures Company Limited ⁽²⁾	<ul style="list-style-type: none"> - Thai Oil Treasury Center Company Limited holds 100.0% of its shares. - The Company's executives, namely Mr. Pongpun Amornvivat and Mr. Santi Wasanasiri hold directorship in TOP Ventures Company Limited.
TOP Ventures Hong Kong Limited ⁽³⁾	<ul style="list-style-type: none"> - Thai Oil Treasury Center Company Limited holds 100.0% of its shares. - The Company's executives, namely Mr. Pongpun Amornvivat and Mr. Santi Wasanasiri hold directorship in TOP Ventures Hong Kong Limited.
TOP Ventures America LLC ⁽⁴⁾	<ul style="list-style-type: none"> - TOP Ventures Hong Kong Limited holds 100.0% of its shares. - The Company's executives, namely Mr. Pongpun Amornvivat and Mr. Santi Wasanasiri hold directorship in TOP Ventures America LLC.
Sapthip Company Limited	<ul style="list-style-type: none"> - Thai Oil Ethanol Company Limited holds 50.0% of its shares. - The Company's executives, namely Miss Pattaralada Sa-ngasang, Mr. Pongpun Amornvivat, Miss Rungnapa Janchookiat and Mr. Nitas Krongvanitchayakul hold directorship in Sapthip Company Limited.
Sapthip Green Energy Company Limited	<ul style="list-style-type: none"> - Sapthip Company Limited holds 100.0% of its shares. - The Company's executive, namely Mr. Jumpon Thapanapong holds directorship in Sapthip Green Energy Company Limited.
Ubon Bio Ethanol Public Company Limited	<ul style="list-style-type: none"> - Thai Oil Ethanol Company Limited holds 21.3% of its shares. - The Company's executives, namely Miss Pattaralada Sa-ngasang and Mr. Pongpun Amornvivat hold directorship in Ubon Bio Ethanol Company Limited.

Company	Relationship with the Company
TOP Maritime Service Company Limited	<ul style="list-style-type: none"> - Thai Oil Marine Company Limited holds 100.0% of its shares. - The Company's executives, namely Mr. Chatapong Wungtanagorn, Mr. Viroj Meenaphant, Mr. Nitas Krongvanitchayakul and Miss Wanwisa Yanchinda hold directorship in TOP Maritime Service Company Limited.
LABIX Company Limited	<ul style="list-style-type: none"> - Thai Paraxylene Company Limited holds 75.0% of its shares. - Common director is Mr. Wirat Uanarumit. - The Company's executives, namely Miss Pattaralada Sa-ngasang, Miss Duangporn Teerapabpaisit and Mr. Saranyu Limwongse hold directorship in LABIX Company Limited.
PTT Digital Solutions Company Limited	<ul style="list-style-type: none"> - PTT Public Company Limited holds 20.0% of its shares. - The Company holds 20.0% of its shares. - The Company's executive, namely Mr. Pongpun Amornvivat holds directorship in PTT Digital Solutions Company Limited.
PTT Energy Solutions Company Limited	<ul style="list-style-type: none"> - PTT Public Company Limited holds 40.0% of its shares. - The Company holds 20.0% of its shares. - The Company's executive, namely Mrs. Runnapa Janchookiat holds directorship in PTT Energy Solutions Company Limited.
Global Power Synergy Public Company Limited	<ul style="list-style-type: none"> - PTT Public Company Limited holds 22.8% of its shares. - The Company holds 8.9% of its shares. - TP (whose 74.0% of shares is held by the Company) holds 20.78% of its shares. - Common director is Mr. Wirat Uanarumit. - The Company's executive, namely Mr. Bandhit Thamprajamchit holds directorship in Global Power Synergy Public Company Limited.
Energy Recovery Unit Company Limited ⁽⁵⁾	<ul style="list-style-type: none"> - Global Power Synergy Public Company Limited holds 100.0% of its shares.
Sam Palang Social Enterprise Company Limited	<ul style="list-style-type: none"> - PTT Public Company Limited holds 20.0% of its shares. - The Company holds 15.0% of its shares. - Common director is Miss Duangporn Thiengwatanatham. - The Company's executive, namely Mr. Viroj Meenaphant holds directorship in Sam Palang Social Enterprise Company Limited.
PTT Oil and Retail Business Public Company Limited ("PTTOR")	<ul style="list-style-type: none"> - PTT Public Company Limited holds 100.0% of its shares.
PTT Treasury Center Company Limited	<ul style="list-style-type: none"> - PTT Public Company Limited holds 100.0% of its shares.
PTT International Trading Pte. Ltd.	<ul style="list-style-type: none"> - PTT Public Company Limited holds 100.0% of shares.

Company	Relationship with the Company
PTT International Trading London Ltd.	- PTT Public Company Limited holds 100.0% of its shares.
PTT Tank Terminal Company Limited	- PTT Public Company Limited holds 100.0% of its shares.
PTT Exploration and Production Public Company Limited (“PTTEP”)	- PTT Public Company Limited holds 64.8% of its shares.
PTTEP Energy Development Company Limited	- PTT Exploration and Production Public Company Limited holds 100.0% of its shares.
PTTEP International Company Limited	- PTT Exploration and Production Public Company Limited holds 100.0% of its shares.
Energy Complex Company Limited	- PTT Public Company Limited holds 50.0% of its shares.
PTT Global Chemical Public Company Limited (“PTTGC”)	- PTT Public Company Limited holds 47.7% of its shares.
IRPC Public Company Limited (“IRPC”)	- PTT Public Company Limited holds 47.6% of its shares.
Thai Petroleum Pipeline Company Limited	<ul style="list-style-type: none"> - PTT Oil and Retail Business Public Company Limited holds 40.4% of its shares. - The Company holds 9.2% of its shares. - The Company’s executive, namely Mr. Chatapong Wungtanagorn holds directorship in Thai Petroleum Pipeline Company Limited.
GC Glycol Company Limited	- PTT Global Chemical Public Company Limited holds 100.0% of its shares.
PTT Phenol Company Limited	- PTT Global Chemical Public Company Limited holds 100.0% of its shares.
Vencorex (Thailand) Company Limited	- PTT Global Chemical Public Company Limited holds 100.0% of its shares.
Global Green Chemical Public Company Limited (“GGC”)	- PTT Global Chemical Public Company Limited holds 72.3% of its shares.
Thai Tank Terminal Company Limited	- PTT Global Chemical Public Company Limited holds 51.0% of its shares.
Solution Creation Company Limited	- PTT Global Chemical Public Company Limited holds 100.0% of its shares.
PTT MCC Biochem Company Limited	- PTT Global Chemical Public Company Limited holds 50.0% of its shares.

Company	Relationship with the Company
PTT Oil Myanmar Co., Ltd.	- PTT Oil and Retail Business Public Company Limited holds 100.0% of its shares.
Brighter PTT Oil and Retail Co., Ltd.	- PTT Oil and Retail Business Public Company Limited holds 51.0% of its shares.

Source: ^{1/}On August 6, 2019, TS signed a Share Purchase Agreement with the existing shareholder(s) of TSR in the amount of 15,410 shares, representing 67%.

^{2/}On August 27, 2019, TTC established TOP Ventures Company Limited.

^{3/}On August 7, 2019, TTC established TOP Ventures Hong Kong Limited.

^{4/}On August 13, 2019, TTC established TOP Ventures America LLC.

^{5/}On May 7, 2019, GPSC established Energy Recovery Unit Company Limited

2) Description of Connected Transactions

Connected Transactions with Major Shareholders

Transaction	Transaction Value	
	December 31, 2019 (Million Baht)	June 30, 2020 (Million Baht)
Transactions with Thai Oil Public Company Limited		
Revenue from oil products	1,929	77
Other income	2	12
Expenses		
- Oil and natural gas products	116,149	34,629
- Purchase of assets	1	3
Other expenses	121	58
Trade accounts receivable	-	-
Other receivables	1	-
Right-of-use assets	-	8,649

Transaction	Transaction Value	
	December 31, 2019 (Million Baht)	June 30, 2020 (Million Baht)
Trade accounts payable	11,598	3,943
Other payables	-	-
Lease liabilities	-	8,488
Transactions with TP		
Natural gas expenses	2,717	1,319
Purchase of assets	-	-
Trade account payables	226	212
Other payables	-	-
Transactions with TM		
Revenue from transportation services	-	1
Other expenses	1	1
Right-of-use assets	-	1
Lease liabilities	-	1
Transactions with TLB		
Revenue from lube base oil products	-	-
Natural gas expenses	495	94
Expenses for chemical raw materials	-	-

Transaction	Transaction Value	
	December 31, 2019 (Million Baht)	June 30, 2020 (Million Baht)
Trade accounts payable	23	17
Transactions with TPX		
Expenses for oil products as raw materials for mixed xylene and LPG	-	-
Transactions with TOP SPP		
Natural gas expenses	4,661	2,243
Trade accounts payable	406	371
Transactions with TS		
Revenue from solvent products	9	5
Expenses of solvent and petrochemical products	-	-
Trade accounts payable	-	5
Transactions with SAKC		
Natural gas expenses	73	31
Other expenses	1	-
Trade accounts payable	7	6
Transactions with Saphip Company Limited		
Revenue from ethanol products	-	-
Expenses for ethanol products	-	-

Transaction	Transaction Value	
	December 31, 2019 (Million Baht)	June 30, 2020 (Million Baht)
Transactions with LABIX		
Natural gas expenses	673	264
Trade accounts payable	49	36

Connected Transactions between the Company and its Subsidiaries (in which the Company holds less than 100 percent of its shares) and Related Companies

Transaction	Transaction Value	
	For the year ended December 31, 2019 (Million Baht)	For the six-month period ended June 30, 2020 (Million Baht)
Transactions with TP		
Revenues		
- The Company had revenue from services and public utilities under service and supply agreements and public utility agreements.	851	417
- The Company received rentals under land lease and sublease agreements.	3	1
- The Company received dividends.	676	250

Transaction	Transaction Value	
	For the year ended December 31, 2019 (Million Baht)	For the six-month period ended June 30, 2020 (Million Baht)
Expenses		
- The Company paid the expenses for electricity and steam to TP under the supply agreement for power and steam.	1,730	883
Trade accounts receivable	40	52
Other receivables	23	22
Finance lease receivable	-	4
Trade accounts payable		
- TP is the Company's creditor in respect of expenses for electricity and steam under the supply agreement for power and steam.	139	146
Other payables	-	1
Transactions with GPSC		
Revenues		
- The Company sold high-speed diesel to GPSC.	3	-
- The Company received revenue under various support service agreements, compensation for construction costs of raw water pipeline, and backup fuel purchase agreement.	20	10
- The Company received rentals under land sublease agreements.	8	-
- The Company received dividends.	174	201

Transaction	Transaction Value	
	For the year ended December 31, 2019 (Million Baht)	For the six-month period ended June 30, 2020 (Million Baht)
Expenses		
- Other expenses	25	19
- Purchase of assets	6	-
Trade accounts receivable	4	-
Other receivables	2	2
Finance lease receivable	-	14
Other payables	-	2
Transactions with Energy Recovery Unit Company Limited		
Other non-current liabilities	440	440
Transactions with PTTES		
Expenses		
- The Company paid service fees to PTTES under the technical advisory service agreement.	88	48
Purchase of assets	9	-
Other payables	-	25

Transaction	Transaction Value	
	For the year ended December 31, 2019 (Million Baht)	For the six-month period ended June 30, 2020 (Million Baht)
Transactions with Thai Petroleum Pipeline Company Limited		
Revenue		
- The Company recognized gain from investment reclassification.	-	154
Dividend income	160	157
Expenses		
- The Company paid the transportation service expenses and other expenses to Thai Petroleum Pipeline Company Limited under the petroleum pipeline service agreement and related expenses.	54	19
Other payables	5	3
Transactions with PTT Digital Solutions Company Limited		
Dividend income	18	19
Expenses		
- The Company paid service fees under the information technology and communication service agreement to PTT Digital Solutions Company Limited.	229	12
Purchase of assets	54	9
Other receivables	-	19
Other payables	50	6

Transaction	Transaction Value	
	For the year ended December 31, 2019 (Million Baht)	For the six-month period ended June 30, 2020 (Million Baht)
Transactions with PTTGC		
Other income	1	-
Expenses for petroleum products	484	244
Other expenses	2	-
Other receivables	1	-
Trade accounts payable	-	355
Transactions with IRPC		
Other income	4	-
Expenses for petroleum products	-	-
Other expenses	177	59
Trade accounts receivable	-	-
Other payables	9	10
Purchase and sale of petroleum crude and raw materials as backup oil under the law	2,240	-
Transactions with PTTOR		
Revenue from petroleum products	164,543	53,847
Other income	15	5

Transaction	Transaction Value	
	For the year ended December 31, 2019 (Million Baht)	For the six-month period ended June 30, 2020 (Million Baht)
Expenses for petroleum products	259	44
Other expenses	1	-
Trade accounts receivable	8,940	5,736
Trade accounts payable	88	122
Transactions with Energy Complex Company Limited		
Other expenses	66	33
Other payables	1	1
Right-of-use assets	-	31
Lease liabilities	-	31
Transactions with GGC		
Expenses for petroleum products	1,225	836
Other expenses	2	-
Trade accounts payable	97	94
Transactions with GC Maintenance & Engineering Company Limited		
Other expenses	-	1

Transaction	Transaction Value	
	For the year ended December 31, 2019 (Million Baht)	For the six-month period ended June 30, 2020 (Million Baht)
Transactions with PTTEP International Company Limited		
Other expenses	-	-
Transactions with PTT International Trading London Ltd.		
Expenses for petroleum products	-	-
Trade accounts payable	-	-
Transactions with PTT International Trading Pte. Ltd.		
Revenue from petroleum products	325	963
Other income	14	23
Expenses for petroleum products	11,133	1
Expenses from net oil price hedging	28	13
Other expenses	1	-
Trade accounts receivable	16	344
Trade accounts payable	702	-
Other payables	22	-

Connected Transactions between Subsidiaries and Subsidiaries or Related Companies

Company	Transaction	Transaction Value	
		For the year ended December 31, 2019 (Million Baht)	For the six-month period ended June 30, 2020 (Million Baht)
TM	Transactions with IRPC		
	- TM provided product transportation services.	-	-
	- TM purchased petroleum products.	37	15
	- Trade accounts payable	2	2
	Transactions with PTTOR		
	- TM provided product transportation services.	1	-
	- TM purchased petroleum products.	6	10
	- Other payables	-	2
	Transactions with PTT International Trading Pte. Ltd.		
	- TM provided product transportation services.	-	-
	Transactions with PTTGC		
	- TM provided product transportation services.	-	-
TOP Maritime Service Company Limited	Transactions with PTTEP		
	- TOP Maritime Service Company Limited provided transportation	111	70

Company	Transaction	Transaction Value	
		For the year ended December 31, 2019 (Million Baht)	For the six-month period ended June 30, 2020 (Million Baht)
	services for crew and supplies in the Gulf of Thailand.		
	- Trade accounts receivable	25	24
	Transactions with PTTEP International Company Limited		
	- TOP Maritime Service Company Limited provided transportation services for crew and supplies in the Gulf of Thailand.	2	1
	- Trade accounts receivable	-	-
	Transactions with PTTEP International Company Limited (Yangon Branch)		
	- TOP Maritime Service Company Limited provided transportation services for crew and supplies in the Gulf of Thailand.	5	10
	- Trade accounts receivable	5	5
	Transactions with PTTEP Energy Development Company Limited		
	- TOP Maritime Service Company Limited provided transportation services for crew and supplies in the Gulf of Thailand.	1	-
TP	Transactions with TPX		

Company	Transaction	Transaction Value	
		For the year ended December 31, 2019 (Million Baht)	For the six-month period ended June 30, 2020 (Million Baht)
	- TP sold electricity and steam power and provided steam power backup services under the supply agreement for power and steam power.	1,094	544
	- TP purchased steam power under the steam supply agreement.	29	16
	- Trade accounts receivable	93	91
	- Trade accounts payable	3	3
	Transactions with TLB		
	- TP sold electricity and steam power under the supply agreement for power and steam.	651	317
	- Trade accounts receivable	55	52
	Transactions with GPSC		
	- TP received revenue from backup power expenses under the backup power purchase agreement.	-	-
	- TP received dividends.	405	-
	- TP purchased filtered raw water.	22	-
	- Trade accounts payable	1	-
	Transactions with PTT TCC		

Company	Transaction	Transaction Value	
		For the year ended December 31, 2019 (Million Baht)	For the six-month period ended June 30, 2020 (Million Baht)
	- Interest expenses	27	56
	- Other payables	27	1
	- Long-term loans	3,999	3,999
	Transactions with TTC		
	- Interest expenses	78	160
	- Other payables	78	1
	- Long-term loans	11,381	11,381
TOP SPP	Transactions with GPSC		
	- TOP SPP received revenue from backup power expenses under the backup power purchase agreement.	1	1
TLB	Transactions with IRPC		
	- TLB sold by-products	5	-
	- TLB purchased by-products.	192	-
	Transactions with PTTOR		
	- TLB sold lube base oil products.	2,690	907
	- TLB purchased lube base oil products.	11	3

Company	Transaction	Transaction Value	
		For the year ended December 31, 2019 (Million Baht)	For the six-month period ended June 30, 2020 (Million Baht)
	- Trade accounts receivable	68	95
	- Other payables	1	1
	Transactions with PTT International Trading Pte. Ltd.		
	- TLB sold lube base oil products.	-	30
TPX	Transactions with IRPC		
	- TPX sold aromatic petrochemical and aromatics products.	596	359
	- TPX purchased aromatic petrochemical and aromatics products.	44	-
	- Trade accounts receivable	11	4
	- Other payables	-	-
	Transactions with PTTOR		
	- TPX purchased aromatic petrochemical products.	2	1
	Transactions with PTTGC		
	- TPX purchased aromatic petrochemical products.	55	-

Company	Transaction	Transaction Value	
		For the year ended December 31, 2019 (Million Baht)	For the six-month period ended June 30, 2020 (Million Baht)
	Transactions with PTT International Trading Pte. Ltd.		
	- TPX purchased aromatic petrochemical products.	4,496	1,011
	- Trade accounts receivable	343	205
TS	Transactions with IRPC		
	- TS sold solvent products.	90	18
	- TS purchased solvent products.	1,100	375
	- Trade accounts receivable	8	2
	- Trade accounts payable	85	46
	Transactions with PTTOR		
	- TS purchased solvent products.	12	5
	- Trade accounts payable	1	1
	Transactions with PTTGC		
	- TS sold solvent products.	174	45
	- TS purchased solvent products.	9	4
	- Trade accounts receivable	8	13

Company	Transaction	Transaction Value	
		For the year ended December 31, 2019 (Million Baht)	For the six-month period ended June 30, 2020 (Million Baht)
	- Trade accounts payable	-	1
	Transactions with PTT Phenol Company Limited		
	- TS purchased solvent products.	119	68
	- Trade accounts payable	6	9
	Transactions with GGC		
	- TS purchased solvent products.	-	-
	Transactions with PTT MCC Biochem Company Limited		
	- TS sold solvent products.	-	2
	- TS purchased solvent products.	14	3
	- Trade accounts receivable	-	1
	- Trade accounts payable	-	1
	Transactions with Solution Creation Company Limited		
	- TS sold solvent products.	-	-
	Transactions with Vencorex (Thailand) Company Limited		

Company	Transaction	Transaction Value	
		For the year ended December 31, 2019 (Million Baht)	For the six-month period ended June 30, 2020 (Million Baht)
	- TS sold solvent products.	21	7
	- Trade accounts receivable	1	1
Sapthip Company Limited	Transactions with PTTOR		
	- Sapthip Company Limited sold ethanol products.	720	264
	- Sapthip Company Limited purchased petroleum products.	3	1
	- Trade accounts receivable	55	43
	- Trade accounts payable	-	-
SAKC	Transactions with IRPC		
	- SAKC purchased raw materials.	324	73
	- Trade accounts payable	4	5
	Transactions with PTTGC		
	- SAKC purchased raw materials.	2,104	681
	- Trade accounts payable	206	109
	Transactions with PTT Tank Terminal Company Limited		
	- SAKC paid the product storage tank expenses.	20	12

Company	Transaction	Transaction Value	
		For the year ended December 31, 2019 (Million Baht)	For the six-month period ended June 30, 2020 (Million Baht)
	- Other payables	-	-
	Transactions with Thai Tank Terminal Company Limited		
	- SAKC paid the product storage tank expenses.	17	8
TOP Solvent (Vietnam) LLC	Transactions with IRPC		
	- TOP Solvent (Vietnam) LLC purchased solvent products.	680	205
	- Trade accounts payable	32	33
	Transactions with PTT Phenol Company Limited		
	- TOP Solvent (Vietnam) LLC purchased solvent products.	33	62
	- Trade accounts payable	-	13
	Transactions with GC Glycol Company Limited		
	- TOP Solvent (Vietnam) LLC purchased solvent products.	22	15
	- Trade accounts payable	1	1
LABIX	Transactions with Thai Tank Terminal Company Limited		

Company	Transaction	Transaction Value	
		For the year ended December 31, 2019 (Million Baht)	For the six-month period ended June 30, 2020 (Million Baht)
	- LABIX paid the product storage tank expenses.	11	-
	- Other payables	-	-

5.1.5 Major Shareholder of the Company

Table summary of top 10 Major Shareholder of TOP

No	Name	Amount (shares)	Shareholding (percent)
1	PTT Public Company Limited	918,565,183	45.03
2	Thai NVDR Company Limited	136,553,156	6.69
3	Social security office	73,611,400	3.61
4	Siam Management Holding Limited	61,200,000	3.00
5	SOUTH EAST ASIA UK (TYPE C) NOMINEES LIMITED	54,135,140	2.65
6	STATE STREET EUROPE LIMITED	48,565,219	2.38
7	GIC PRIVATE LIMITED	35,750,626	1.75
8	THE BANK OF NEW YORK MELLON	23,995,922	1.18
9	THE BANK OF NEW YORK (NOMINEES) LIMITED	12,382,400	0.61
10	K20SLTF	12,051,000	0.59
11	Others	663,217,827	32.51

Source: Information from TOP as at 6 August 2020

5.1.6 Lists of Management team of the Company

No	Name	Position
1.	Mr. Wirat Uanarumit	Chief Executive Officer and President
2.	Mr. Bandhit Thamprajamchit	Senior Executive Vice President Refinery and Petrochemical
3.	Mr. Jeerawat Pattanasomsit	Executive Vice President Manufacturing, and Vice President Refinery (Acting)
4.	Mr. Chatapong Wungtanagorn	Executive Vice President Corporate Commercial and Vice President Commercial Planning (Acting)

No	Name	Position
5.	Mr. Charlee Balmongkol	Executive Vice President CFP Project Director
6.	Mr. Pongpun Amornvivat	Executive Vice President Strategy and Executive Vice President Innovation and Digitalization (Acting)
7.	Miss Pattaralada Sa-ngasang	Executive Vice President Finance and Accounting
8.	Mr. Viroj Meenaphant	Executive Vice President Corporate Governance and Affairs and Vice President Corporate Affairs (Acting) and Company Secretary
9.	Mr. Viroj Wongsathirayakhun	Executive Vice President Organization Effectiveness and Vice President People and Organization Management (Acting) and Vice President assigned as Managing Director, Thai Oil Energy Services Co., Ltd.
10.	Mr. Surachai Saengsamran	Executive Vice President CFP Project Sponsor
11.	Mr. Jumpon Thapanapong	Vice President Corporate Resources & Transformation Management and Vice President New S-curve Business Development (Acting)
12.	Mr. Chet Prongchit	Vice President Movement Marine and Logistic
13.	Mr. Narongsak Chaviengpob	Vice President Engineering
14.	Mr. Nattapong Tumsaroj	Vice President Business Development
15.	Mr. Nuttapon Meerit	Vice President, Special Assignment assigned as CFP Process Manager
16.	Miss Duangporn Teerapabpaisit	Senior Vice President – assigned as Managing Director, LABIX Company Limited
17.	Miss Torsang Chairavat	Vice President Strategic Planning
18.	Mrs. Tarika Devahastin	Vice President Financial Planning
19.	Mr. Nikom Kongnok	Vice President Corporate Governance and Sustainability
20.	Mr. Nitas Krongvanitchayakul	Senior Vice President – assigned as Managing Director, Thai Oil Ethanol Company Limited
21.	Mrs. Prapin Thongnium	Vice President Corporate Internal Audit
22.	Mr. Phumchit Tatsanaprasert	Vice President Quality Management and Vice President Efficient Operations Support (Acting)
23.	Mr. Mongkol Janchookiat	Vice President Procurement and Contract
24.	Miss Rungtip Maneesarachun	Vice President Treasury
25.	Mrs. Rungnapa Janchookiat	Executive Vice President Operation Excellence and Vice President Technology (Acting)
26.	Mr. Sarunyu Limwongse	Vice President Petrochemical and Lube Base
27.	Miss Somporn Bunluesriruang	Vice President Supply Chain Optimization
28.	Mr. Santi Wasanasiri	Vice President assigned as Managing Director, Thai Lube Base Public Company Limited and Thai Paraxylene Company Limited
29.	Mrs. Suchada Deechaiya	Vice President People and Organization Excellence
30.	Miss Sudarat Orrattanasakul	Vice President Regulatory Compliance
31.	Mr. Anawat Chansaksoong	Vice President Commercial

No	Name	Position
32.	Miss Acharee Tiyabhorn	Vice President assigned as Managing Director, Thai Oil Solvent Company Limited and TOP Solvent Company Limited
33.	Mr. Udom Wongsirinopphakhun	Vice President Asset Development and Vice President assigned as Managing Director, Thai Oil Power Company Limited and TOP SPP Company Limited
34.	Mr. Somboon Chuaykoblap	Vice President Corporate Strategic Risk
35.	Mr. Worrachart Ruangtragool	Vice President assigned as Managing Director, Thai Oil Marine Company Limited
36.	Mr. Vivat Wongnirund	Vice President assigned as Managing Director, Sak Chaisidhi Company Limited
37.	Miss Wanwisa Yanchinda	Vice President Accounting (Acting)

Source: List of Management team as at August 1 2020

5.1.7 Nature of Business Operations

1. Oil Refinery Business

The refinery plant has been designed to refine diverse types of crude oil, including other raw materials, to be a variety of products in response to market demand for the purpose of maximizing refinery margin. Basically, each respective production unit in the refinery plant will serve in either of the following functions:

- Separate various types of hydrocarbon solvent in crude oil at different boiling points;
- Convert hydrocarbons to higher value products;
- Upgrade the quality of products by extracting contaminants;
- Mix intermediate streams into petroleum products.

Crude oil is used as primary raw materials for oil refinery. The quality of crude oil and types of refining units in the refinery plant define the refining process and the capacity to properly process crude oil into various types of petroleum products. Generally, the price of light sweet crude oil is higher than heavy sour crude oil, because it undergoes less refining and decontamination processes, and produce a higher volume of various high value products, such as, gasoline, kerosene and diesel products. Basically, the price of heavy sour crude oil is lower than light sweet crude oil because it produces low value products and requires additional production process to obtain light oil of high value. As a result, the refinery plant tries to refine crude oil and other raw materials to maximize its utilization, taking into account the conversion units and treating units of the respective refinery plants, product prices at the moment and in the future, types of desired products and prices of crude oil and other raw materials.

At present, the Company's refinery plant uses various conversion units, such as, catalytic octane maximization unit, catalytic cracking unit, catalytic hydrocracking unit, thermal fuel oil upgrading unit, which will enhance the capacity to

produce gasoline, jet fuel and diesel that are highly demanded in the domestic market, and will also optimize the Company's utilization of raw materials in its production.

In addition, the Company's refinery plant is capable of refining a variety of types of crude oil, including crude oil from the Middle East, the Far East, West Africa and crude oil from domestic sources of supply, and the selection of raw materials depends on prices, quality and volume of products to be produced from such raw materials.

2. Petrochemical Business

2.1 Thai Paraxylene Company Limited (TPX)

TPX, whose 100 percent of shares is held by the Company, engages in the business of production of paraxylene, mixed xylene and benzene.

Paraxylene is used as raw materials in the intermediate petrochemical industry in the production of PTA (Purified Terephthalic Acid) for production of polyester and plastic materials in the production of PET (Polyethylene Terephthalate) drinking water bottles, as the downstream petrochemical industry. Benzene is used as primary precursor in the production of styrene monomer, phenol and cyclohexane. These substances are used in the production of plastic packages, electric appliances, automobile parts, etc. As for toluene, it is used in the solvent industry and may also be used as raw materials in the production of benzene and paraxylene.

2.2 LABIX Company Limited ("LABIX")

LABIX, whose shares are held by TPX and Mitsui & Co., Ltd. at the shareholding ratio of 75 percent and 25 percent, respectively, engages in the business of manufacture of Linear Alkyl Benzene (LAB). LABIX's plant is recognized as the first and fully-integrated plant for production of LAB in Thailand and Southeast Asia with advanced and environmentally-friendly technologies.

LAB is used as raw materials in the detergent production industry in order to produce Linear Alkyl Benzene Sulfonate (LAS), which is a type of surfactants and used as intermediate in the production of detergents and other cleaning products.

3. Lube Base Oil Business

3.1 Thai Lube Base Public Company Limited (TLB)

TLB is a company whose 100 percent of shares is held by the Company.

Products of TLB are divided into three groups as follows:

- Lube Base Oil, which is divided into various types as follows:
 - Engine oil, e.g., engine oil for vehicles using gasoline, diesel, gear oil, automatic transmission fluids;
 - Marine oil, e.g., oil for low speed diesel engine;
 - Industrial oil, e.g., lubricating oil for compressor, refrigeration oil, gear oil;
 - Heat transfer oil, hydraulic oil, spindle oil, turbine oil;
 - Metal processing fluids, e.g., grinding oil;
 - Quench oil, e.g., anti-rust oil, etc.
- Bitumen, which is used for roadwork and road pavements.

- By-products, namely:
 - Aromatic Extract, which is used in rubber products, e.g., car tires, rubber seals, footwear outsoles, etc.;
 - Treated Distillate Aromatics Extract (TDAE), which is used in rubber products according to the requirements in the EU countries;
 - Vacuum gas oil (VGO), which is used as raw materials in the production of diesel;
 - Sulphur, which is used as raw materials in the production of detergents, sulfuric acid;
 - Slack wax, which is used as raw materials in the production of candles and cosmetics, and used as coating for paper containers and packages;
 - Naphtha, which is used as raw materials in the production of gasoline and jet fuel.

4. Solvent Business

4.1 Thai Oil Solvent Company Limited (“TOS”)

TOS, whose 100 percent of shares is held by the Company, engages in the solvent and chemical business, both in Thailand and abroad, and holds shares in TOP Solvent Company Limited, (“TS”), Sak Chaisidhi Company Limited (“SAKC”) and TOP Solvent (Vietnam) LLC.

SAKC is a plant for production of high-quality hydrocarbon solvents for industrial purposes, e.g., paint, tire, adhesive, edible oil, foam, plastic and copper extraction, etc., and TS is its distributor both in Thailand and abroad.

TOP Solvent (Vietnam) LLC, whose 100 percent of shares is held by TOS, engages in the business of distribution of solvent and chemical products in Vietnam, and marks Thai Oil Group’s first foreign investment.

In Myanmar, TS has established its representative office in Yangon, Myanmar, under the name TOP Solvent Company Limited (Myanmar Representative Office), to engage in the business of distribution of solvent products, including other chemicals, directly to local suppliers, which is relatively and highly growing.

Moreover, TS, in association with its strategic partner, has launched PT. Tirta Surya Raya (“TSR”) in Indonesia, whereby TS holds 67 percent of its shares, to engage in the business of supply and distribution of solvent and chemical products in Indonesia. The existing shareholders and team in TSR have long-time experience in collaboration with TS and its products are in line with and well supportive of TS’s business.

5. Power Generation Business

5.1 TOP SPP Company Limited (“TOP SPP”)

TOP SPP, whose 100 percent of shares is held by the Company, is a producer of electricity and steam by way of natural gas-fired combined cycle co-generation power plants in 2 projects with the total capacity of 239 megawatts of electricity and 497 tons of steam per hour. TOP SPP distributes electricity to EGAT under two 25-year power purchase agreements of 90 megawatts each, totaling 180 megawatts, and has started its commercial operations and distribution of electricity to EGAT for the first and second projects on April 1 and June 1, 2016, respectively. Its revenue from sales of electricity to EGAT accounts for approximately 54% of total revenues of TOP SPP while the other 46 percent of revenue represents sales of the remaining electricity and all steam to

companies in Thai Oil Group. The operating results of TOP SPP are supportive of steady revenue and enhance the efficiency in terms of power consumption to the Company, whereby the Company provides all management services to TOP SPP.

5.2 Thai Oil Power Co., Ltd. (TP)

TP, whose 74 percent of shares is held by the Company, is a producer of electricity and steam by way of natural gas-fired combined cycle co-generation power plant, with the capacity of 118 megawatts of electricity and 216 tons of steam per hour. TP distributes 41 megawatts of electricity to EGAT under a 25-year power purchase agreement, representing approximately 20 percent of its revenues, and the other 80 percent of revenue is derived from sales of the remaining electricity and all steam to companies in Thai Oil Group. TP's power and steam supply agreements help secure steady revenues and power consumption to the Company, with the contractual conditions that the customers shall pay for power supply to TP based on the minimum volume (Take - or - Pay) at an average rate of 70 percent and for steam supply at an average rate of 85 percent, whereby the Company provides all management services to TP.

5.3 Global Power Synergy Public Company Limited (GPSC)

GPSC is a company whose 8.9 percent of shares is held by the Company and 20.8 percent of shares is held by TP, and as such, the Company's effective shareholding in GPSC amounts to a total of 24.3 percent. GPSC engages in its core business of production and distribution of public utilities by way of its own business operations and investment in other entities. As of December 31, 2019, GPSC's total capacity, based on the Company's shareholding, which has already started its commercial operations and are under construction, is divided into 5,026 megawatts of electricity, 2,876 tons of steam per hour, 7,372 cubic meters of industrial water per hour, and 15,400 refrigeration tons of chilled water.

6. Transportation of Oil and Petroleum Products

Thai Oil Marine Company Limited (“TM”)

TM, whose 100 percent of shares is held by the Company, strives to become the leader of large-vessel fleets for PTT Group and in the region to support expansion of energy, petroleum and petrochemical markets, e.g., VLCC, AFRAMAX and Crew Boats, to support logistical management in PTT Group, and prepares for strategic plans for business expansion to Thai Oil Group.

Not only the Company owns five oil and petrochemical tankers to provide marine transportation services for petroleum and petrochemical products, both domestically and internationally, TM has also built a network of carriers with variety of specializations in collaboration with strategic partners, particular large ocean liners, such as VLCC, AFRAMAX and Crew Boats for transportation of suppliers and crew to offshore oil rigs, which helps improve the efficiency of service standards.

7. Ethanol Business

Thai Oil Ethanol Company Limited (“TET”)

TET, whose 100 percent of shares is held by the Company, invests in ethanol business where ethanol fuel is mixed with gasoline to produce a variety of gasohol for distribution in the country, e.g., gasohol E10 (octane 91 and 95), gasohol E20 (octane 95) and gasohol E85 (octane 95).

At present, TET invests in two companies that produce and distribute ethanol, namely:

- Saphthip Company Limited, located in Lopburi Province, whose 50 percent of shares is held by TET, is a producer and distributor of cassava-based ethanol for use as fuel, made of both fresh cassava and tapioca chip, with the capacity of 200,000 liters per day. In addition, Saphthip Company Limited has a subsidiary, namely:
 - Saphthip Green Energy Company Limited was established in April 2018 and operates the biogas power business with the capacity of 2.4 megawatts, and Saphthip Company Limited holds 100 percent of its shares, and TET indirectly holds 50 percent of shares in Saphthip Green Energy Company Limited through Saphthip Company Limited.
- Ubon Bio Ethanol Company Limited, located in Ubon Ratchathane Province, whose 21.28 percent of shares is held by TET, is a producer and distributor of cassava-based ethanol for use as fuel and industrial use, made of both fresh cassava and tapioca chip, including molasses, with the capacity of 400,000 liters per day. In addition, Ubon Bio Ethanol Company Limited has subsidiaries, namely:
 - Ubon Bio Energy Company Limited is a producer of native starch and organic starch, with the capacity of 700 tons per day;
 - Ubon Biogas Company Limited is a biogas producer from wastewater from the tapioca starch factory of Ubon Bio Energy Company Limited, with the capacity of 36,000 cubic meters per day. Biogas is used as fuel in the starch production, and the remaining gas is used to generate 1.9 megawatts of electricity for distribution to the Provincial Electricity Authority (“PEA”);
 - NP Bio Energy Company Limited is a biogas producer from bagasse in the tapioca starch factory of Ubon Bio Energy Company Limited, including bagasse in the ethanol factory of Ubon Bio Ethanol Company Limited, with the capacity of 70,000 cubic meters per day. Biogas is used as fuel in the ethanol production of Ubon Bio Ethanol Company Limited.

8. Human Resources Management Business

Thai Oil Energy Services Company Limited (“TES”)

TES, whose 100 percent of shares is held by the Company, is established to support the business of Thai Oil Group in respect of human resources management and recruitment to achieve business objectives, both now and in the future. The Company focuses on applying marketing ideas and technologies to create a whole new experience to candidates to attract and connect with high-profile personnel to join companies in Thai Oil Group, and build a network with leading educational institutes and external alliances to jointly develop and train quality personnel in response to the requirements of Thai Oil Group and local labor markets. At present, the Company has nearly 1,000 staff members.

9. Power Consultation Business

PTT Energy Solutions Company Limited (“PTTES”)

PTTES is a joint venture company of PTT Group, in which the Company holds 20 percent of its shares, and provides engineering and technical consultation services towards operational excellence and promotes capacity building for personnel in PTT Group by focusing on development of knowledge and innovation. The Company's vision is to become “Technical Center of Excellence in AEC in 2020.”

10. Social Enterprise Business

Sarn Palang Social Enterprise Company Limited (SPSE)

SPSE is a joint venture company of PTT Group, in which the Company holds 15 percent of its shares, to support social enterprise activities, resolve social, community and environmental problems, and efficiently promote local employment, and also promote such policies of the government sector in encouraging the private sector and people to participate in the development of the country and jointly resolve problems and carry on non-profit business activities for occupational opportunities for local residents, generate revenue for communities and return to communities for sustainable growth.

11. Financial Management Business

Thai Oil Treasury Center Company Limited

Thai Oil Treasury Center Company Limited, whose 100 percent of shares is held by the Company, is established to engage in the business as an International Business Center (IBC) and a Treasury Center (TC) for companies in Thai Oil Group, with the scope of business to initially cover three core activities, namely 1. financial advisory services; 2. foreign exchange risk management services; and 3. centralized liquidity and financial management services.

On June 25, 2019, the Extraordinary General Meeting of Shareholders of TTC resolved to approve the registered capital increase from Baht 10 million to Baht 946.2 million, with the initial paid-up capital increase at 25 percent (equivalent to approximately Baht 236.55 million), and approve the establishment of TOP Ventures Company Limited and TOP Ventures Hong Kong Limited to proceed with Corporate Venture Capital (CVC) transactions by investing in Venture Capital (VC) and/or startup business, for the purpose of expanding its investment in such businesses in which Thai Oil Group specializes, including new businesses, to accommodate changes in business. TTC directly holds 100 percent of shares in TOP Ventures Company Limited and TOP Ventures Hong Kong Limited. TOP Ventures Company Limited has a registered capital of Baht 35 million (25 percent of which is paid-up, equivalent to Baht 8.75 million) and TOP Ventures Hong Kong Limited has a registered and paid-up capital of HKD 1.

12. Information Technology Business

The Company continues to introduce digital technologies for implementation, strategic planning as approved and supported for investment according to the 2018 masterplan, and allows PTT Digital Company Limited to participate

in major activities, particularly infrastructure projects and projects creating rise to synergy with PTT Group companies to ensure the cost-efficiency in terms of investment, sustainable maintenance and value added in the long run.

The Company has jointly set out a digital technology management strategy with PTT Digital Company Limited by establishing the Center of Excellence to develop the capacity of personnel in various fields, such as, cyber security, compliance with new laws, robotic process automation, and agile project development, etc.

5.1.8 Revenue Structure of the Company

Revenue structure of the Company according to financial statement for the year 2017 – 2019 and quarter 2 of the year 2020 as follows

Table illustrate revenue structure of the Company according to business unit for the year 2017 – 2019 and Quarter 2 of 2020

	2017		2018		2019		Quarter 2 2020	
	Baht million	%	Baht million	%	Baht million	%	Baht million	%
Oil refinery	349,829.0	106.85	405,130.0	104.05	375,401.0	103.65	128,537.0	102.0
Lube base oil refinery	57,881.0	17.68	66,701.0	17.13	52,198.0	14.41	20,370.0	16.2
Petrochemical	18,662.0	5.70	20,959.0	5.38	18,243.0	5.04	6,748.0	5.4
Power generation	10,929.0	3.34	11,734.0	3.01	11,770.0	3.25	5,756.0	4.6
Solvent	9,182.0	2.80	9,992.0	2.57	9,102.0	2.51	3,902.0	3.1
Marine transportation services	802.0	0.24	621.0	0.16	660.0	0.18	330.0	0.3
Ethanol	1,620.0	0.49	1,477.0	0.38	1,473.0	0.41	750.0	0.6
Other	984.0	0.30	1,925.0	0.49	4,295.0	1.19	2,607.0	2.1
Intercompany revenue	-122,501.0	-37.42	-129,195.0	-33.18	-110,962.0	-30.64	(42,977.0)	-34.1
Total	327,388.0	100.00	389,344.0	100.00	362,180.0	100.00	126,023.0	100.0

Source: 56-1 report of TOP for the year 2017 – 2019 and financial statement as of 30 June 2020

5.1.9 Products and services of the Company

The Company divide the business group clearly into 4 main business groups with the nature of the products or services can be summarized as follows

- 1) The Company's oil refineries are a leading refinery that produces and sells finished petroleum products wholesale. It is the largest single oil refinery in the country, which has a capacity of refining oil and other raw materials about 275,000 barrels per day. It accounts for about 25% of the total refining capacity in Thailand. Thai Oil is also the largest and most sophisticated refinery in Thailand added value to its products. It is integrated with petrochemical plants and base oil refineries and as a refinery complex. This makes it possible to select a wide variety of crude oil and increase product value to meet market demand. In both petroleum products, petrochemicals and base oil, resulting in the ability to compete its competitors. Due to sophisticated and modern distillation system, the

Company is able to shut down and maintain certain distillation units without having to stop all distillation units at the same time. This makes it possible to meet the needs of customers continuously when compared with other refineries in the country, which makes it possible to meet the needs of customers continuously when compared with other refineries in the country and possible to meet the needs of customers continuously compared with other refineries in the country.

In addition, the Company also has a fleet that supports raw material procurement and delivery of products from PTT and Thai Oil group both domestically and abroad. As a result, it has competitive transportation costs. However, Thai Oil Refinery has location advantage which is located in Sriracha District, Chonburi Province that is the distribution center of finished oil to various regions in the country by ships, trucks and pipelines. In addition, Thailand is the hub for supplying products to the countries of the Indochina Peninsula. The Company focuses mainly on distributing products both locally and in the region.

- 2) Thai Paraxylene Co., Ltd. (“TPX”) began commercial in 2002 to operate the business of manufacturing and distributing petrochemical products. TPX currently has a production capacity of 0.25 million tons per year of paraxylene and 0.25 million tons of benzene produced per year will be used as a feedstock in the intermediate petrochemical industry for the production of PTA (Purified Terephthalic Acid), which is forwarded to the downstream petrochemical industry to produce polyester or synthetic fibers used for produce clothes and can also be used to produce plastic bottles, which commonly known as PET (Polyethylene Terephthalate) bottles such as plastic drinking water bottles. Plastic soft drink bottles used in the manufacture of products such as films, food containers Bags used for storing heat, etc. For benzene, it is an important precursor to the production of Styrene Monomer, Phenol and Cyclohexane. (Cyclohexene), which these substances will be used to produce plastics to use as a packaging Electrical appliances and cars, etc.
- 3) Thai Lube Base Public Company Limited (“TLB”) was established in 1997 to operate the business of manufacturing and sells base oil. TLB currently has an annual production capacity of 0.26 million tons of base oil, with TLB base oils being the highest quality Group 1 base oil, which is the main product. When using base lubricant add quality additives, result in lubricant or engine oil used in engines to lubricate moving engine parts such as pistons, shafts to provide lubrication and cooling functions. Also, TLB produce asphalt with a capacity of approximately 0.35 million tons per year, which are used in road construction. It is used as a surface material for making roads, sidewalks, parking lots and airports, etc. TLB also produces 0.06 million tons of clean rubber oil per year. Caused by the reproduction of rubber oil (Aromatic Extract) at the aromatic extraction unit to eliminate carcinogens and reduce air pollution. It is used in the tire industry and TLB also produces special products such as Slack Wax, which is a raw material for producing candles, shoe polish, varnish, cosmetics and binders for plywood production.
- 4) Labix Co., Ltd. (“LABIX”) began commercial production in the first quarter of 2016 to operate Linear Alkyl Benzene (LAB), the first in Thailand. Also, the first in Southeast Asia. LAB is an important raw material in the production of detergents and cleaning products and is the latest innovation of the Thai Oil group. LABIX is a joint venture of TPX and Mitsui & Company Co., Ltd., the largest LAB trader in Asia, with a 75 percent stake and 25 percent, respectively, with an investment of approximately Baht 12,000 million, which can reduce the trade deficit and the

cost of importing LAB substances per year reached Baht 3,500 - 4,000 million and generating income for the country of more than 6,000 Baht million per year, as well as increasing the country's competitiveness to support the opening of ASEAN Economic Community.

5.1.10 Financial Position and Performance of the Company

The IFA summarized TOP's performance and financial position based on financial statements from the year 2017 – 2019 and Quarter 2 of 2020 audited and reviewed by KPMG Phoomchai Company Limited and financial statement for the year 2019 and Quarter 2 for the year 2020 as summarized below

1) Key Summary of the Company's Consolidated financial statement

Consolidated Income Statement

Table: Summary of key figures in the Company's statement of comprehensive income in 2017-2019 and Quarter 2 for the year 2019 and 2020

	2017		2018		2019		Quarter 2 2019		Quarter 2 2020	
	Baht million	%	Baht million	%	Baht million	%	Baht million	%	Baht million	%
Revenue from sales and services	337,387.7	100.0	389,343.5	100.0	362,179.3	99.4	183,587.6	99.6	126,023.3	98.2
Subsidy from oil fuel fund	-	-	-	-	2,147.4	0.6	765.6	0.4	2,329.9	1.8
Total revenue	337,387.7	100.0	389,343.5	100.0	364,326.7	100.0	184,353.2	100.0	128,353.2	100.0
Cost of sales of good and services	(305,385.6)	(90.5)	(373,128.0)	(95.8)	(355,756.3)	(97.6)	(177,772.3)	(96.4)	(140,847.0)	(109.7)
Gross profit (loss)	32,002.1	9.5	16,215.6	4.2	8,570.4	2.4	6,580.8	3.6	(12,493.9)	(9.7)
Dividend income	157.9	0.0	157.4	0.0	167.1	0.0	167.1	0.1	14.4	0.0
Net gain from financial institution	(133.2)	(0.0)	(820.5)	(0.2)	358.9	0.1	(76.4)	(0.0)	(52.3)	(0.0)
Net foreign exchange gain	3,181.6	0.9	626.7	0.2	1,775.1	0.5	1,245.6	0.7	(293.7)	(0.2)
Other income	1,190.1	0.4	1,718.9	0.4	1,576.7	0.4	1,337.1	0.7	714.0	0.6
Selling expense	(491.8)	(0.1)	(424.0)	(0.1)	(404.9)	(0.1)	(218.3)	(0.1)	(198.5)	(0.2)
Administrative expense	(2,969.4)	(0.9)	(2,357.8)	(0.6)	(2,279.3)	(0.6)	(1,128.6)	(0.6)	(977.6)	(0.8)
Share of profit of joint ventures and associates	1,196.7	0.4	1,192.9	0.3	1,299.4	0.4	702.5	0.4	1,282.7	1.0
Profit before finance cost and income tax expense	34,133.8	10.1	16,309.2	4.2	11,063.3	3.0	8,609.9	4.7	(12,004.8)	(9.4)
Finance cost	(3,285.1)	(1.0)	(3,510.8)	(0.9)	(3,307.5)	(0.9)	(2,410.4)	(1.3)	(2,134.0)	(1.7)
Finance cost from repurchase of debentures	-	-	(431.1)	(0.1)	-	-	-	-	-	-
Profit before income tax expense	30,848.8	9.1	12,367.2	3.2	7,755.8	2.1	6,199.5	3.4	(14,138.8)	(11.0)

	2017		2018		2019		Quarter 2 2019		Quarter 2 2020	
	Baht million	%	Baht million	%	Baht million	%	Baht million	%	Baht million	%
Income tax expense	(5,529.5)	(1.6)	(1,982.8)	(0.5)	(1,239.4)	(0.3)	(1,116.2)	(0.6)	3,063.2	2.4
Profit for the year	25,319.3	7.5	10,384.4	2.7	6,516.4	1.8	5,083.3	2.8	(11,075.6)	(8.6)
Owners of the parent	24,856.2	7.4	10,149.0	2.6	6,276.7	1.7	4,975.2	2.7	(11,274.1)	(8.8)
Non-controlling interests	463.1	0.1	235.4	0.1	239.7	0.1	108.1	0.1	198.5	0.2

Source: Consolidated financial statement of the Company for the year 2017 – 2019 and Quarter 2 of 2020

Consolidated Statement of Financial Position

Table: Summary of key figures in the Company's statement of Financial position in 2017-2019 and Quarter 2 for 2020

	31 Dec 2017		31 Dec 2018		31 Dec 2019		30 June 2020	
	Baht million	%	Baht million	%	Baht million	%	Baht million	%
Assets								
Cash and cash equivalent	15,623.4	6.8	34,041.5	12.7	74,854.2	26.4	37,364.3	12.5
Deposit at a financial institution used as collaterals	-	0.0	-	0.0	325.5	0.1	326.4	0.1
Short-term investment	52,318.1	22.9	73,220.6	27.3	1,757.2	0.6	42,947.0	14.4
Trade receivable	22,327.8	9.8	24,359.0	9.1	22,465.5	7.9	14,496.8	4.9
Other receivable	1,170.7	0.5	1,381.6	0.5	1,287.8	0.5	1,161.1	0.4
Short-term loan to other parties	90.0	0.0	45.0	0.0	-	0.0	-	0.0
Current portion of finance lease receivable	-	0.0	-	0.0	-	0.0	9.2	0.0
Receivables from oil fuel fund	1,029.1	0.5	1,388.9	0.5	1,672.5	0.6	2,248.4	0.8
Inventories	32,840.9	14.4	28,738.5	10.7	30,292.4	10.7	15,601.6	5.2
Derivative assets	-	0.0	-	0.0	-	0.0	258.9	0.1
Prepaid corporate income tax	59.7	0.0	937.6	0.3	1,268.7	0.4	173.6	0.1
Valued added tax receivable	751.6	0.3	630.8	0.2	752.5	0.3	502.2	0.2
Other current assets	0.1	0.0	-	0.0	-	0.0	-	0.0
Total current assets	126,211.4	55.3	164,743.5	61.3	134,676.3	47.5	115,089.6	38.6
Financial assets measured at fair value through profit or loss	-	0.0	-	0.0	-	0.0	322.5	0.1
Financial assets measured at fair value through other comprehensive income	-	0.0	-	0.0	-	0.0	68.1	0.0
Available-for-sale investment	3,103.3	1.4	360.5	0.1	382.5	0.1	-	0.0
Investment in joint venture	542.0	0.2	624.9	0.2	617.5	0.2	665.6	0.2
Investment in associates	13,825.7	6.1	14,315.6	5.3	32,441.8	11.4	33,076.5	11.1
Other long-term investment	779.9	0.3	779.9	0.3	820.5	0.3	-	0.0

	31 Dec 2017		31 Dec 2018		31 Dec 2019		30 June 2020	
	Baht million	%	Baht million	%	Baht million	%	Baht million	%
Finance lease receivable	-	0.0	-	0.0	-	0.0	9.6	0.0
Investment properties	102.5	0.0	102.5	0.0	102.5	0.0	102.5	0.0
Property, plant, and equipment	78,612.4	34.5	79,929.0	29.8	106,559.2	37.6	124,790.1	41.9
Right of use assets	-	0.0	-	0.0	-	0.0	15,297.9	5.1
Goodwill	601.4	0.3	584.7	0.2	765.0	0.3	777.0	0.3
Intangible assets	2,590.0	1.1	2,460.3	0.9	2,386.9	0.8	2,397.1	0.8
Deferred tax assets	507.4	0.2	629.3	0.2	670.9	0.2	4,628.8	1.6
Other non-current assets	-	0.0	-	0.0	3,217.7	1.1	-	0.0
Total non-current assets	1,232.3	0.5	4,082.7	1.5	803.8	0.3	945.0	0.3
Total assets	101,896.9	44.7	103,869.5	38.7	148,768.2	52.5	183,080.8	61.4
Liabilities								
Short-term loans from financial institution	968.8	0.4	2,391.7	0.1	1,576.1	0.6	2,454.1	0.8
Trade payables	18,963.2	8.3	21,844.3	8.1	25,015.2	8.8	7,022.0	2.4
Other payables	3,475.9	1.5	3,871.8	1.4	9,106.1	3.2	3,946.8	1.3
Current portion of long-term loans from financial institution	1,592.4	0.7	1,548.6	0.6	1,335.9	0.5	1,040.7	0.3
Current portion of debentures	-	0.0	3,000.0	1.1	-	0.0	-	0.0
Derivative liabilities	-	0.0	-	0.0	-	0.0	49.6	0.0
Current portion of lease liabilities	-	0.0	-	0.0	-	0.0	878.5	0.3
Current portion of debenture	-	0.0	-	0.0	-	0.0	3,000.0	1.0
Excise duty payable	4,784.9	2.1	4,814.8	1.8	1,417.7	0.5	4,580.0	1.5
Income tax payable	3,562.8	1.6	548.6	0.2	215.0	0.1	501.6	0.2
Other current liabilities	-	0.0	0.2	0.0	0.7	0.0	-	0.0
Total current liabilities	33,348.0	14.6	38,020.1	14.2	38,666.7	13.6	23,473.2	7.9
Long-term loans from financial institution	8,068.1	3.5	15,054.3	5.6	13,884.3	4.9	13,774.9	4.6
Long-term loans from a third party	-	0.0	-	0.0	219.4	0.1	224.4	0.1
Long-term loans from related parties	-	0.0	-	0.0	3,998.8	1.4	3,998.8	1.3
Debentures	55,838.6	24.5	85,065.2	31.7	97,184.2	34.3	126,841.5	42.5
Derivative liabilities	-	0.0	-	0.0	-	0.0	1,043.8	0.4
Lease liabilities	-	0.0	-	0.0	-	0.0	11,511.1	3.9
Deferred tax liabilities	9.0	0.0	37.0	0.0	124.9	0.0	137.5	0.0

	31 Dec 2017		31 Dec 2018		31 Dec 2019		30 June 2020	
	Baht million	%	Baht million	%	Baht million	%	Baht million	%
Employee benefit obligations	3,510.9	1.5	3,587.0	1.3	4,586.0	1.6	4,714.1	1.6
Other non-current liabilities	185.4	0.1	377.0	0.1	856.6	0.3	1,619.2	0.5
Total non-current liabilities	67,612.0	29.6	104,120.5	38.8	120,854.3	42.6	163,865.5	55.0
Total liabilities	100,960.0	44.3	142,140.6	52.9	159,521.0	56.3	187,338.7	62.8
Shareholder's Equity								
Issued and paid-up share capital	20,400.3	8.9	20,400.3	7.6	20,400.3	7.2	20,400.3	6.8
Share premium	2,456.3	1.1	2,456.3	0.9	2,456.3	0.9	2,456.3	0.8
Other deficits	203.0	0.2	303.6	0.1	(3,361.2)	-1.2	(3,361.2)	-1.1
Retained Earnings	-	0.0	-	0.0	-	0.0	-	0.0
Legal reserve	2,040.0	0.1	2,040.0	0.8	2,040.0	0.7	2,040.0	0.7
Other reserve	244.5	0.1	244.5	0.1	244.5	0.1	244.5	0.1
Unappropriated	96,975.5	42.5	96,400.3	35.9	97,996.6	34.6	85,734.7	28.8
Other component of equity	(96.1)	-0.0	(132.9)	-0.0	196.3	0.1	(558.0)	-0.2
Equity attribute to the owners of the parent	122,223.5	53.6	121,712.0	45.3	119,972.7	42.3	106,956.5	35.9
Non-controlling interest	4,924.8	2.2	4,760.4	1.8	3,950.8	1.4	3,875.2	1.3
Total equity	127,148.2	55.8	126,472.4	47.1	123,923.5	43.7	110,831.7	37.2
Total liabilities and equity	228,108.3	100.0	268,613.0	100.0	283,444.5	100.0	298,170.3	100.0

Source: Financial statement of the Company for the year 2017 – 2019 and Quarter 2 of the year 2020

Key Financial ratios

Table of the Company's key financial ratio in 2017 – 2019 and Quarter 2 of 2020

	2017	2018	2019	30 June 2020
Liquidity ratio				
Current ratio (times)	3.7	4.3	3.4	4.9
Quick ratio (times)	2.7	3.4	2.5	4.0
Account receivable day (days)	22.6	21.8	23.4	19.7
Inventory day (days)	39.4	30.1	30.2	2.4
Account payable day (days)	22.6	19.9	24.0	13.9
Cash Cycle (days)	39.4	32.0	29.7	32.3
Profitability ratio				
Gross profit margin (%)	9.5	4.2	2.4	(9.7)
Operating profit margin (%)	10.1	4.2	3.0	(9.4)
Net profit margin (%)	7.4	2.6	1.7	(8.8)
Return-on-equity (%)	21.2	8.1	5.2	(8.7)
Solvency ratio				
Debt-to-equity ratio (times)	0.8	1.1	1.3	1.7
Interest coverage ratio (times)	10.3	4.6	3.1	(5.6)

Source: Calculated from financial statements of the Company in 2017 – 2019 and Quarter 2 2020

2) Explanation for Financial Status and Performance of the Company

Financial performance

Revenue from sales and services

Revenue from sales and services consists of revenue from oil refinery, aromatics and LAB, Lube base oil, Power generation, Manufacturing and distribution sea Freight, ethanol production, other businesses

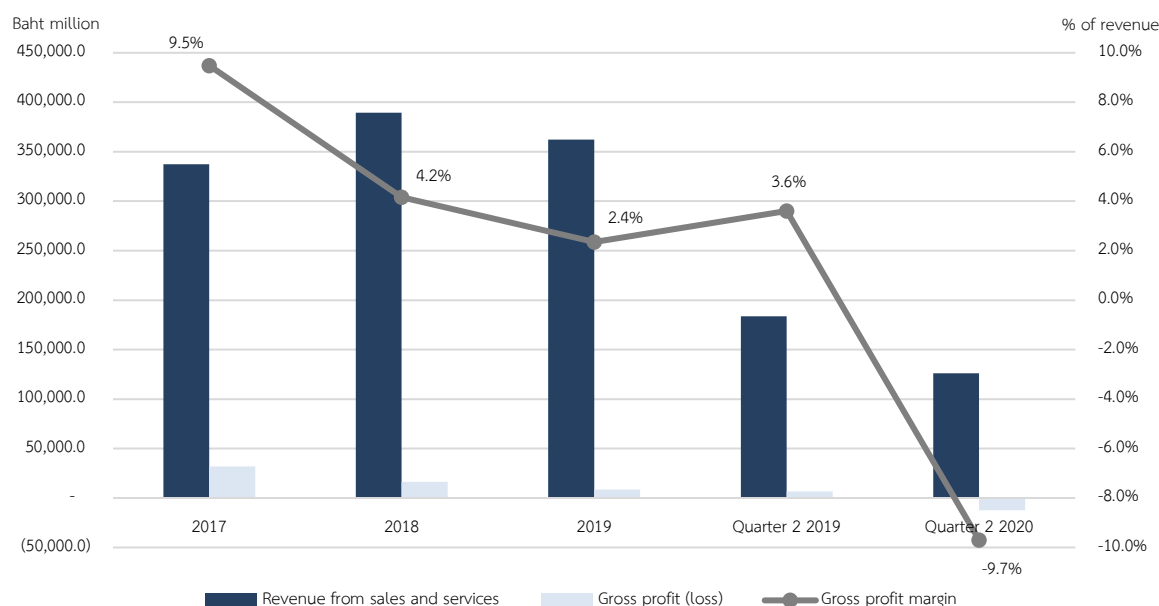
In 2018, the Company had sales and service income of Baht 389,042.3 million, an increase from the year 2017 which was Baht 337,387.7 million at the amount of Baht 51,955.8 million or equivalent to a growth rate of 15.4 percent due to an increase in the average product selling price from the crude oil price. However, the gross profit from the group, excluding the effect of oil stocks, decreased by \$ 2.2 per barrel to \$ 6.9 per barrel due to the reduced pressure of Crude Premium increased. Moreover, the spread of gasoline and Dubai crude oil dropped. Although, diesel and jet fuel spreads increased from the previous year, the spread of base oil and asphalt and fuel oil was weakening due to the increased supply of base lubricants and the demand for asphalt slowed down. In addition, in 2018, Thai Oil Group had a loss from oil stocks and an adjustment to reduce the book value of inventories. This compares with oil stock profit and a reversal of reducing the book value of oil inventories in 2017.

In 2019, the Company had sales and service income of Baht 362,179.3 million, a decrease from the year 2018 which was Baht 389,042.3 million, amounting to Baht 27,164.1 million or equivalent to a 7.0 percent due to the decrease in product sales volume from major maintenance shutdowns and the average product selling price decreased in line with crude oil prices. as well as the price difference of aromatics, paraxylene and benzene and gasoline 95, base oil and burner oil from an oversupply. As a result, the gross profit from the group, excluding the impact of oil stocks, fell \$ 2.2 per barrel to \$ 4.7 per barrel. However, the increase in crude oil prices resulted in a stock profit of Baht 1,581.4 million.

In the second quarter of 2020, the Company had sales and service income of Baht 126,023.3 million, a decrease from the second quarter of 2019, which was Baht 183,587.6 million at the amount of Baht 57,564.3 million or a 31.4 percent due to product sales prices and gross product sales volume declined as a result of the oil price war and the COVID-19 outbreak and the weakening of finished oil spreads. Although Crude Premium has dropped considerably, the paraxylene and gasoline 95 spread and the by-product price difference from base oil production based on diesel and fuel oil prices dropped. In addition, the sales volume of clean rubber oil, a special product, decreased from the same period of the previous year.

Gross profit margin

Revenue, Gross Profit, and Gross profit margin of the Company in 2017 – 2019 and Quarter 2 of 2019 and Quarter 2 of 2020



During 2017 and 2019, the average gross profit margin was 5.3 percent. In 2018, the gross profit margin was 4.2 percent, a 0.6 percent drop from 2017, which had a 9.5 percent of gross profit margin from the cost of sales and services, an increase of Baht 67,742.3 million or a 0.2 percent increase from 2017, at the amount of Baht 305,385.6 million.

In 2018, the Company's gross profit was Baht 16,215.6 million, a decrease from the year 2017 which was Baht 32,002.1 million, amounting to Baht 15,786.6 million or equivalent to a 49.3 percent, mainly due to the difference in gasoline prices and Dubai crude oil prices significantly dropped from oversupply. There is also a loss on oil inventory and a reduction in the book value of the inventories to the net realizable value compared to the profit from the oil stock and a reversal of reducing the book value of oil inventories to the net value that result in the company gross profit margin of 4.2 percent, a decrease from the year 2017 which was 9.5 percent.

In 2019, the gross profit margin was 2.4 percent, a 0.4 percent drop from 2018, which is 4.2 percent gross profit margin, due to the lower average selling price of Thai Oil refineries. Aromatics business slowed down in 2019 due to declining product sales and a drop in product selling prices with a Product-to-feed Margin of \$ 81 per ton, down by \$ 40 per ton. This was mainly due to lower aromatics and benzene price spreads due to the increasing supply pressure of the new paraxylene plant. Lubricants business declined due to the lower average product price and total sales volume. Electricity generating business declined from a decrease in sales volume from major maintenance shutdowns of Thai Oil customers. In addition, the cost of natural gas which is the main cost has increased result in the company's gross profit margin of 2.4 percent, a decrease from the year 2018 which was 4.2 percent.

In the second quarter of 2020, the Company's gross profit was Baht -12,493.9 million, a decrease from the second quarter of 2019, which was Baht 6,580.8 million, at the amount of Baht 19,074.7 million or equivalent to a 289.9 percent, mainly due to the Thai Oil distillation affected by the spread of COVID-19, result in the Company's gross profit margin of -9.7 percent, decreased from the year 2018 which was 3.6 percent.

Selling expense and Administrative expense

During 2017 - 2019, selling and administrative expenses were Baht 3,461.2 million, Baht 2,781.7 million, and Baht 2,684.2 million, respectively, representing the average of the past 3 years, equal to 0.7 percent of total income or Compound Annual Decline rate (CADR) of 10.6 percent.

In 2018, selling and administrative expenses were Baht 2,781.7 million, a decrease from the end of 2017 which was Baht 3,461.2 million, amounting to Baht 679.5 million or equivalent to a 0.2 percent discount from 2017 due to the recording of impairment of assets in 2017.

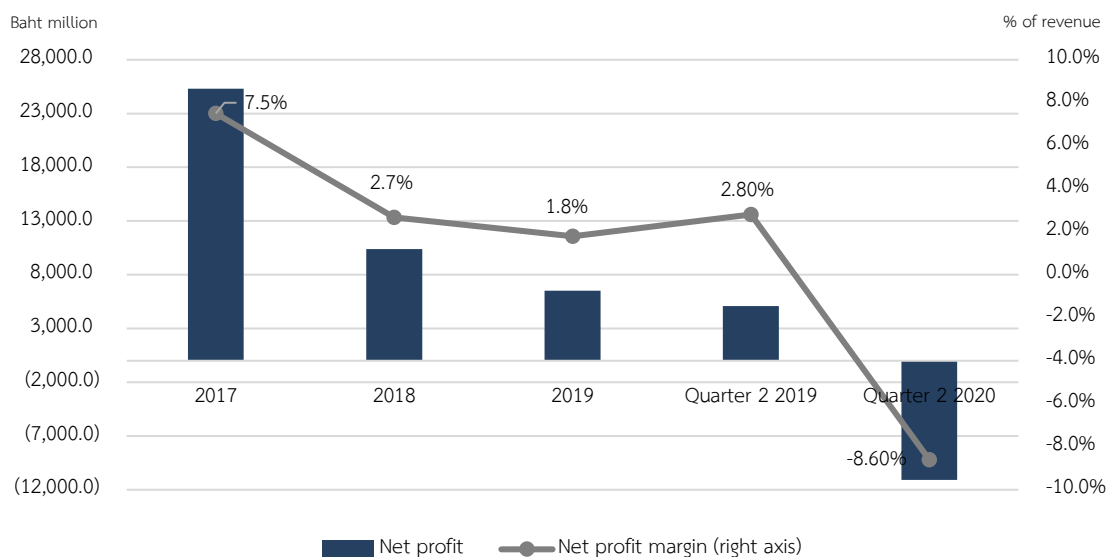
In 2019, selling and administrative expenses were Baht 2,684.2 million, a decrease from the end of 2018, which was Baht 2,781.7 million, amounting to Baht 97.5 million or equivalent to a 0.0 percent from 2018 due to the write off asset increases.

In the second quarter of 2020, the Company had selling and administrative expenses equal to Baht 590.9 million, a decrease from the second quarter of 2019, which was Baht 800.7 million, amounting

to Baht 209.8 million or equivalent to a 26.2 percent reduction from the decreased in employee benefit obligations

Net profit margin

Net Profit and Net profit margin of the Company in 2017 - 2019 and Quarter 2 of 2019 and Quarter 2 of 2020



During 2017 – 2019, Net profit of the Company was Baht 25,319.3 million, Baht 10,384.4 million, and Baht 6,516.4 million, representing 7.5 percent, 2.7 percent and 1.8 percent of net profit margin, respectively, with an average of 4.0 percent of total revenue or Compound Annual Growth rate of 38.0 percent.

In 2018, the Company had a net profit of Baht 10,384.4 million, a decrease from the year 2017 which was Baht 25,319.3 million, amounting to Baht 14,934.8 million or equivalent to a 59.0 percent decreased due to the Company's refinery business decrease in the stock of oil and the loss of the oil stock. In addition, the lower net exchange gain. As a result, Thai Oil Refinery's net profit decreased significantly from 2017, resulting in the net profit margin equal to 2.7 percent, a decrease from the end of 2018 which had a net profit margin of 7.5 percent or 0.6 percent reduction

In 2019, the Company had a net profit of Baht 6,516.4 million, a decrease from 2018 which was Baht 10,384.4 million, amounting to Baht 3,868.0 million or equivalent to a 37.2 percent reduction from an increase in expenses from the recognition of estimates of Employee benefit liabilities from the new Labor Protection Act stipulates additional compensation rates for employees who have worked for 20 consecutive years or more. They are entitled to compensation not less than the final wage rate of 400 days from the original 300 days of effect. The company's net profit margin was 1.8 percent, a decrease from the end of 2018 which had a net profit margin of 2.7 percent or a 0.3 percent discount.

In the second quarter of 2020, the Company had a net profit of Baht -11,075.6 million, a decrease from the year 2018 which was Baht 5,083.3 million, amounting to Baht 16,158.9 million or equivalent to a 317.9 percent reduction due to a net exchange loss from depreciation of the Baht Financial costs are

lower when depreciation and add the reversal of income tax expenses, resulting in the company The net profit margin of -8.6 percent, a decrease from the second quarter of 2019, which had a net profit margin of 2.8 percent.

Financial Position

Assets

As of the end of 2018, the Company had total assets of Baht 286,613.0 million, an increase from the end of 2017, which was Baht 228,108.3 million, amounting to Baht 40,504.6 million or 17.7 percent growth, mainly due to cash, cash equivalents and temporary investments increased by Baht 39,321.5 million due to an increase in cash flow from operations in 2018 and cash received from issuing debentures while there were investments in various projects and dividend payments in April and September 2018, trade accounts receivable increased by Baht 2,031.1 million from average sales volume in December 2018 higher than December 2017.

As of the end of 2019, the Company had total assets of Baht 283,444.5 million, an increase from the end of 2018, which was Baht 268,613.0 million Baht, amounting to Baht 14,831.5 million or equivalent to a growth of 5.5 percent, mainly due to an increase in inventories of Baht 1,553.9 million in accordance with the average crude oil price in December 2019, increased from December 2018, fuel Fund receivables and VAT recovered increased by Baht 331.0 million, Baht 283.5 million Baht and Baht 121.7 million, respectively. Property, plant and equipment increased by Baht 26,630.1 million from investment in various projects according to the work plan and investment in associated companies increased by Baht 18,126.2 million from the acquired new ordinary shares in proportion to their shareholding in GPSC.

In the second quarter of 2020, the Company had total assets of Baht 298,170.3 million Baht, an increase from the end of 2019 by Baht 14,725.8 million or a growth rate of 5.2 percent mainly from cash, cash equivalents and short-term investment increased by Baht 3,699.9 million, mainly due to the cash received from the issuance of US dollar denominated debentures of US \$ 1,000 million deduct with investment in projects according to the plan Non-current assets increased by Baht 34,312.5 million due to net increase of property, plant and equipment Baht 18,231.0 million from investment in various projects according to the plan and deferred tax assets increased Baht 3,958.0 million from operating loss in the quarter.

Liabilities

As of the end of 2018, the Company had total liabilities of Baht 142,140.6 million, an increase from the end of 2017, which was Baht 100,960.0 million, amounting to Baht 41,180.5 million or equivalent to a growth of 40.8 percent. Trade payables increased by Baht 2,881.0 million due to the increase in trade payables due in January 2019 and other payables increased by Baht 395.8 million from fuel fund payables that increased in line with the excise tax rate and sales volume in December 2018 increased from December 2017, long-term loans and debentures increased by Baht 39,169.0 million.

At the end of 2019, the Company had total liabilities of Baht 159,521.0 million, an increase from the end of 2018, which was Baht 142,140.6 million, amounting to Baht 17,380.4 million or equivalent to a growth of 12.2 percent. Trade accounts payable increased by Baht 3,170.8 million in line with the average crude oil price and crude oil purchase volume in December 2019, an increase from December 2018. Other payables increased by Baht 5,234.3 million, most of which were payables from the construction of the Clean Fuel Project.: CFP) and long-term borrowings and debentures increased by Baht 11,954.5 million.

In the second quarter of 2020, the Company had total liabilities of Baht 187,338.7 million, an increase from the end of 2019 by Baht 27,817.7 million or 17.4 percent growth, mainly due to net lease liabilities of Baht 11,511.1 million and derivative liabilities in accordance with Financial Reporting Standards No. 9, Financial Instruments of Baht 1,043.8 million, long-term loans and debentures, an increase of Baht 32,257.7 million from TTC's US dollar debentures, since in June 2020 TTC issued unsecured and unsecured debentures subordinated to US \$ 1,000 million to foreign institutional investors The Thai Oil Refinery is the guarantor of the whole amount of debentures.

Shareholder's Equity

As of the end of 2018, the Company had total shareholders' equity of Baht 121,712.0 million, a decrease from the end of 2017 which was Baht 122,223.5 million, an amount equal to Baht 511.4 million or a 0.4 percent decrease in operating profit for the year 2018 amounted to Baht 10,329.8 million and the dividend payment of the Company

As of the end of 2019, the Company had total shareholders' equity of Baht 119,972.7 million Baht, a decrease from the end of 2018 which was Baht 121,712.0 million, an amount equal to Baht 1,739.2 million or a 1.4 percent due to operating profit. for the year 2019 amounted to Baht 6,544.5 million, non-controlling interests from acquisitions The Company's dividend payment and share of loss from changes in net assets of the Company.

In the second quarter of 2020, the Company had total shareholders' equity of Baht 106,956.5 million, a decrease from the year 2019 by Baht 13,016.3 million or a 10.8 percent decrease, mainly due to the total comprehensive loss for operating results in the quarter, dividends paid, and the impact of introducing new financial reporting standards for the first time

5.1.11 Market Overview and Industry trends

Market conditions and World Economy

The International Monetary Fund (IMF) issued a projection that the global economy would grow 3.4 percent in 2020 recovering from the lowest growth in 10 years last year. This is supported by the global economic upturn after expansionary policies through monetary measures launched by the Central Bank in many countries, including interest rate cut and government bond repurchase to increase liquidity in the economic system. The 2020 economic growth comes from economic expansion of both advanced and emerging economies. The growth of advanced economies, compared to previous year, is expected at 1.7 percent since the US economy is likely to constantly grow from the increasing domestic consumption and strongly growing labour market. On the other hand, the growth of emerging economies is estimated at 4.6 percent from the previous year. Such growth is contributed by India's robust economies growth expected at 7.0 percent. On the contrary, China's economic growth is likely to slow down from 6.2 percent 2019 to 5.8 percent in 2020, due to China's economic reform and stagnant growth of industrial sector.

The 2020 global economic growth rate is to encounter risk factors slowing down such growth, including the ongoing US-China trade war and its uncertain consequences despite some negotiation progress, as well as higher geopolitical tensions, especially in the Middle East

Crude Oil Market and Refining Industry

(1) Crude Oil Market

The 2020 average price of Dubai crude is expected in the range of 55-65 USD per barrel, supported by higher global demand growth of 1.2 million barrels per day (International Energy Agency (IEA) December 2019 Report). The demand increase is due to the 3.4 percent global economic growth forecast, after the US-China trade war progressed with the first-phase trading negotiation in December 2019, and anticipated the next phase in 2020, leading to recovering economies. The OPEC and allies have also agreed to limit more of their production from 1.2 million barrels per day to 1.7 million barrels per day in Q1/2020 to maintain the stability of crude price. Oil production from Iran and Venezuela will also remain at the low level due to export limitation from the economic sanction imposed by the US. The geopolitical tension in the Middle East also causes the concern on supply risk.

Nevertheless, the 2020 crude oil price is still pressured since the global crude supply tends to increase especially from such non-OPEC countries as the US, Norway, Canada, and Brazil, with estimated growth around 1.8-2.2 million barrels per day. Oil production in the US is likely to increase by 1.4 million barrels per day, mainly from shale oil, which accounts for 70 percent of the total production due to the commissioning of more pipeline in 2019 and 2020. The US crude export is likely to increase by 0.7 million barrels per day to 3.6 million barrels per day in 2020. Oil production of Norway would rise 0.3 million barrels per day after its full-steam production of the oil field in the North Sea.

(2) Refining Market

The refining industry is likely to be supported by the enforcement of the International Convention for the Prevention of Pollution from Ships imposed by the International Maritime Organization (IMO) mandating all vessels to use fuel oil

with sulphur below 0.5 ppm. This enforcement has spiked demand for low sulphur fuel oil and diesel, while supply of gasoline is expected to fall, as some refineries are likely to increase diesel production to address the higher market demand. The spread between fuel oil and Dubai crude is likely to become narrower, following the lower demand due to the IMO new regulation enforcement. However, the Gross Refinery Margin (GRM) is likely to be pressured since Saudi Arabia and China plan for the commissioning of new refineries in 2020, resulting in the similar amount of demand and supply growth at around 1.2-1.3 million barrels per day

Domestic Market for Petroleum Products

The 2020 economy of Thailand is expected to grow 2.7-3.7 percent, projected by NESDC in November 2019 Report. The key drivers for such growth are higher household consumption, state and private investments in Thailand's infrastructure, and economic stimulus measures under government policies. Such measures better the growth of export and tourism following the global economic recovery and the adjustment to trade barrier measures. The export sector is set to expand 2.3 percent, while private sector consumption and investment are projected to grow 3.7 percent and 4.8 percent respectively

Thailand's consumption of petroleum products in 2020 is projected to grow 2.0 percent; considering by each type, it is found that gasoline, diesel, jet fuel and fuel oil are to grow at 3.3 percent, 2.2 percent, 2.3 percent and 5.0 percent respectively. The consumption of LPG is, on the contrary, set to fall 2.4 percent

Aromatics Markets

The 2020 paraxylene market tends to be constantly pressured by additional supply from the commissioning of new petrochemical plants in 2019 and 2020, including Zhejiang PC Line 2 in China with capacity of 2,000,000 tons per year and Saudi Aramco Jizan in Saudi Arabia with capacity of 800,000 tons per year. Due to the commissioning of a new PTA plant with capacity of 5.3 million tons per year, the total paraxylene effective capacity in 2020 is expected to rise 8.2 million tons, while the global demand is expected to increase 1.4 million tons. This will help support paraxylene to some extent causing paraxylene production to decrease from 80.6 percent in 2019 to 74.3 percent in 2020.

Similar to paraxylene market, the benzene market situation in 2020 remains the same as that of 2019. Since it is constantly pressured by additional supply from the commissioning of new plants in 2019 and 2020. This results in the estimate of new capacity in 2020 at 3.4 million tons, while the demand is expected to grow at 1.2 million tons, causing the global production to decrease from 75.7 percent in 2019 to 73.8 percent in 2020. However, the high-production-cost paraxylene plants with by-product benzene have not shown any signs to operate again, since it is still under the break-even reducing some of the supply. The US-China trade war must be closely monitored, to define if it causes the continuous slowdown of benzene and downstream products among continents.

Lube Base Oil and Bitumen Market

The lube base oil situation in 2020 remains the same as that of 2019, due to the rapid increase of supply after the commissioning of Group II and III new lube base oil plants (total capacity of 1.2 million tons per year), including Hill Refinery in Kazakhstan (capacity of 250,000 tons per year), and Hainan Handi Refinery in China (capacity of 1,000,000 tons per year) while the demand growth is considerably low. However, the competition of lube base oil Group II will

be less aggressive, as its feedstock price is referenced to the diesel price, which is expected to increase, following the enforcement of the IMO new regulation. This causes the price of lube base oil Group II to increase, while that of Group I is under less pressure.

The 2020 bitumen market is expected to be less active than that of 2019 due to additional supply with some fuel oil producers turning to produce more bitumen after the enforcement of IMO new regulation, causing a lower price of fuel oil and a narrower spread between bitumen and fuel oil. The demand for bitumen is, however, projected to increase due to economic development plans of many countries in the region, emphasizing on the constant development of public utility and roads construction and repair.

Linear Alkyl Benzene (LAB) Market

LAB market tends to slightly recover due to better global economic growth and more demand for detergent products resulted from constantly increasing population, leading to satisfying overall demand growth of LAB in Asia and Middle East. In the first half of 2020, it is expected that LAB supply will be tight due to the maintenance shutdown of LAB plants in Southeast Asia. However, in the latter half of 2020, LAB market is expected to encounter pressure from the commissioning of new LAB plants in Saudi Arabia scheduled in Quarter 3 of 2020 (capacity of 120,000 tons per year).

Solvent Market

The Bank of Thailand forecasted that Thailand's 2020 economic growth would decrease to 3.3 percent, lower than previously expected of 3.8 percent. The risk factors affecting the growth decline includes domestic political uncertainty, tardiness of the government's mega-project investments, and the unresolved trade war between the US and China, leading to export slowdown, which affects the investment of the private sector. Thai Baht appreciation also obstructs Thailand's export and tourism competitiveness.

Hydrocarbon Solvent (HCS) Group: Despite Asia's sluggish economies, the supply of HCS in Asian market is expected to increase, especially from Northeastern Asia producers, including China, Japan, and Taiwan, increasing their production capacity to meet any rising demand. This leads to the oversupply of HCS. The unresolved trade war between the US and China causes China's demand to slow down and China to export more to Southeast Asia to replace exports to the US. Moreover, the producers from Japan, South Korea, and Taiwan are to find new destination in replacement of China's market. The new destination includes Southeast Asia countries.

The domestic HCS demand is expected to increase in line with economic growth. Even though the 2019 solvent industry is slow down and exports grow negatively, it is expected that the 2020 export of automobiles, spares and parts, as well as electronics, is to grow, leading to higher consumption of HSC. More supply volume than that of demand causes the price competition to be more aggressive.

Toluene-Xylene-White Spirit (TXW) Group: TXW is categorized as HSC, but due to its large volume and market size, TXW is separately presented to better reflect the market situation. TXW demand and supply are mainly in accordance with the volume used as fuel additives and in the petrochemical industry. TXW supply is expected to increase due to the constant oversupply of paraxylene since 2019 after the commissioning of new plants in China leading to TXW product surplus. Even though in early 2020 TXW demand for fuel additives is to increase, it is expected that the

demand will briefly increase in early 2020 and slow down in the middle of the year, leading to more TXW supply in petrochemical industry.

The 2019 domestic TXW demand decreased, following the sluggish growth of the automotive industry, along with lower export volumes of spares and parts. This resulted in the decrease of demand for automotive paints, tyres, car seats, glue and other related equipment. However, 2020 TXW demand, both domestic and international, is expected to increase. On the other hand, domestic producers are to control sales volumes as did in 2019 to ensure the market balance, leading to a less aggressive price competition than that of other group

Chemical Solvent (ChemSol) Group: With additional supply from new producers in China and Southeast Asia, the ChemSol market continues to be in oversupply. In addition, the unresolved ongoing trade war between the US and China will force China to export to countries in Southeast Asia as did in previous years. This leads to the same aggressive price competition as that of other product group, despite the shutdown plan of many producers.

Thailand imports nearly all ChemSol products, and the capacity expansion as well as new plants, especially in China, will push even more surplus. This, together with lower-than-expected economic growth, results in even more severe price competition. Many ChemSol importers decided in 2019 to reduce or stop the import of some ChemSol products with unforeseeable long-term profiting. With more prospects identified in Southeast Asia, especially Thailand and Indonesia, several new importers are expected to enter the business with an intention, not only to expand their market in the region, but also to move the distribution base from China to Southeast Asia due to China's lower demand. This inevitably leads to an intense price competition.

Non-Solvent and Food Ingredient and Cleaning Group: Despite the export fall and negative sentiments in nearly all industrial sectors in 2019, the food and beverage sector has remained strong, with growth recorded in both domestic consumption and export, as it is deemed necessary and basic needs for living. Demand for food ingredient and cleaning products in industries, also, remains at the same level; at the same time, Thailand has competitive advantages on food manufacturing for export due to the richness and fertility of agricultural products in volume and variety. This causes the domestic demand and supply of food ingredients and cleaning products to continuously grow in line with economic growth. Despite a slight decrease, the growth of food ingredient and cleaning products is still higher than that of solvent products, constituting the Company goal to expand this product group in 2020. Nevertheless, Thailand is facing a risk of water shortage crisis in 2020 after a year of drought and flood in 2019, causing periodic shortfalls of finishing products due to shortage of raw material, and possibly leading to the demand drop of products in this group.

Power Industry

The 2020 power demand is projected to slightly increase, in line with Gross Domestic Product (GDP). The new investment of small power producers are expected to replace the power plants whose contracts with EGAT are due to expire during 2017-2025. In this regard, the government opens for the renewal of the contracts on the production and sales of power and steam with EGAT. The excess power is to be sold only to users in industrial estates and industrial parks

Thailand's 2018-2037 power development plan (PDP 2018) prioritizes the security of power generation systems, transmission systems, and distribution systems. The development plan also focuses on the balance of regional electric system, suitable level of power security, increase in electric system flexibility, the promotion of low-cost power generation from renewable energy, lowering impacts on environment, and the development of smart grid to address prosumers' changes. The expected power generating capacity at the end of PDP 2018 is 77,211 MW in 2037, with a higher ratio of power generated from renewable energy and more participation of communities in power generation, while capping electricity tariffs at current levels.

Petroleum Transportation Industry

For marine transportation of crude and petroleum and petrochemical products in 2020, it is expected that freight rates are to slightly increase due to the enforcement of IMO new regulation limiting the sulphur in fuel oil below 0.5 ppm, causing shipowners' cost to increase. On the other hand, VLCC freight rates are expected to slightly decrease from that of late 2019 since the demand and supply of vessels are gradually in balance, despite several new vessels in service. Such several new vessels are caused by the estimate of the same number of vessels to be decommissioned due to the approaching time to enforce the installation of Ballast Water Management System, which is not worth the cost of long-service vessels. Moreover, the increase in US crude export, following the increase in crude oil price, is likely to push the demand for vessels. The offshore demand is expected to grow due to the increasing activities of old rigs decommissioning, including petroleum exploration and production. This constitutes further growth for offshore businesses.

Ethanol Market

With a state policy to continuously support the consumption of gasohol with higher ethanol components, the demand for ethanol in 2020 is projected to grow. Moreover, the Department of Energy Business (DOEB) plans to phase out one type of gasoline and promote gasohol E20 as a primary product. The DOEB also adjusts spreads between gasohol 95 and gasohol E20, and between gasohol E20 and gasohol E85 to ensure suitable level. All these measures are geared toward higher demand for ethanol.

Ethanol supply in 2020 is also projected to increase with the total capacity higher than domestic demand. This results from the capacity expansion of one new molasses-based facility in Quarter 3 of 2020, resulting in an additional 200,000 liters per day. This surges the total ethanol capacity to 6.08 million liters per day in 2020 or 2.7 percent increase from that of 2019.

The 2020 ethanol price tends to increase compared to that of 2019. The predicted harsh weather and severe drought of 2020 will likely cut down the total national sugarcane inventory from 131 million tons in the 2018-2019 season to 111 million tons in the 2019-2020 season, as some sugarcane fields would be left idle. This causes the reduction in sugarcane inventory, and therefore reduces the use of molasses for ethanol production. For Cassava crop of October 2019- September 2020, the product volume is expected to decrease from 30.9 million tons in previous season, to 30.5 million tons due to El Nino and cassava mosaic disease found in 15 eastern provinces. The decrease in cassava

volume causes its price to increase though the price is slightly pressured by the lower starch yield of cassava produced during higher-than-usual rainfall during August-September 2019 and being early harvested.

5.1.12 Pricing policy and Product delivery policy

Domestic finished petroleum product prices were based on Singapore market prices at that time for the same product. This is a benchmark price of the ex-refinery price. The Singapore market price reflects the demand and supply of the product in the region, which will set the daily price in money US dollar denominated, the company sells finished petroleum products to the domestic market for prices based on the principle of import parity and in exports with reference to the principle of export parity.

The company sells finished petroleum products to customers in front of the refinery, based on the terms of sale of products at the source of the oil refinery of the company (Free on Board: FOB), enabling product buyers to access the delivery network. Conveniently deliver products and high efficiency in cost management. In 2019, many refineries in Thailand have maintenance, resulting in insufficient supply to meet domestic demand for finished petroleum products at some point. Additional petroleum products to meet the increasing demands of the customers and to build confidence in the customers that the Company have sufficient petroleum products to meet ongoing demand.

The Company's oil refineries approximately 42.0 percent of finished petroleum products are transported. Through oil transportation pipelines Which is connected with the Company's refinery by the d pipeline, which can transport finished oil and semi-finished oil. Can be distributed to various types of oil terminals in the North and Northeast to meet the demand in the said sector. Whereas another 26.0 percent is distributed through customer-rented tanker transportation and the remaining 32.0 percent is by motor vehicle where the Company has petroleum products dispensing stations operating. 24 hours a day, enabling domestic and Indochina buyers to purchase a wide variety of products from the company. This will help increase competitiveness and serve the needs of the increasing customer. In addition, with the location of the Company's refinery Near areas with high oil consumption This makes it possible to deliver products at low cost to major markets of the country, including Bangkok. And centers in different regions of the country

5.1.13 Procurement of the Company's product and services

Crude oil supply

The main raw material for oil refining is crude oil. The Company purchases crude oil from both domestic and international crude oil fields. By using the buying method in the form of a time contract and buying crude oil at a fixed market price, which will make the company flexible in procurement of crude oil. The company buys crude oil from offshore crude oil fields through direct sea transportation to refineries and domestic crude through rail and ship transportation of the company. There is a buoy in the deep-water boat, which make the company able to receive crude oil and other raw materials directly from large crude oil vessels, which makes the crude oil transportation more efficient and the cost of crude oil transportation ships is also reduced.

In 2019, the Company imported approximately 90.0 percent of the crude oil and other raw materials used in the production process. The company purchase 67.0 percent of crude oil from countries in the Middle East region such as the Arab Emirates, Qatar and Saudi Arabia, 10.0 percent from countries in the Far East region (Far East) such as Malaysia, Brunei, Indonesia, Vietnam and Russia, 9.0 percent from North America, 3.0 percent from South Africa (West Africa) and 6.0 percent from Europe (North Sea & Mediterranean), the remaining 5.0 percent comes from domestic crude oil fields. The reduced proportion of domestic crude oil is caused by improper quality. In addition, overall domestic crude oil production has continued to decline. The selection of crude oil will depend on the price and expected return. The Company intending to increase the purchase of crude oil and other raw materials from various sources to increase the flexibility of purchasing crude oil to generate profit. From maximum refining and reducing dependence on crude oil from a particular source, which will affect the operation if crude oil from that field cannot be delivered. In addition, the proportion of crude oil use from countries in the Middle East has high sulfur values and tends to decline. This is due to the preparation period for the production of low sulfur fuel oil no more than 0.5 percent according to the regulations of the International Maritime Organization (IMO), which will result in higher use of low sulfur crude oil.

However, trading of crude oil depends on the situation in the crude oil market and the amount of crude oil the Company has, therefore, the Company proceeds to purchase approximately 50 percent of crude oil from PTT Plc. and approximately 50 percent from other distributors under Contracts for both a fixed time period and the purchase of crude oil at live market prices. For the purchase of crude oil and other raw materials from both domestic and international, the Company uses the credit for commercial payments within 30 days from the date specified on the consignment note. Which is a common principle.

Summary of crude oil price and other raw material which bought from different location

Crude oil and other raw materials	2017		2018		2019	
	Baht million	%	Baht million	%	Baht million	%
Middle east	151,623	70.0	188,599	70.0	143,481	67.0
Far east Asia	16,310	8.0	32,048	12.0	21,191	10.0
Thailand	27,872	13.0	26,958	10.0	10,149	5.0
Africa	2,958	1.0	6,950	2.0	6,559	3.0
Europe	14,895	7.0	6,322	2.0	13,667	6.0
North America	1,529	1.0	9,853	4.0	19,676	9.0
Total	215,187	100.0	270,731	100.0	215,451	100.0

Other raw materials

Thai Lube Base Public Company Limited uses raw materials to produce base oils from either long residue produced from the company or buy long residue from both domestic and international. To be used as a raw material for the base lubricant production of Thai Lube Base Plc. In addition, the Company also imports other additives and colorings for mixing in products to meet market demand and government regulations. It also imported mixes, xylene and toluene. To be used as raw material for the production of aromatic products of Thai Paraxylene Co., Ltd. to increase the production volume to the full capacity of the paraxylene production unit. When it is cost effective in economics.

5.1.14 Factors with Impacts on the Company's Operations

1) Gross Refinery Margin and Gross Integrated Margin

Gross refinery margin and gross integrated margin depend on various factors beyond the Company's control, including demand and supply of crude oil and other raw materials, including the following factors:

- Price fluctuations of crude oil, petroleum products, aromatics products, lube base oil products and precursors for cleaning agents;
- Local market demand and capacities of other refineries in Thailand and Asia Pacific, including overhaul of crude oil sources, refineries and oil pipelines, which affect the market supply volume;
- Global economic situations, particularly in the United States of America, China and Europe, and foreign exchange fluctuations, especially Thai Baht against USD;
- International political issues and political stability in the major oil producing countries;
- Global oil reserve and volume of crude oil and other raw materials and petroleum products;
- Relocation of investments and speculation of gain on assets;
- Transportation costs of crude oil, other raw materials and petroleum products;
- Climate change and natural perils which affect market demand and supply, including unforeseen events, e.g., various natural disasters;
- Sufficiency and suitability, including competitive prices of other renewable energy sources;
- Effect of government rules and regulations, e.g., determination of quality of fuel, control of selling prices of products, etc.

2) Impact from Market Conditions

Major factors giving rise to impact from market condition on the Company include price fluctuations of crude oil and raw materials, foreign exchange and interest rates, the details of which may be summarized as follows:

Prices of Raw Materials and Petroleum Products

Price fluctuations of crude oil, other raw materials, petroleum and petrochemical products will affect the Company in terms of net sales, costs of sales, gross profit and cash flows of the Company. Therefore, the Company's gross refinery market will vary from time to time by the then current market condition. Besides, when the prices of crude oil and raw materials are on the rise, the Company would additionally need short-term facilities, and given that the Company has an inventory of crude oil and petroleum products, therefore, the value of inventory will vary by market prices accordingly.

With regard to the costs of fuel for power business, TP and TOP SPP entered into long-term power distribution agreements with EGAT, whereby parts of the cost of fuel shall be borne by EGAT. In addition, TP and TOP SPP sell electricity to the Company and its group of companies based on the same price formula of PEA, which includes the costs of fuel and foreign exchange fluctuation in the electricity payments. As for revenue from sales of steam by TP and TOP SPP, this primarily relies on the costs of fuel and USD exchange rate.

Ethanol business, in which TET holds shares through its subsidiaries and associates, the price fluctuations of raw materials and ethanol selling price will materially affect the Company's operations. Generally, the prices of raw materials in ethanol production, namely molasses and cassava, will fluctuate according to domestic demand and supply, policies on import and export of trading partner countries, including natural disasters which affect the output at that time. Ethanol selling price will vary by local ethanol demand and supply and prices of raw materials, and such demand depends on government policy.

Foreign Exchange

The fluctuations of Thai Baht against USD will affect the operating results of the Company and its subsidiaries because the majority of the production costs originates from import of crude oil or raw materials, which must be paid in USD. Moreover, revenue from sales of petroleum and petrochemical products rely on global market prices which are denominated in USD. However, changes in Thai Baht may also affect profits to a certain degree due to different periods of costs and revenue recognition.

Interest Rate

The Baht-denominated loans of the Company and its subsidiaries include both fixed interest rate and floating interest rate, whereby the latter will be affected by the interest rate fluctuations in the market. The Baht-denominated loans refer to fixed deposit rate (FDR) or minimum lending rate (MLR) or THBFIX or average rate as specified in the respective loan agreements.

3) Seasons

Demand and prices of petroleum products vary during the year partly due to seasons. That is, demand (in terms of quantity) for diesel during the monsoon season in Thailand will be relatively lower than other seasons. Unit price of diesel will increase in winter due to the fact that Japan, South Korea, European Union and the United States of America rely on oil as fuel to keep them warm. Besides, unit price of gasoline in summer is

usually higher than other seasons since in the United States of America, people tend to use more gasoline in summer.

4) Inflation Rate

The Ministry of Commerce compiles Thailand's inflation rates, which can be referenced from Consumer Price Index.

Year	percent
2015	(0.9)
2016	0.2
2017	0.7
2018	1.1
2019	0.2

5.1.15 Total Debt Instruments

On June 18, 2020, TTC, whose 100 percent of shares are held by the Company, issued 2 lots of USD-denominated debentures, unsecured and unsubordinated, with a total value of USD 1,000 million, due for principal repayment in 2030 in the amount of USD 400 million and in 2050 in the amount of USD 600 million. These debentures were guaranteed by the Company.

As of June 30, 2020, Thai Oil Group had a total of 9 lots of unsecured USD-denominated debentures, with a total value of USD 3,565 million, divided into 2 lots of debentures issued by the Company with a total value of USD 389 million, due for principal repayment in 2023 in the amount of USD 216 million and in 2043 in the amount of USD 173 million, and 7 lots of debentures issued by TTC with a total value of USD 3,176 million, due for principal repayment in 2023 in the amount of USD 284 million, in 2028 in the amount of USD 400 million, in 2030 in the amount of USD 399 million, in 2043 in the amount of USD 327 million, in 2048 in the amount of USD 600 million, in 2049 in the amount of USD 565 million, and in 2050 in the amount of USD 600 million. These debentures were guaranteed by the Company.

In addition, the Company also had 4 lots of Baht-denominated debentures, unsecured and unsubordinated, with a total value of Baht 20,500 million, due for principal repayment in 2021 in the amount of Baht 3,000 million, in 2022 in the amount of Baht 3,000 million, in 2024 in the amount of Baht 7,000 million, and in 2027 in the amount of Baht 7,500 million.

All the proceeds from issuance of such debentures are utilized as long-term capital for investment, business expansion, debt payments and/or working capital in its operations and other activities of Thai Oil Group

5.1.16 Total Term Loans, Total Other Liabilities, including the Company's Overdrafts and Collateral Assets

Table of Consolidated Outstanding Liabilities, Both Short-Term and Long-Term as of June 30, 2020

	30 June 2020 (Baht million)
Short-term loans from financial institutions	2,454

	30 June 2020 (Baht million)
Current portion of long-term loans from financial institutions	1,041
Long-term loans from financial institutions	13,775
Long-term loans from a third party	224
Long-term loans from related parties	3,999
Current portion of debentures	3,000
Debentures	126,842
Total	151,335

Table of Details of Outstanding Long-Term Loans and Debentures as of June 30, 2020 by company and currency

	Company	LABIX	TP	TOP SPP	Sak Chaisidhi	Thai Oil Marine	TOP Maritime	Sapthip	Sapthip Green Energy	Thai Oil Treasury Center	Top Solvent (Vietnam)	Total
USD-denominated debentures ⁽¹⁾	11,934	-	-	-	-	-	-	-	-	97,408	-	109,342
Baht-denominated debentures	20,500	-	-	-	-	-	-	-	-	-	-	20,500
Baht-denominated loans	-	4,963	3,999	7,771	538	587	782	28	63	-	-	18,731
Loans in other current currencies ⁽¹⁾	97,841 (from related parties)	-	-	-	-	-	-	-	-	-	308	98,149
Total	130,275	4,963	3,999	7,771	538	587	782	28	63	97,408	308	246,722

Source: 1/This includes foreign exchange gain/(loss) from conversion of foreign currency liabilities

Collateral Assets

As of June 30, 2020, the Company did not use its core fixed assets in the business operations, e.g., property, plant, refinery, machinery and equipment, etc., owned by the Company as collaterals

However, as of June 30, 2020, certain subsidiaries of the Company used their core fixed assets in the business operations owned by the subsidiaries as collaterals, with the details as follows:

- Land, machinery and structures in respect of the wastewater sludge disposal machine of Sapthip Company Limited were mortgaged as collateral to secure a loan from a financial institution in the amount of Baht 141 million;

- Petrochemical production plant of LABIX was mortgaged as collateral to secure loans from several financial institutions in the amount of Baht 6,200 million;
- Power plant, machinery and equipment of TOP SPP were mortgaged as collateral to secure loans from several financial institutions in the amount of Baht 8,500 million;
- Crew boats of TOP Maritime Service Company Limited were mortgaged as collateral to secure loans from several financial institutions in the amount of Baht 900 million.

5.1.17 Potential Liabilities

As of June 30, 2020, the Company's potential liabilities include forward contracts on petroleum and crude oil prices with foreign companies and related parties. The Company or such contractual parties are obliged to pay the difference between fixed price and floating price for each particular period. As of June 30, 2020, the Group has the petroleum volume under such contracts in the amount of 1.95 million barrels and 0.08 million metric tons, and the Company has the petroleum volume in the amount of 2.00 million barrels and 0.17 million metric tons (as of December 31, 2019, the Group had the petroleum volume in the amount of 1.53 million barrels and 0.06 million metric tons and the Company had the petroleum volume in the amount of 1.57 million barrels and 0.06 million metric tons).

5.1.18 Pending Material Litigations or Claims

As of June 30, 2020, the Company or its subsidiaries are not subject to any legal disputes which remain pending and may affect assets of the Company or its subsidiaries in an amount over 5 percent of the equity according to the consolidated financial statements of the Company and its subsidiaries and have no disputes which may materially affect the Company's business operations.

5.1.19 Summary of Material Agreements over the Past 2 Years

Water and Natural Gas Pipeline Agreement

According to a water supply agreement between the Company and East Water Resources Development and Management Public Company Limited, the Company is entitled to connect its water pipeline with the water supply pipeline from Nong Plalai – Nong Kho and water supply pipeline from Nong Kho – Laem Chabang, to use water for its oil refinery process, and permission has already been obtained from the relevant authorities to use pipeline areas for pipeline installation to connect with the Company's pipeline.

Land and Building Lease Agreements

The Company has the right to utilize state-owned land as the site of refinery and staff accommodation, located in Chonburi Province, covering a total area of 1,499 rai, 3 ngarn, 26 square wah (representing 65 percent of total area of the Company's refinery plant in Amphoe Si Racha) for a lease term of 30 years, which will expire on September 10, 2022. The rental will increase every 5 years by 15 percent. The annual rental rate from September 2012 to September 2017 is approximately Baht 201 million per year, and the annual rental rate from September 2017 to September 2022 is approximately Baht 231 million per year.

On August 21, 2018, the Company signed a state-owned land lease agreement with the Ministry of Finance, whereby the Company shall pay the rental on a yearly basis under the lease term of 30 years from 2022 to 2052. The annual rental rate from September 2022 to September 2025 would be approximately Baht 384 million, and the rental will increase every 3 years by 10 percent, being the total rental of approximately Baht 21,321 million throughout the lease term. On the execution date of the lease agreement, the Company made the rental prepayment in the amount of Baht 2,962 million.

The Company has been granted permission from the Treasury Department to sublease certain parts of the state-owned land to its subsidiaries and related companies, representing 8 percent of total area of the Company's refinery plant. In this regard, the Company shall pay an additional annual rental to the Treasury Department in the amount of approximately Baht 7 million. In addition, the Company leases out land owned by the Company to its subsidiaries and related companies, representing 10 percent of total area of the Company's refinery plant, provided that the lease and sublease periods are equal to the remaining lease term under the state-owned land lease agreement.

Product Offtake and Crude Oil Supply Agreement ("POCSA")

The Company sells petroleum products to PTTOR under the Product Offtake and Crude Oil Supply Agreement (POCSA), whereby PTTOR and the Company agree to purchase and sell petroleum products at the market price in accordance with the procedures for determination of product volume, terms and conditions as set out in the POCSA.

According to the procedures for determination of product volume, PTTOR shall propose such type and volume of petroleum products required by PTTOR, with the minimum volume of 49.99 percent of the refining capacity of the Company. The Company shall inform the type and volume of products available for delivery by the Company to PTTOR within the period as agreed upon. Moreover, PTTOR shall have the right of first refusal to purchase the products at the market price at that time before other customers, should the Company have any surplus products, subject to the conditions of the POCSA.

The POCSA may be terminated by either party by giving written notice of such intention to the other party at least 12 months in advance, provided that the parties shall not give such notice of termination before the 10th anniversary of the effective date of the POCSA. The Company signed an amendment agreement in 2013 to extend the period of compliance with the POCSA, whereby both parties may not give such notice of termination for another 10 years.