



**Invitation to the Extraordinary General  
Meeting of Shareholders No.1/2018  
Thai Oil Public Company Limited**

Monday, August 27, 2018, 14.00 hrs.

Bhiraj Hall 1– 3

Bangkok International Trade and Exhibition Centre  
(BITEC)

Registration starts at 12.00 hrs.

For convenience in registration,

**kindly bring the Registration Form with barcode to the Meeting**

**\*\*\* No Tokens Provided for Shareholders and Proxies attending the Meeting\*\*\***

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- Remarks:**
- Attachment 1 Information Memorandum on Asset Acquisition Transaction from the Investment in the Clean Fuel Project (CFP) of Thai Oil Public Company Limited**
  - Attachment 2 Report on the Opinions of the Independent Financial Advisor on Asset Acquisition Transaction of Thai Oil Public Company Limited with respect to the Investment in the Clean Fuel Project (CFP)**
  - Attachment 3 Meeting Registration Form (please bring this form on the Meeting date)**
  - Attachment 4 Proxy Form (Proxy Form B is recommended) and P.O. Box envelope for the shareholders to submit the Proxy Form by post**

**The Attachment 1, 2, 3 and 4 are sent herewith in separation from this invitation booklet.**



(Translation)

Ref. TBK. 01/0462

1 August 2018

- Subject:** Invitation to the Extraordinary General Meeting of Shareholders No. 1/2018
- Attention:** Shareholders of Thai Oil Public Company Limited
- Attachments:**
1. Information Memorandum on Asset Acquisition Transaction from the Investment in the Clean Fuel Project (CFP) of Thai Oil Public Company Limited
  2. Report on the Opinions of the Independent Financial Advisor on Asset Acquisition Transaction of Thai Oil Public Company Limited with respect to the Investment in the Clean Fuel Project (CFP)
  3. Meeting Registration Form (please bring this form on the Meeting date)
  4. Proxy Form (Proxy Form B is recommended) and P.O. Box envelope for the shareholders to submit the Proxy Form by post
  5. Conditions and procedures on the registration, the granting of proxies, and required documents to be presented in order to attend the shareholders meeting of Thai Oil Public Company Limited
  6. List of the Company's independent directors who are the representatives for the granting of proxies, and the definition of independent director of Thai Oil Public Company Limited
  7. Articles of Association of Thai Oil Public Company Limited relevant to the Shareholders Meeting
  8. Map of the venue of the Extraordinary General Meeting of Shareholders No. 1/2018

The Board of Directors Meeting No. 6/2018 of Thai Oil Public Company Limited (the “**Company**”), convened on 29 June 2018, resolved to call the Extraordinary General Meeting of Shareholders No. 1/2018 on Monday, 27 August 2018, at 14.00 hrs., at Bhiraaj Hall 1-3, Bangkok International Trade and Exhibition Centre (BITEC), No. 88, Bangna–Trad Road (Km. 1), Bang Na, Bangkok 10260, and set the date to determine the names of the shareholders who are entitled to attend and to vote in the Extraordinary General Meeting of Shareholders No. 1/2018 (Record Date) on Friday, 13 July 2018.

The Company would like to inform shareholders that the Company has delivered the Minutes of the 2018 Annual General Meeting of Shareholders, convened on 11 April 2018, to all shareholders, and posted the same on the Company's website on 25 April 2018. The shareholders were allowed to verify the accuracy of the Minutes, and to object or request for any amendment to be made to the Minutes from 2 May 2018 to 31 May 2018. After the end of such period, there were no shareholders who objected or requested for any amendment to be made to the Minutes.

The Company hereby informs shareholders of the agenda items according to the resolutions of the Board of Directors as follows:

**Agenda Item 1: To consider and approve the investment in the Clean Fuel Project (CFP) which constitutes an asset acquisition Transaction of the Company**

**Objectives and Rationale:**

Thai Oil Public Company Limited was established in the year 1961 in order to engage in the petroleum refining business in Sri Racha District, Chon Buri Province, with the starting refining capacity of 35,000 barrels per day. For the past 57 years, the Company has occasionally expanded its crude oil refining capacity and improving production efficiency to satisfy the domestic fuel demand in order to foster the country's energy and economic securities, and also to enhance its competitive capability in the business operation. At present, the Company's refinery has the crude oil refining capacity of 275,000 barrels per day which are able to produce finished petroleum products of approximately 14,000 million litres per year, or equivalent to approximately 25 percent of the country's overall refining capacity. The Company's refinery is categorized as a complex refinery, involving various steps, which include the crude oil distillation units, the quality improvement units, and the value upgrading units, which enable the Company to produce high-quality petroleum products in high proportion. Furthermore, the Company has expanded its business into other related businesses to create value added and stabilize operating results in order to mitigate the volatility risk of the petroleum industry, e.g., electricity business, aromatics business, lubricant business, solvent business, marine and pipeline transportation business, ethanol business, the production of raw material for cleaning agent business.

The Company has put in place the process for regularly and constantly monitoring, studying and assessing the industry environment and competition situation in order that the Company will be able to initiate action plans in response to various situations appropriately so as to create a strategic advantage. According to the recent study, it was found that there have been several new high capacity refineries using advanced technologies come on-stream, whereas a large number of refineries with low capacities and have been in service for a long period of time were forced to permanently shut down due to the lack of competitiveness. Furthermore, the market demand of each petroleum products tends to change by virtue of the regulations and the relevant policies of the government and the regulatory authorities. For example, the announcement of the adjustment of marine fuel oil quality by the International Marine Organization (IMO) by reducing the sulphur content from the current level of 3.5 percent to 0.5 percent by 2020. Accordingly, the demand for fuel oil with high sulphur, which is one of the Company's current products, is expected to experience a significant decline. In contrary, the demands for diesel and jet fuel are expected to continually expand in line with the growth of the economy and tourism industry from air travel and the public policy on promoting the country as the aviation hub of the region, while the impacts from alternative energy on these two products are quite limited, etc. In order to respond to the business situation and the industry trends as stated above, the Company has initiated the Clean Fuel Project (CFP) with the main purpose to enhance its refineries competitiveness to retain its position among the leaders group of the industry by means of maximizing the refinery profitability margin. The CFP Project will embrace the improvement of the production process efficiency by enhancing its capability to refine heavy crude oil, of which the price is lower than the light crude oil which the Company is currently refining. This will consequently result in the reduction of procurement cost of raw materials. Moreover, there will be an installation of a value upgrading units where heavy oil with lower value and high sulphur content, such as fuel oil and asphalt, is converted into light oil with low sulphur content in accordance with the Euro 5 standards

that are more valuable, environmentally-friendly, and in strong market demand, such as jet fuel and diesel, resulting in an increase in the average value of the Company's overall products. Furthermore, the CFP Project will also respond to and accommodate the growth of the aviation industry and the country's economic growth. In an effort to improve the efficiency of the production process, the Company will install a new crude distillation unit with higher refining capacity in replace of the current crude distillation units which have been in use for over 50 years. This will result in an increase in the refining capacity from the existing 275,000 barrels per day to 400,000 barrels per day, resulting to the achievement of economies of scale and strengthen the Company potential to be able to stand firmly in the petroleum refinery industry in the future.

The CFP Project does not only yield direct benefits to the Company and add value to the shareholders, but it will also benefit the country as a whole in various aspects, e.g., strengthening the country's energy security by reducing the need to import finished petroleum products in the future, increasing the country's capacity in producing raw material for the petrochemical industry Phase 4 of government, creating an opportunity for the country to become the 'Energy Hub' of the ASEAN Economic Community (AEC). The project will also support the country economic growth from its investment by generating demand of labour employments, both directly and indirectly. Moreover, the CFP project will also enable the Company's refinery to process crude oil produced in the country.

The investment value of the CFP project is approximately USD 4,825 million with the estimated interest expenses during construction of approximately USD 151 million. The sources of funds for the investment will be obtained from the remaining cash of the Company in the amount of approximately USD 2,500 million, long-term loans secured from financial institutions, and/or funds derived from the issuance and offer for sale of the debt instruments, e.g. debentures, amounting to approximately USD 1,500 – 2,000 million, and the rest of funds will be obtained from the cash flow from the Company's future business operation, amounting to approximately USD 1,600 million.

The investment in the CFP Project constitutes an asset acquisition Transaction of the Company pursuant to the Notification of the Capital Market Supervisory Board No. TorChor. 20/2551 Re: Rules on Entering into Material Transactions Deemed as Acquisition or Disposal 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 and Disposition of Assets B.E. 2547 (2004) (including any amendment thereto) (the "**Notifications on Assets Acquisition or Disposal**"). The Transaction represents the highest value of 68.58 percent calculated based on the Total Value Consideration Basis compared with the total assets value of the Company from the reviewed Consolidated Financial Statement of the Company for the period ending 31 March 2018, and when combining the Transaction value with the asset acquisition Transaction entered into by the Company during the past six months prior to the date of entering into this Transaction, the value of which was approximately THB 81 million, the total Transaction value will be equivalent to 68.61 percent which is classified as a "Class 1 Asset Acquisition Transaction" pursuant to the Notifications on Assets Acquisition or Disposal. Therefore, the Company is obliged to prepare the report and disclose the information memorandum on the entering into of the Transaction with the Stock Exchange of Thailand, and convene a shareholders meeting in order to seek approval on the investment in the CFP Project, as well as arrange for an independent financial advisor (IFA) to provide opinions on the entering into of the Transaction.

The details with respect to the investment in the CFP Project are set out in the Information Memorandum on Asset Acquisition Transaction from the Investment in the Clean Fuel Project (CFP) attached to this Invitation (Attachment 1).

### **Opinions of the Board of Directors:**

The Board of Directors approved the investment in the CFP Project and considered it appropriate to propose to the Extraordinary General Meeting of Shareholders No. 1/2018 to approve the investment in the CFP Project. The Board of Director has considered and opined that the investment in the CFP Project would enhance the competitiveness of the Company, improve the refinery efficiency, and increase the product value with more environmentally-friendly quality. The increase in crude oil distillation unit capacity will allow the refinery to handle more types and greater quantities of crude oils, which create economies of scale and a saving of raw material costs. Furthermore, the project will help steering the country's economic growth and also provide energy security in the long run.

In addition, the Board of Directors deemed it appropriate to propose that the shareholders meeting consider and approve the authorisation of the Board of Directors or a person designated by the Board of Directors to enter into negotiation, agreement, to determine, amend, change the details or conditions, and to undertake any necessary act with respect to the investment in the CFP Project, as well as to execute the relating agreements, memorandum, and documents, to contact the relevant government agencies or regulatory agencies, and to undertake any appropriate and necessary act for the purposes of the CFP Project, in the best interests of the Company.

In this regard, in order for the shareholders to obtain accurate, complete, and reliable information for the purposes of decision-making, the Company has appointed Maybank Kim Eng Securities (Thailand) Public Company Limited as its independent financial advisor (IFA) to provide opinions on the investment in the CFP Project to the shareholders. Thus, the shareholders are advised to pay attention to the opinions of the independent financial advisor and to consider other reliable information which is relevant to the project for their decision-making.

### **Opinions of the Independent Financial Advisor:**

The Independent Financial Advisor is of the opinion that, in terms of 'reasonableness', the act of entering into this Transaction is considered to be 'reasonable' due to the following reasons: an increase in the Company's competitive capacity; reduction of raw material (feedstock) cost; providing value-added; as well as increasing business opportunities within Petrochemical industry. In addition, the CFP Project operation will also benefit the Kingdom of Thailand and the country's overall economy by enhancing Thailand's domestic long-term energy security, providing support to Phase 4 of the state-owned petrochemical project; and creating the opportunity for Thailand to become the region's energy hub among ASEAN Economic Community (AEC); etc.

The Independent Financial Advisor deemed that the entering into of the Transaction is appropriate as the price and the conditions of the Transaction are reasonable, and there is also the preparation of the projected return on investment based on the careful assumption. Therefore, the shareholders should approve the entering into the Transaction. However, entering into the Transaction also has its own disadvantages and poses risks, all of which the shareholders should additionally take into account in light of their decision-making process. The details are specified in the Report on the Opinions of the Independent Financial Advisor on Asset Acquisition Transaction in Attachment 2.

### **Voting Requirements:**

The resolution on this agenda item shall be passed by votes of no less than three-fourths of the total votes of the shareholders attending the Meeting and entitled to vote.

**Agenda Item 2: Other matters (if any)**

On the date of the Meeting, the Company will allow the shareholders and/or proxies to register for the meeting, and will start checking the supporting documents for the appointment of proxies from 12.00 hrs. onwards. The shareholders and/or proxies are requested to study the conditions and procedures on the registration, the granting of proxies, and etc. as detailed in Attachment 5. Furthermore, in the interests of the facilitation of the registration, the shareholders and/or proxies are requested to bring the documents and evidence listed in Attachments 3 and 4 on the Meeting date for registration.

In this regard, should the shareholders have any question regarding the agenda items of the Meeting, please submit the question in advance to the Investor Relations [ir@thaioilgroup.com](mailto:ir@thaioilgroup.com), Tel. 02-797-2961, or Corporate Management Support Section, Tel. 02-797-2999 ext. 7312-7315.

The shareholders are cordially invited to attend Extraordinary General Meeting of Shareholders No. 1/2018 on the date, time, and place specified above. Your cooperation would be greatly appreciated.

Sincerely yours,

Thai Oil Public Company Limited



(Mr. Atikom Terbsiri)

Chief Executive Officer and President

Corporate Management Support Section:

Tel.: 02-797-2999, 02-299-0000 ext. 7312-7315

Fax: 02-797-2973

**Conditions and procedures on the registration,  
the granting of proxies, and required documents to be presented in order to  
attend the shareholders meeting of Thai Oil Public Company Limited**

The registration and examination of proxy documents will be started on Monday, August 27, 2018 from 12.00 p.m. onwards, at the venue mentioned in the EGM invitation notice. The registration will be conducted using the barcode system. **For convenience of the registration, shareholders and/or proxies are requested to present the Registration Form showing the barcode of shareholder's registration number (Attachment 3) together with supporting documents as described below.**

1. **Attendance of Meeting in Person** – Shareholders must present following documents for registration:
  - Registration Form (Attachment 3) signed by the shareholder
  - Original of valid identification card or driving license or government official identification or passport (in case of foreigners). In case of any changes of name or last name, evidence of such changes must be presented.
  
2. **Proxy Granting** - Shareholders are allowed to grant a proxy to only one representative to attend and vote at the EGM by using the attached Proxy Form B (Attachment 4). If other forms (Form A or Form C (Only for foreign investors who appointed custodians in Thailand)) are needed, please download them from the Company's website: [www.thaioilgroup.com](http://www.thaioilgroup.com).

**2.1 Shareholders who wish to appoint a representative, please proceed with either of these 2 methods:**

- 1) **Granting proxy to one of the Company's independent directors** as listed in Attachment 6 – shareholders are requested to fill up and sign the Proxy Form (if using Form B attached herewith, **please sign on page 2 (Proxy) and page 3 (Supplemental Proxy)**) and a certified copy of valid identification card or driving license or government official identification or passport (in case of foreigners) and the Registration Form attached. Please send all documents to the Company within August 20, 2018 to register in advance, (The Company will affix 20-Baht stamp duty for the shareholders who send the registration documents to the Company in advance).

*or*

- 2) **Granting proxy to other person** – shareholders are requested to fill up the Proxy Form which must be presented by the proxy on the Meeting date together with all documents as listed in item 2.2. For the convenience of registration, the proxy is required to sign the Registration Form and to present the signed Registration Form together with the Proxy Form on the Meeting date.



## 2.2 Required Documents for Proxy


### 1) Natural-person grantor:



- Proxy form signed by the grantor and the proxy (if using Form B attached herewith, **please sign on page 2 (Proxy) and page 3 (Supplemental Proxy)**) (Stamp duties will be provided for the proxy at the documentation-check counter).
- Registration Form (signed by the proxy attending the meeting).
- **Certified true copy** of valid identification card or driving license or government official identification or passport (in case of foreigners) of the grantor
- **Certified true copy** of valid identification card or driving license or government official identification or passport (in case of foreigners) of the proxy. The proxy is required to **present the original document** for the registration.

### 2) Juristic-person grantor:

- Proxy form signed by an authorized person according to its Affidavit, with the seal of the juristic person affixed (if any), and by the proxy (if using Form B attached herewith, **please sign on page 2 (Proxy) and page 3 (Supplemental Proxy)**) with a stamp duty of Baht 20 affixed (Stamp duties will be provided for the proxy at the documentation-check counter).
- Registration Form (signed by the proxy attending the meeting).
- If the grantor is a juristic person registered under Thai laws, a copy of the Affidavit of that juristic person - issued by the Ministry of Commerce or the relevant government authority, bearing a date within 60-day period prior to the meeting date, and certified as a true copy by the authorized person of the juristic person with the seal of the juristic person (if any) must be presented.
- If the grantor is a foreign juristic person, a copy of the Affidavit of that juristic person - issued by the relevant government authority of the country where the juristic person is located and certified by a notary public or other government authorities bearing a date within 6-month period prior to the meeting date must be presented.
- For foreign juristic person, unless an original document is in English language, an English translation certified as a true and correct translation by an authorized person of that juristic person must be provided.
- **Certified true copy** of valid identification card or driving license or government official identification or passport (in case of foreigners) **of the proxy**. The proxy is required to **present the original document** for the registration.

**List of the Company's Independent Directors who are the representatives  
for the granting of proxies in the Extraordinary General Meeting of Shareholders No. 1/2018**

<b>Name of Directors</b>	<b>Position</b>	<b>Age</b>	<b>Address</b>	<b>Conflict of Interest</b>
1.  <b>Ms. Chularat Suteethorn</b>	Independent Director / Chairman of the Audit Committee / Member of the Nomination and Remuneration Committee	64	82/1 Soi Phaholyothin 14, Samsennai, Phayathai, Bangkok 10400	- None -
2.  <b>Mr. Chen Namchaisiri</b>	Independent Director / Member of the Audit Committee	62	Asia Fiber Public Company Limited 33/133-136, Wall Street Tower, 27 Floor, Surawongse Road, Suriyawongse, Bangrak, Bangkok 10500	- None -
3.  <b>Associate Professor Dr. Pasu Decharin</b>	Independent Director / Member of the Audit Committee	50	Dean's Office, Faculty of Commerce and Accountancy, Jaiyossompati Building 2 Chulalongkorn University, 254 Phayathai Road, Wangmai, Pathumwan, Bangkok 10330	- None -
4.  <b>ACM Suttipong Inseeyong</b>	Independent Director / Chairman of the Nomination and Remuneration Committee	60	127 The Office of Deputy Chief of Defence Forces (3), The Royal Thai Armed Forces, Chaengwattana Road, Thung Song Hong, Lak Si, Bangkok 10210	- None -

Name of Directors	Position	Age	Address	Conflict of Interest
5.  <b>Pol. Gen. Aek Angsanonont</b>	Independent Director / Chairman of the Corporate Governance Committee	62	19/12 Sittakarn Building, Room 8B, Chidlom Road, Lumpini, Patumwan, Bangkok 10330	- None -
6.  <b>Mr. Kanit Si</b>	Independent Director / Member of the Corporate Governance Committee	68	Bangkok Bank Public Company Limited 333 Silom Road, 13 Floor, Silom, Bangrak, Bangkok 10500 Thailand	- None -

### **Definition of Independent Director of Thai Oil Public Company Limited**

The Board of Directors must comprise of sufficient number of independent directors to inspect and balance the performance of the Board and the operation of Management team. Independent directors on the Board must represent at least one-third of all directors and must not be less than three directors.

The Company's definition of independent director is stricter than the qualifications required by the Notification of Capital Market Supervisory Board which are:

- 1) Holding shares not exceeding 0.5 percent of the total number of shares with voting rights of the Company, its parent company, subsidiary, affiliate, major shareholder or controlling person, including shares held by related persons of such independent director.
- 2) Neither being nor used to be an executive director, employee, staff, advisor who receives salary, or controlling person of the Company, its parent company, subsidiary, affiliate, same-level subsidiary company, major shareholder or controlling person, unless the foregoing status has ended not less than two years prior to taking the independent directorship.
- 3) Not being a person related by blood or legal registration as father, mother, spouse, sibling, and child, including spouse of child to other director, executive, major shareholder, controlling person, or person to be nominated as director, executive or controlling person of the Company or its subsidiary company.
- 4) Neither having nor used to have a business relationship with the Company, its parent company, subsidiary, affiliate, major shareholder or controlling person, in the manner which may interfere with his/her independent judgement, and neither being nor used to be a significant shareholder or controlling person of any person having a business relationship with the Company, its parent company, subsidiary company, affiliate, major shareholder or controlling person, unless the foregoing relationship has ended not less than two years prior to taking the independent directorship.

The term 'business relationship' under the first paragraph shall include any normal business transaction, rental or lease of immovable property, transaction relating to assets or services or granting or receipt of financial assistance through receiving or extending loans, guarantee, providing assets as collateral, and any other similar actions, which result in the Company or the counterparty being subject to indebtedness payable to the other party in the amount of three percent or more of the net tangible assets of the Company or twenty million baht or more, whichever is lower. The amount of such indebtedness shall be calculated according to the method for calculation of value of connected transactions under the Notification of the Capital Market Supervisory Board. The consideration of such indebtedness shall include indebtedness occurred during the period of one year prior to the date on which the business relationship with the person commences.

- 5) Neither being nor used to be an auditor of the Company, its parent company, subsidiary, affiliate, major shareholder or controlling person, and not being a significant shareholder, controlling person, or partner of an audit firm which employs auditors of the Company, its parent company, subsidiary company, affiliate, major shareholder or controlling person, unless the foregoing relationship has ended not less than two years prior to taking the independent directorship.
- 6) Neither being nor used to be a provider of any professional services including those as legal advisor or financial advisor who receives service fees exceeding two million baht per year from the Company, its parent company, subsidiary, affiliate, major shareholder or controlling person, and not being a significant shareholder, controlling person or partner of the provider of professional services, unless the foregoing relationship has ended not less than two years prior to taking the independent directorship.
- 7) Not being a director appointed as representative of directors of the Company, major shareholder or shareholder who is related to major shareholder.
- 8) Not undertaking any business in the same nature and in competition to the business of the Company or subsidiary company or not being a significant partner in a partnership or being an executive director, employee, staff, advisor who receives salary or holding shares exceeding one percent of the total number of shares with voting rights of other company which undertakes business in the same nature and in competition to the business of the Company or its subsidiary company.
- 9) Not having any other characteristics which cause the inability to express independent opinions with regard to the Company's business operations.
- 10) The Company's independent directors shall hold the directorship not more than 6 consecutive years. (Director's term shall be counted as of August 23, 2012 onwards)

**Articles of Association of Thai Oil Public Company Limited**  
**Relevant to the Shareholder's Meeting**

**1. Calling of the Shareholders Meeting**

Article 33. The board of directors shall call for a shareholders' meeting which is an annual general meeting of shareholders within four (4) months from the last day of the fiscal year of the Company.

Shareholders' meetings other than the one referred to in the first paragraph shall be called extraordinary general meetings. The board of directors may call for the extraordinary general meeting of shareholders at any time as deemed appropriate.

Shareholders holding shares amounting to not less than one-fifth (1/5) of the total number of shares wholly sold or not less than twenty-five (25) shareholders holding shares amounting to not less than one-tenth (1/10) of the total number of shares wholly sold may submit their names and request the board of directors in writing to call for an extraordinary general meeting at any time, provided that, the reasons of request for calling for such meeting shall be clearly stated in the said written request. In such an event, the board of directors shall proceed to call for a shareholder meeting to be held within a period of one (1) month from the date of the receipt of such request from the said shareholders.

Article 34. In calling a shareholders' meeting, the board of directors shall prepare a written notice specifying the place, date, time, agenda of the meeting and the matters to be proposed to the meeting in appropriate detail by clearly indicating whether it is a matter proposed for acknowledgement or for consideration, as the case may be, including the opinion of the board of directors on the said matters, and the said notice shall be distributed to the shareholders and the registrar not less than seven (7) days prior to the date of the meeting. The notice shall be published in the newspaper for not less than three (3) consecutive days and not less than three (3) days prior to the date of the meeting.

The place of the meeting shall be in the province in which the head office of the Company is situated or at any other place where the board of directors prescribed.

Article 38. The matters which should be conducted by the annual general meeting of shareholders are as follows:

- (1) to consider the report of the board of directors concerning the Company's business in the past year period
- (2) to consider and approve the balance sheet, the statement of profit and loss as of last days of the Company's fiscal year.
- (3) to consider and approve of profit allocation and dividend payment.
- (4) to consider and elect new directors in place of those whose office term expires fix the remuneration of directors;
- (5) to consider and appoint auditor and fix the remuneration of the auditor.
- (6) other business.

Article 41. The board of directors shall prepare the balance sheet and the statement of profit and loss as of the last day of the fiscal year of the Company for submission to the shareholders for consideration and approval at the annual general meeting. The board of directors shall cause balance sheet and the statement of profit and loss to be examined by an auditor prior to submission to the shareholder's meeting.

Article 42. The board of directors shall deliver the following documents to the shareholders together with the notice calling for an annual general meeting of shareholders:

- (1) copies of the balance sheets and statement of profit and loss, which have already been audited by the auditor, including the auditor's report; and
- (2) annual report of the board of directors.

## **2. The Quorum**

Article 35. At a shareholders' meeting there shall be not less than twenty five (25) shareholders and proxies (if any) attending the meeting or not less than one-half (1/2) of the total number of shareholders and in either case such shareholders shall hold shares amounting to not less than one-third (1/3) of the total number of shares sold, whereby a quorum would then be constituted.

At any shareholders' meeting, if one (1) hour has passed from the time specified for the meeting and the number of shareholders attending the meeting is still inadequate for a quorum as prescribed in the first paragraph, and if such shareholders' meeting was called as a result of a request of the shareholders, such meeting shall be cancelled. If such meeting was not called as a result of a request of the shareholders, a new meeting shall be called for and the notice calling for such meeting shall be dispatched to shareholders not less than seven (7) days prior to the date of the meeting. In the subsequent meeting, a quorum is not required

Article 36. The chairman of the board shall be the chairman of shareholders' meetings. If the chairman of the board is not present at a meeting or cannot perform his duty, the vice-chairman shall be chairman of the meeting. If there is no vice-chairman or there is a vice-chairman but he is not present or cannot perform his duty, the shareholders present at the meeting shall elect one shareholder to be the chairman of the meeting.

## **3. Voting**

Article 37. A resolution of a shareholders' meeting, the shareholders shall be entitled to one (1) vote per one (1) share. Any shareholder who has a special interest in any matters shall not be entitled to vote in that matter except for voting on the election of directors. A resolution of the shareholders' meeting shall require:

- (1) in an ordinary event, the majority votes of the shareholders who attend the meeting and cast their votes. In case of a tie vote, the chairman of the meeting shall have a casting vote.
- (2) in the following events, a vote of not less than three-fourths (3/4) of the total number of votes of shareholders who attend the meeting and have the right to vote:
  - (a) the sale or transfer of the whole or the substantial part of the Company's business to any other person;
  - (b) the purchase or acceptance of transfer of the business of private company (s) or public company(s) by the Company;
  - (c) the making, amending or terminating of any agreement with respect to the granting of a lease of the whole or substantial parts of the Company's business, the assignment of the management of the business of the Company to any person(s), or the amalgamation of the business with other persons for the purpose of profit and loss sharing;

- (d) the amendment of the Memorandum of Associations or Articles of Association of the Company;
- (e) the increasing or reducing the Company's capital;
- (f) the dissolution of the Company;
- (g) the issuance and offering of debentures of the Company;
- (h) the amalgamation of business of the Company with other company(s); or
- (i) other activities as prescribed by law which are required the shareholders' meeting approval by a vote of not less than three-fourths (3/4) of the total number of votes of shareholders who attend the meeting and have the right to vote.

#### **4. Board of Directors**

Article 16. The Company shall have a board of directors to carrying out the company's business, which shall consists of not less than five (5) persons and no more than fifteen (15) persons. Not less than one half of the number of the directors must reside within the Kingdom of Thailand.

A director need not be a shareholder in the Company.

Article 17. The directors shall be elected at the shareholder's meeting in accordance with the criteria and procedures as follows:

- (1) Each shareholder shall have one(1) share for one(1) vote;
- (2) Each shareholder may exercise all the votes he or she has under (1) to elect one or several persons as directors or directors, but the shareholder cannot be divided his or her votes to any person in any number as the shareholder pleases; and
- (3) Persons who receive the highest votes arranged in order from higher to lower in a number equal to that of the number of directors to be appointed are elected to be the directors of the Company in the meeting. In the event of a tie at a lower place, which would make the number of directors greater than that required, the chairman of the meeting should have a casting vote.

Article 18. At every annual ordinary shareholder's meeting one-third (1/3) of the directors, or, if the number of directors cannot be divided exactly into three parts, the number of directors nearest to one-third (1/3) shall vacate office.

A vacating director may be eligible for re-election.

The directors to vacate office in the first and second years following the registration of the conversion of the Company shall be drawn by lots. In subsequent years, the directors who have remained in office for the longest time shall vacate office.

Article 21. The shareholders' meeting may pass a resolution to remove any director from his / her office prior to expiration of his / her office term by a vote of not less than three-fourths (3/4) of the number of shareholders attending the meeting and having the right to vote and the shares held by them shall, in aggregate, be not less than one half of the number of shares held by the shareholders attending the meeting and having the right to vote.



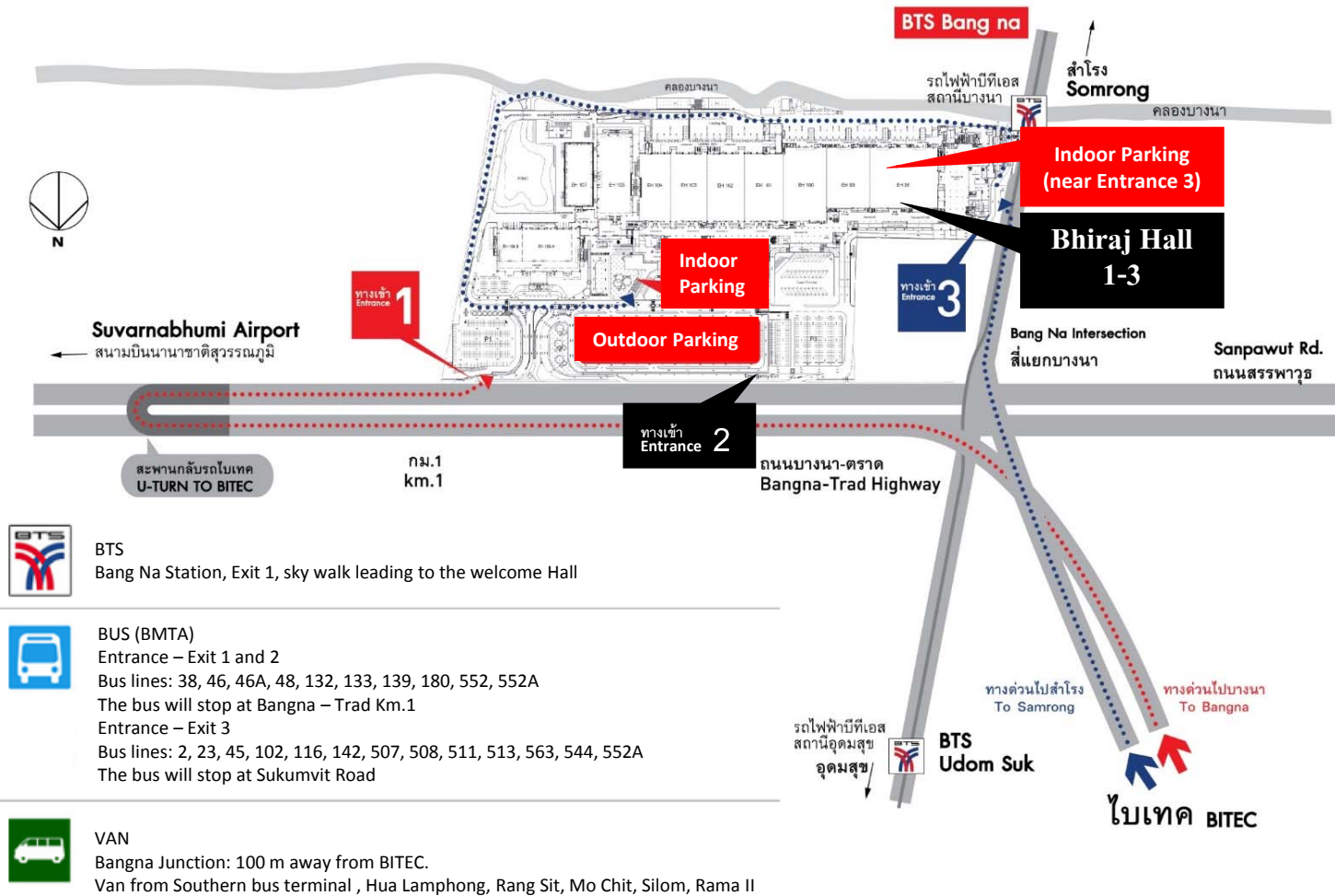
Article 23. A director shall have a right to receive remuneration from the Company in the form of rewards, meeting allowance, gratuity, bonus or other benefits in accordance with the approval of the shareholders' meeting which has passed a resolution by not less than two-third (2/3) of the total number of votes of the shareholders attending the meeting and having the right to vote. It may be prescribed in fixed amount or establish the rules and prescribed for particular circumstance(s) or being perpetual rules until be changed by shareholder's meeting resolution. Moreover, a director shall have a right to receive the allowance and welfare according to the Company's rule.

The provisions in the first paragraph shall not affect the right of the director appointed from the officers or employees of the Company to receive remuneration and benefit in his/her capacity as an officer or employee of the Company.

## Map of Bangkok International Trade and Exhibition Centre (BITEC)

### Parking Area

- Please enter the parking area using **Entrance 3** and park in the **Indoor parking near Entrance 3**, in the area between **red or yellow pillars on B1 B2 B3 Floor**. Please bring the parking ticket for scanning at the front of event room.
- **Please avoid parking in Bhiraj Tower (blue ticket)** , as such parking tickets can not be scanned.





**Information Memorandum on Asset Acquisition Transaction  
from the Investment in the Clean Fuel Project (CFP)  
of Thai Oil Public Company Limited  
(List 2)**

The Board of Directors Meeting No. 6/2018 of Thai Oil Public Company Limited (the “**Company**”), convened on 29 June 2018, resolved to approve the investment in the Clean Fuel Project (the “**CFP Project**”) by the Company for the purposes of enhancing the competitiveness of the Company by improving its production efficiency to increase the product value by making it more environmentally-friendly, and to increase its oil refining capacity to allow the refineries to handle more types and greater quantities of crude oil, which create an economies of scale and a reduction of raw material costs and also strengthen the country’s energy stability as well as promote the country’s long-term economic development. The CFP Project represents the investment value of approximately USD 4,825 million or approximately THB 160,279 million, with the projected interests during construction in the amount of USD 151 million or approximately THB 5,016 million. Furthermore, the USD currency and the rate which is equivalent to THB referred to under this document is calculated based on the foreign exchange rate of the Bank of Thailand (average selling rate for the USD) as of 28 June 2018, at THB 33.2185 to USD 1.

The investment in the CFP Project constitutes an asset acquisition transaction of the Company pursuant to the Notification of the Capital Market Supervisory Board No. TorChor. 20/2551 Re: Rules on Entering into Material Transactions Deemed as Acquisition or Disposal 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 and Disposition of Assets, B.E. 2547 (2004) (including any amendment thereto) (collectively, the “**Notifications on Assets Acquisition or Disposal**”). The transaction represents the highest value of 68.58 percent calculated based on the Total Value of Consideration Basis compared with the total assets value of the Company from the reviewed Consolidated Financial Statement of the Company for the period ending 31 March 2018, and when combining the transaction value with the asset acquisition transaction entered into by the Company during the past six months prior to the date of entering into this transaction, the value of which was approximately THB 81 million, the total transaction value will be equivalent to 68.61 percent which is classified as a “Class 1 Asset Acquisition Transaction” pursuant to the Notifications on Assets Acquisition or Disposal. Therefore, the Company shall comply with the Notifications on Assets Acquisition or Disposal as follows:

- (1) Disclose an information memorandum on the investment in the CFP Project of the Company to the Stock Exchange of Thailand (the “**Stock Exchange**”);
- (2) Convene a shareholders meeting in order to seek approval on the investment in the CFP Project of the Company and other related matters, whereby the Company shall obtain a vote of not less than three-fourths of the total number of votes of the shareholders attending the Meeting and entitled to vote, without counting the votes of the interested shareholders; and
- (3) Arrange for an independent financial advisor (IFA) to provide opinions on the reasonability and benefit of the investment in the CFP Project to the Company, reasonableness of the price, and conditions of the transaction, and to deliver such opinions to the Office of the Securities

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and Exchange Commission (the “**SEC Office**”), the Stock Exchange, and the shareholders of the Company.

In this regard, the Company would like to disclose the information memorandum on the investment in the CFP Project as follows:

**1. Information Memorandum under List (1).**

**1) Transaction Date**

The Company expects that the investment in the CFP Project will be commenced within September of 2018, and the construction is expected to be commenced in May of 2019 and completed by the first quarter of 2023.

**2) Name of Related Party and its Relationship with the Company**

Upon being granted approval from the shareholders meeting, the Company will engage those parties who have knowledge, experience and expertise with respect to the engineering design, procurement, construction, and installation of equipment and machinery necessary for the investment in the CFP Project in accordance with its procedures and regulations.

At first, the Company deemed that such relevant parties are not connected persons of the Company. Nevertheless, during the investment in the CFP Project, if it appears that any of the relevant parties is a connected person of the Company, the Company will strictly comply with 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 (2003) (including any amendment thereto) (collectively, the “**Notifications on Connected Transactions**”).

**3) General Characteristics of the Transaction and Transaction Value**

**3.1 General Characteristics of the Transaction**

The Company has been engaged in the petroleum refining business since the year 1961, with oil refineries located near Laem Chabang Port, Si Racha District, Chon Buri Province, having an oil refinery area of over 2,500 rai which can be divided into the leased land of the Treasury Department, Ministry of Finance, and the land owned by the Company.

At present, the refining capacity of Thailoil’s refinery is 275,000 barrels per day which can produce refined petroleum products of approximately 14,000 million liters per year or equivalent to 25 percent of Thailand’s overall refining capacity.

Thailoil’s refinery has been designed to create maximum value from the production system. As a complex refinery, the refining process involves various steps that take place in the crude distillation units, the upgrading units, and the quality improvement units, which help to produce high quality petroleum products.

Nevertheless, the benchmarking of Thailoil’s competitiveness against other refineries in the region reveals that the competitiveness ranking of Thailoil in comparison to other refineries in the region has tendency to decrease as there are new refineries with

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a higher production capacity and using more advanced technologies. In addition, the performance of the First Crude Distillation Unit and the Second Crude Distillation Unit have decreased as they have been in use for approximately 50 years and 40 years, respectively. As a result, additional investment to increase their performance and cost of maintenance are relatively not worthwhile.

In view of the above, the Company has researched and explored various approaches in order to enhance the competitiveness of the refineries and put its refineries in the forefront of the industry by increasing the profitability ratio per unit with the development of the Clean Fuel Project (CFP).

The CFP Project embraces the performance improvement of the production process in order to have the capacity to refine heavy crude oil, of which the price is normally lower than that of light crude oil which the Company has currently been refining, resulting in the reduction of raw material costs. In addition, the CFP Project will include the installation of an upgrading unit where heavy oil with lower value and high sulfur content, such as fuel oil and asphalt, is converted into light oil with lower sulfur content in accordance with the Euro 5 Standard that has higher quality and is more environmentally-friendly, for example, jet fuel and diesel. Consequently, the CFP Project not only adds value to the Company's products, but also responds to and accommodates the growth of the aviation industry and the country's economic development. In an effort to improve the performance of the production process, the Company plans for the construction of crude distillation units with higher refining capacity in replace of the current crude distillation units, which will result in an increase in the refining capacity from 275,000 barrels to 400,000 barrels per day, which creates the economies of scale and encourage the Company to be able to stand firmly in the petroleum refinery industry in the future and strengthen the energy security of the nation.

In summary, the scope of the CFP Project comprises the construction of six groups of production units as follows:

- Group 1: Hydrocracking Unit (HCU-3) and Residue Hydrocracking Unit (RHCU), which are distillation units that help adding value to the products by converting fuel oil to middle distillates, i.e. jet fuel and diesel.
- Group 2: Crude Distillation Unit (CDU-4) to replace CDU-1 & CDU-2 with refining capacity 220,000 barrel per day and High Vacuum Unit (HVU), which distill crude oil and long residues from the residues of crude oil distillation columns CDU-4 to be processed with fractional distillation prior to feeding to other units for further value adding.
- Group 3: Hydrogen Manufacturing Unit (HMU-3 / PSA-4), which produces hydrogen for the use in other distillation units.
- Group 4: Hydro Treating Unit (HDT-4) and Hydro De-sulfurization Unit (HDS-4), which extracts sulfur from benzyl and diesel content, respectively.

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Group 5: Sulphur Recovery Unit (SRU), which produces sulfur which is extracted from various types of oil by the recovery unit, before distribution in the form of liquid sulfur or converted into solids for export purposes.

Group 6: Energy Recovery Unit (ERU), which extracts the residual products from RHCU, referred to as “pitch”, to be used as the fuel for generating electricity, all of which will be used in the production units of the CFP Project.

In addition, there are constructions of necessary and relevant utility units, e.g., wastewater treatment system, raw water pond, crude oil and products storage tank, and pipeline transportation of crude oil and products.

The Company expects that the investment in the CFP Project would require investment funds of approximately USD 4,825 million, with the projected interests during construction in the amount of USD 151 million. The period of investment and development of the CFP Project of approximately 4-5 years, whereby the construction is expected to be completed and ready for the commercial operation in the first quarter of 2023.

### **3.2 Transaction value**

The investment in the CFP Project represents the highest value, in accordance with the Notifications on Assets Acquisition or Disposal, of 68.58 percent calculated based on the Total Value of Consideration Basis compared with the total assets value of the Company from the reviewed Consolidated Financial Statement of the Company for the period ending 31 March 2018, and when combining the transaction value with the asset acquisition transaction entered into by the Company during the past six months prior to the date of entering into this transaction, the value of which was approximately THB 81 million, the total transaction value will be equivalent to 68.61 percent which is classified as a “Class 1 Asset Acquisition Transaction” pursuant to the Notifications on Assets Acquisition or Disposal. Therefore, the Company shall comply with the Notifications on Assets Acquisition or Disposal as follows:

- (1) Disclose an information memorandum on the investment in the CFP Project of the Company to the Stock Exchange;
- (2) Convene a shareholders meeting in order to seek approval on the investment in the CFP Project and other related matters, whereby the Company shall obtain a vote of not less than three-fourths of the total votes of the shareholders attending the Meeting and entitled to vote, without counting the votes of the interested shareholders; and
- (3) Arrange for an independent financial advisor (IFA) to provide opinions on the reasonability, benefits of the investment in the CFP Project, reasonableness of the price, and conditions of the transaction and to deliver such opinions to the SEC Office, the Stock Exchange, and the shareholders.

The details of the calculation of the transaction size are as follows:

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**(a) Net Tangible Assets (NTA) Basis:**

Not applicable as the investment in the CFP Project is considered as an investment in additional assets.

**(b) Net Profit Basis:**

Not applicable as the investment in the CFP Project is considered as an investment in additional assets.

**(c) Total Value of Consideration Basis:**

$$\begin{aligned} &= \frac{\text{(Total value of the CFP Project + share value of TOP Maritime Service Co., Ltd.)} \times 100}{\text{Total asset value of the Company and its subsidiaries}} \\ &= \frac{\text{(THB 165,295 million}^1\text{ + THB 81 million)} \times 100}{\text{THB 241,040 million}} \\ &= \text{approximately 68.61 percent} \end{aligned}$$

Remark<sup>1</sup>: The total value of the CFP Project comprises the investment value of approximately USD 4,825 million or approximately THB 160,279 million, with the projected interests during construction in the amount of USD 151 million or approximately THB 5,016 million.

**(d) Value of Securities issued by the Company as consideration for the assets acquired:**

Not applicable as there is no issuance of new securities.

**4) Details of the assets to be acquired**

The CFP Project comprises the construction of six groups of production units as follows:

Group 1: Hydrocracking Unit (HCU-3) and Residue Hydrocracking Unit (RHCU), which are distillation units that help adding value to the products by converting fuel oil to middle distillates, i.e. jet gasoline and diesel.

Group 2: Crude Distillation Unit (CDU-4) to replace CDU-1 & CDU-2 with refining capacity of 220,000 barrel per day and High Vacuum Unit (HVU), which distill crude oil and long residues from the residues of crude oil distillation columns CDU-4 to be processed with fractional distillation prior to feeding to other units for further value adding.

Group 3: Hydrogen Manufacturing Unit (HMU-3 / PSA-4), which produces hydrogen for the use in other distillation units.

Group 4: Hydro Treating Unit (HDT-4) and Hydro De-sulfurization Unit (HDS-4), which extracts sulfur from benzyl and diesel content, respectively.

Group 5: Sulphur Recovery Unit (SRU), which produces sulfur, which is extracted from various types of oil by the recovery unit, before distribution in the form of liquid sulfur or converted into solids for export purposes.



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Group 6: Energy Recovery Unit (ERU), which extracts the residual products from RHCU, referred to as “pitch”, to be used as the fuel for generating electricity, all of which will be used in the production units of the CFP Project.

In addition, there are constructions of necessary and relevant utility units, e.g., wastewater treatment system, raw water pond, crude oil and products storage tank, and pipeline transportation of crude oil and products.

**5) Total Value of the Consideration and Payment Method**

The total value of the CFP Project is approximately USD 4,825 million, with the projected interests during construction in the amount of USD 151 million, whereby the payment will be made in cash.

**6) Value of the Acquired Assets**

It is expected that the value of the acquired assets would be close to the total value of consideration as specified in 5) above.

Nevertheless, the bookkeeping of some types of investment funds for the CFP Project may not be booked as the investment funds for the CFP Project in full. As a result, the value of the acquired assets under the CFP Project may change in accordance with the relevant bookkeeping practices and principles.

**7) Basis used to determine the total value of consideration**

The total value of consideration is assessed from bidding process with respect to the engineering design covering detailed engineering design, procurement of machinery and equipment, construction of factory, and installation of equipment and machinery, and other expenses necessary for the investment in the CFP Project, which are based on the design from external engineering consultant and also estimated interest payment during CFP construction

**8) Expected Benefits from Entering into the Transaction Concerning the Investment in the CFP Project**

The investment in the CFP Project will be beneficial to the Company and the country as follows:

**1.8.1 Benefits to the Company**

- (a) Increase competitiveness: Due to the fact that the oil refinery business becomes more competitive due to construction of new refineries which are being equipped with advanced technologies and are enhancing their energy efficiency, as well as higher consumption of renewable energy. Without investment in the CFP Project to replace the current crude distillation unit of the Company which is in use for more than 50 years, it may result in the Company’s inability to compete in the market in the future and will have an effect on its revenue and business operation in the future.
- (b) Cost reduction of crude oil production: After the completion of the CFP Project construction, the Company will have the capacity to refine heavy crude oil, of which the price is normally lower than that of light crude oil, consequently reducing the cost

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of oil refining and allowing more flexibility in accepting supplies of crude oil from more varied sources.

- (c) Adding value to the products: The CFP Project will add value to the products by converting fuel oil into jet gasoline and diesel of which yield higher prices and are more environmentally-friendly. The CFP Project will not only allow the Company to be able to respond to the changes in the market where the use of fuel oil in the shipping industry will be reduced from 2020 onwards, but also increase the production capacity of jet gasoline and diesel to accommodate market demand in the future.
- (d) Creating opportunities for expansion into the petrochemical business: The CFP Project will enable the Company to produce more light and heavy naphtha, which are raw materials used in the petrochemical industry. In this regard, the Company is currently conducting a feasibility study on adding value to those products in order to convert them into petrochemical products.

## **8.2 Benefits to the Country**

- (a) Enhancement of the country's long-term energy stability: The CFP Project will help reduce the country's dependency on imported products, especially jet gasoline, since it is estimated that Thailand will depend on the import of jet gasoline supplies by 2022 due to increasing demand.
- (b) Support the Petrochemical Project Phase 4 of the public sector: The production of light and heavy naphtha, which are raw materials for the petrochemical industry, will be processed under the CFP Project.
- (c) Opening the window of opportunity to be the "Energy Hub" of ASEAN Economic Community (AEC)
- (d) Driving force for economic development: As the CFP Project is the investment project operated by the private sector, it will generate more employment, both directly and indirectly, which will in turn foster the country's economic development.
- (e) Increase capability for domestically-refined crude oil: Through introducing new technology, as well as increasing the production capacity, the Company is able to produce a wide range of oil products, as well as domestic crude oil, which would help promoting and accommodating the government policy regarding the consumption of domestic crude oil.

## **9) Sources of Funds used for the operation of the CFP Project**

The primary sources of funds used for the operation of the CFP Project are expected to be obtained from the remaining cash of the Company in the amount of approximately USD 2,500 million, long-term loans secured from financial institutions and/or the capital derived from the issuance and offer for sale of the debt instruments, e.g., debentures, amounting to approximately USD 1,500–2,000 million, and the rest of funds will be obtained from the cash flow from the Company's future business operation, amounting to approximately USD 1,600 million.

**10) Opinions of the Board of Directors on the entering into of the transaction**

Board of Directors Meeting No. 6/2018, convened on 29 June 2018, resolved to approve the investment in the CFP Project and other relevant matters since the Board of Directors was of the opinion that such investment in the CFP Project for the purposes of enhancing the competitiveness of the Company by improving its production efficiency, according to the reasons and details as specified in Clauses 3.1 and 8 above, is necessary, appropriate, and yields utmost benefits to the Company and the country as a whole, and resolved to propose the matter to the shareholders meeting of the Company for consideration and approval on the investment on the CFP Project and other relevant matters.

**11) Opinions of the Audit Committee and/or the Board of Directors which are different from the opinions of the Board of Directors**

—No different opinions from the opinions of the Board of Directors—

**2. Responsibility of the Board of Directors with respect to the information set out in documents delivered to the shareholders**

The Board of Directors has verified the information contained herein with prudence and hereby certifies that the information in this Information Memorandum is correct, complete, comprises no false statement, no omission of any facts that are material, and also contains no misleading statements.

**3. Qualifications of the independent financial advisor appointed for providing opinions on the entering into of the transaction**

Maybank Kim Eng Securities (Thailand) Public Company Limited has been appointed as the independent financial advisor to provide opinions on the investment in the CFP Project which constitutes an asset acquisition transaction of the Company, whereby the independent financial advisor holds no shares in the Company and has no relationships with the Company. In this regard, the independent financial advisor has granted consent to the Company to disclose the report on its opinions dated 31 July 2018.

Please refer to the Report on the Opinions of the Independent Financial Advisor on Asset Acquisition Transaction, attached to the Invitation to the Extraordinary General Meeting of Shareholders No. 1/2018 as appeared in Attachment 2.

**4. Indebtedness of the Company**

**4.1 Total amount of debt instruments having been issued and those not having been issued pursuant to the resolution of the shareholders meeting which authorises the Board of Directors of the Company to consider issuing them for sale as it deems appropriate**

**(1) Debt instrument having been issued**

As at 31 March 2018, the debentures issued and offered for sale to the institutional investors and high net worth investors, and offered for sale to the shareholders in form of a private placement, are as follows:

- 1) 2 Series of Unsecured U.S. Dollar Debentures, totalling USD 1,000 million, due 2023 for USD 500 million and due 2043 for USD 500 million; and

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- 2) 5 Series of Unsubordinated and Unsecured Thai Baht Debentures, totaling THB 23,500 million, due 2019 for THB 3,000 million, 2021 for 3,000 million, 2022 for 3,000 million, 2024 for 7,000 million, and 2027 for 7,500 million, detailed as follows:

Debentures	Type	Amount (THB million)	Interest Rate per Annum	Term and Maturity Date	Credit Rating	Projected Credit Rating
No. 1/2014, Series 2	Unsubordinated and Unsecured Debentures with named certificate	3,000	4.13%	5 years, due 12 March 2019	AA-(tha)	AA-(tha)
No. 1/2014, Series 3	Unsubordinated and Unsecured Debentures with named certificate	3,000	4.61%	7 years, due 12 March 2021	AA-(tha)	AA-(tha)
No. 1/2010	Unsubordinated and Unsecured Debentures with named certificate	3,000	4.80%	12 years, due 30 April 2022	AA-(tha)	AA-(tha)
No. 1/2015, Series 4	Unsubordinated and Unsecured Debentures with named certificate	7,000	4.84%	10 years, due 12 March 2024	AA-(tha)	AA-(tha)
No. 1/2012, Series 2	Unsubordinated and Unsecured Debentures with named certificate	7,500	5.05%	5 years, due 23 March 2027	AA-(tha)	AA-(tha)

**(2) Debt instrument not having been issued**

As at 31 March 2018, the unsold amount of issuance and offer for sale of the debentures to both the local and overseas investors approved by the shareholders meeting is USD 1,568 million or in an equivalent amount (calculated based on the foreign exchange rate as at the date of the offer for sale of debentures).

**4.2 Total amount of loans with specified repayment period, and the liability to place assets as collateral**

As at 31 March 2018, the total amount of loans with specified repayment period and the liability to place assets as collateral of the Company and its subsidiaries is USD 16,272 million.

**4.3 Total value of debts in other categories, including overdrafts, and the liabilities to place assets as collateral**

None.

**4.4 Indebtedness to be incurred in the future**

As at 31 March 2018, the Company and its subsidiaries in the group may incur indebtedness and/or gain income from any risk management activity by entering into the Crack Spread Guarantee Agreement for refined oil and crude oil, under which the Company and its

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subsidiaries in the group are required to make or receive payment of the differences between the agreed price and the market price of the refined oil products and crude oil for such particular period, to or from the other party in accordance with the agreed conditions.

As at 31 March 2018, the volume of refined oil and crude oil of the Company and its subsidiaries in the group under such agreement is 0.9 million barrels.

## **5. Corporate Information**

### **5.1 Nature of business operations and business trends of the Company and its subsidiaries**

#### **Nature of Business Operation**

- **Oil Refining Business**

The oil refining process is the process that extracts hydrocarbon molecules in crude form and converts such substance into petrochemical products of higher values. Normal oil refineries are designed to have the capacity to refine various types of crude oils, as well as other materials, into various types of products according to the market demand for the purpose of achieving the highest refinery margin. In general, oil refineries comprise various production units, each production unit has the capacity to perform any of the following:

- Extraction of various types of hydrocarbon in crude oil at different boiling points
- Conversion of hydrocarbon into products with higher values
- Improvement of the product quality by removing contaminants

Crude oil is the feedstock in the oil refining process. The crude oil quality and type of refining unit determine the oil refining methods and the level of convertibility of crude oils into refined petrochemical products in different proportions. In general, oils are categorized by density (from light to heavy), and the quantity of sulfur (from sweet to sour).

The price of light sweet crude oil is higher than that of heavy sour crude oil due to the fact that light sweet crude oil is processed with less contaminant removal processes, and, consequently, yields finished products with higher values, e.g. benzene, jet fuel and diesel in larger quantities. Conversely, the heavy sour crude oil yields products of lower values and requires additional contaminant removal processes in order to yield the light crude oil with higher values. The oil refineries, therefore, endeavor to refine crude oils and other feedstocks for the maximum benefits under the restrictions on the conversion unit and treating unit of each refinery. In this regard, the oil refineries take into account relevant important information, i.e. current and anticipated prices of refined oil products, types of products in demand on the market, and the price of crude oils and other materials for the purpose of refining planning.

The complex oil refining process is able to convert less expensive raw materials, such as heavy sour crude oil, into products with higher values. In general, the product complexity of the oil refinery depends on the quantity and type of conversion unit with flexibility in selection of various types of raw materials. Therefore, a complex

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oil refinery has the advantage of utilizing less expensive crude oils, and this will consequently generate more gross profit.

The oil refineries equipped with upgrading units have the capacity to increase the quantity of benzene, jet fuel, and diesel, all of which have higher values than fuel oil. Therefore, the oil refineries equipped with a high ratio of upgrading units are likely to generate higher gross profits.

The oil refineries of Thairoil Public Company Limited are equipped with conversion units comprising of catalytic octane additives, residue fluid catalytic cracking units, residue fluid catalytic cracking units using hydrogen, and heating oil additives, which enhance the productivity of benzene, jet fuel, and diesel, which are in demand on the domestic market, and enhance, to a certain extent, the flexibility in selection of feedstock for production.

In addition, the Company's oil refineries have the capacity to refine various types of crude oils, i.e., crude oil from the Middle East, Far East, Western Africa or domestic oil sources. The selection of feedstocks is based on price, quality, and quantity of products expected to be derived from such feedstocks.

- Petrochemical Business

**Thai Paraxylene Co., Ltd. (TPX)**, 100% of the shares of which are held by the Company, was incorporated in June 1996 to engage in the business of paraxylene (PX) production. The plant is situated on 92 rai of land, adjacent to Thairoil Refinery, Sriracha District, Chon Buri Province. The construction was completed at the year-end of 2001 and the commercial production has commenced since March 2002.

In 2012, TPX expanded its investment by developing the Tatoray production unit into the PxMax production unit, a production unit which converts toluene into benzene and paraxylene with higher values, resulting in an increase in the production capacity of paraxylene and benzene of the Company to 527,000 and 259,000 tons per year respectively. In addition, the PxMax production unit is equipped with "divided wall column" technology, which is modern and efficient, resulting in an improvement in the overall energy consumption of TPX and reduction in production costs.

Product details

Paraxylene is a feedstock in the intermediate petrochemical industry, used in the production of purified terephthalic acid (PTA). The substance is used to produce polyester fiber and plastic for water bottles, and polyethylene terephthalate (PET), which is part of the downstream petrochemical industry. Benzene is a precursor used in the production of styrene monomer, phenol and cyclohexane, all of which are used to produce plastic containers, electrical appliances, and engine parts. Toluene is used in the solvent industry, in addition to being used as a feedstock for the production of benzene and paraxylene.

**Labix Co., Ltd. (LABIX)**, the shares of which are held by Thai Paraxylene Co., Ltd. and Mitsui and Company Co., Ltd. with the shareholding proportion of 75% and 25% respectively. LABIX engages in the business of linear alkyl benzene (LAB)

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production and has commenced its commercial operation since 25 February 2016. The LABIX plant is situated on 50 rai of land, adjacent to the plant of Thai Paraxylene Co., Ltd., at Sriracha District, Chon Buri Province.

The production plant of LABIX is considered the first comprehensive plant in Thailand and Southeast Asia which produces LAB, equipped with modern and environment-friendly innovation and technology.

The producible LAB is able to compensate for the importation of such products to Thailand, whereby the remaining products are also exported to Southeast Asia. The company is currently a net importer. LABIX's LAB plant will enhance the potential of Thailand to be the center of the production and exportation of detergents to other countries in Southeast Asia.

#### Product details

LAB is a feedstock used in the detergent production industry to be produced as linear alkyl benzene sulfonate (LAS), which is a surfactant used in the production of household detergents and cleaning products.

- Lube Base Oil Business

**Thai Lube Base Public Company Limited (TLB)**, 100% of the shares of which are held by the Company, has commenced its commercial operation since 1997, with the production capacity of lube base oil of 267,015 tons per year, and of bitumen 350,000 tons per year. Afterwards, TLB engaged in the construction of treated distillate aromatic extract unit in order to produce treated distillate aromatic extract (TDAE) products. Its commercial operation commenced in January 2011 with the production capacity of 50,000 tons per year.

#### Product Details

##### **Lube Base Oil**

Lube base oil products are categorized into 3 types based on their viscosity, i.e. 150SN, 500SN, and 150BS, to be blended in the products of finished lube oils. The manufacturer of lube oil blends the lube base oil with recipe-based additives, to produce various types of lube oils, which can be categorized as follows:

- Engine oil, such as oil for the benzene engine, diesel, gear lubricant, and oil for power transmission units
- Marine oil, such as oil for low speed diesel engine
- Industrial oil, such as compressor lubricants, refrigeration oil, gear lubricant, heat transfer oil, hydraulic oil, motor oil for spinners and looms, and turbine oil
- Metal processing fluids, such as grinder lubricant, quench oil, and rust preventive oil.

##### **Bitumen**

- Used in road construction.

## **Byproducts**

- Aromatic extract, used in rubber products of various types, such as tires and rubber seals;
- Treated distillate aromatic extract (TDAE), used in rubber products, under the requirements issued by EU countries;
- Vacuum gas oil (VGO), a feedstock used in the production of diesel
- Sulfur, a feedstock used in the production of detergents and sulfuric acid
- Slack wax, a feedstock used in the production of candles, cosmetics, and coating of paper containers
- Naphtha, a feedstock used in the production of benzene, jet fuel, and in petrochemical industry

- Solvent Business

**Thaioil Solvent Co., Ltd. (TOS)**, 100% of the shares of which are held by the Company, engages in the solvent and chemical business, both within the country and abroad. TOS holds shares in Top Solvent Co., Ltd. (TS), Sak Chaisidhi Co., Ltd. (SAKC), and Top Solvent (Vietnam) LLC. SAKC engages in the production of high-quality hydrocarbon solvents for various types of industrial work, such as the industries of color, tire, glue, vegetable oil extraction, polyethylene foam, plastic, and copper extraction. In this regard, TS acts as its domestic and international sales representative. In addition, Top Solvent (Vietnam) LLC., incorporated on 2 November 2009 (acquired the business from Shell Vietnam Co., Ltd.) in which TOS holds 100% of the shares, engages in the sale of solvent and chemical products in Vietnam, which was the first overseas investment of Thaioil Group. In this regard, Top Solvent (Vietnam) LLC. owns warehouses in Go Dau and Tam Phuoc and is able to sell solvent and chemical products of various types, such as the products in the industries of paints, coating, paint thinner, glue, emulsifier, electronics printing inks, cleaning agents, vegetable oil extraction, and industrial chemicals. Furthermore, Top Solvent (Vietnam) LLC. has planned to construct a new warehouse and terminal in Hai Phong, north of Vietnam, to accommodate the trends of increasing demand in accordance with the domestic economic expansion. The construction is expected to be complete by the year-end of 2018.

- Electricity Generation Business

**TOP SPP Co., Ltd. (TOP SPP)**, 100% of the shares of which are held by the Company, is a company of electricity and steam generation, producing from its thermal power station and cogeneration power plant fueled by natural gas. The two power plants have the total electricity production capacity of 239MW and steam production capacity of 313 tons per hour. The steam production capacity can be expanded to 147 tons per hour in the event of an increase in the demand. TOP SPP distributes the electricity of 180MW to the Electricity Generating Authority of Thailand (EGAT) under the two power purchase agreements with a term of 25 years each, 90MW for each agreement. The electricity commercial sale to EGAT of Project One and Project Two commenced on 1 April and 1 June 2016 respectively. In this



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regard, the revenue derived from the sales is equivalent to approximately 54% of the total revenue, while the remaining electricity and steam is distributed to the companies under Thairoil Group, which is equivalent to 46% of the estimated revenue. The operating results of TOP SPP will enhance the stability of the revenue and increase the efficiency of the Company's energy use. In this regard, the Company provides the management service in all respects for TOP SPP.

**Thaioil Power Co., Ltd. (TP)**, 74% of the shares of which are held by the Company, is a company of electricity and steam generation, producing from its thermal power station and cogeneration power plant fueled by natural gas. TP has the electricity production capacity of 118MW and steam production capacity of 216 tons per hour, whereby TP distributes the electricity of 41MW to EGAT under the power purchase agreement with a term of 25 years (commenced in April, 1999), which is equivalent to approximately 20% of the revenue, while the remaining electricity and steam are distributed to the companies under Thairoil Group, which is equivalent to approximately 80% of the revenue. In this regard, the power purchase agreement of TP helps maintain the Company's revenue stability and energy use. This agreement provides that customers pay for the electricity to TP under the minimum take-or-pay requirement for the electricity at the average of 70% and the steam at the average of 85%. In this regard, the Company provides the management service in all respects for TP.

With respect to Independent Power (Thailand) Co., Ltd. (IPT), in which the Company initially held 24% of the shares and TP held 56% of the shares, IPT, entered into a merger with PTT Utility Co., Ltd. (PTTUT) and changed its name to Global Power Synergy Public Company Limited (GPSC). The result of the merger is the change in the shareholding structure of the Company and TP to 8.91% and 20.79%, respectively. Therefore, the Company holds, directly and indirectly, a total of 24.29% of the shares in GPSC.

- Oil and Petrochemical Product Transportation Business

**Thaioil Marine Co., Ltd. (TM)**, 100% of the shares of which are held by the Company, focuses on being the leader of the large fleet in PTT Group and in the region, to accommodate the expansion of the energy, petroleum, and petrochemical market, such as VLCC, AFRAMAX, and crew boats. The expansion is to support the logistics management in PTT Group, as well as to accommodate the business expansion strategy of Thairoil Group.

Currently, the Company has undergone the business restructuring. In addition to owning five oil and petroleum tankers providing its own transportation service for oils and various petrochemical products by tankers, domestically and overseas, the Company established a corporate group specialized in tankers of various types by cooperating with its business alliances, especially the large ocean liners, such as VLCC, AFRAMAX, and crew boats, for transportation of supplies and crews to offshore oil rigs, which enhance the efficiency of the service standard.

- Ethanol Business

**Thaioil Ethanol Co., Ltd. (TET)**, 100% of the shares of which are held by the Company, invests in the businesses related to the ethanol industry that is used as fuel by blending with benzene to produce gasohol of various types to be distributed domestically, i.e. gasohol E10 (octane 91 and 95), gasohol E20 (octane 95), and gasohol E85 (octane 95), composed of ethanol used as fuel at the ratio of 10%, 20% and 85% respectively.

Currently, TET makes an investment by holding shares in the two companies producing and distributing ethanol, i.e.:

1. **Sapthip Co., Ltd.**, situated in Lop Buri, 50% of the shares of which are held by TET, is a manufacturer and distributor of ethanol used as fuel and used in the industry as a feedstock for cassava-based products, derived from fresh cassava and cassava chips. The production capacity is two hundred thousand liters per day. In this regard, Sapthip Co., Ltd. established **Sapthip Green Energy Co., Ltd.** in April 2018 to engage in the biogas business, in which Sapthip Co., Ltd. holds 100% of the shares.
2. **Ubon Bio Ethanol Public Company Limited**, situated in Ubon Ratchathani, 21.28% of the shares of which are held by TET, is a manufacturer and distributor of ethanol used as fuel and used in the industry as a feedstock for cassava-based products, derived from fresh cassava and cassava chips, including those which are molasses-based. The production capacity is four hundred thousand liters per day. In addition, Ubon Bio Ethanol Public Company Limited owns the following subsidiaries:
  - 2.1 **Ubon Agricultural Energy Co., Ltd.**, a manufacturer of native starch and organic starch, with the production capacity of 700 tons per day;
  - 2.2 **Ubon Biogas Co., Ltd.**, a manufacturer of biogas derived from the waste water of Ubon Agricultural Energy Co., Ltd. (the native starch factory) with the production capacity of 36,000 cubic meters per day. The biogas will be used as fuel in the production process of native starch and the remaining gas will be used in the 1.9MW electricity generation to be distributed to the Provincial Electricity Authority (PEA); and
  - 2.3 **NP Bio Energy Co., Ltd.**, a manufacturer of biogas derived from the cassava waste of Ubon Agricultural Energy Co., Ltd. (the native starch factory), including cassava waste from Ubon Bio Ethanol Co., Ltd. (ethanol plant), with the production capacity of 70,000 cubic meters per day. The biogas will be used as fuel in the production process of ethanol of Ubon Bio Ethanol Co., Ltd.

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- Human Resource Management Business

**Thaioil Energy Service Co., Ltd. (TES)**, in which the Company holds 100% of the shares, was incorporated for the purpose of supporting the businesses of Thaioil Group with respect to human resource management and nomination of personnel to be in line with the business objectives, both at present and in the future. In particular, due to intense competition on the labor market, coupled with various behaviors and demands of candidates, the Company has developed a strategy in the nomination to accommodate the change. An emphasis is put on marketing tools and technology in order to attract and create bond among high-quality personnel to cooperate with the companies under Thaioil Group. Currently, there are more than 700 employees in TES.

- Energy Consultant Business

**PTT Energy Solutions Co., Ltd. (PTTES)** is a joint venture of the company under PTT Group, in which the Company holds 20% of shares. PTTES was incorporated in 2011 to render technical and engineering consultancy services in the interests of operational excellence, along with the enhancement of personnel potential under PTT Group. PTTES aims to develop a body of knowledge and innovation, with the vision to achieve “Technical Center of Excellence in AEC in 2020”.

- Social Enterprise Business

**Sarn Palung Social Enterprise Co., Ltd. (SPSE)** is a joint venture of the company under PTT Group, registered on 8 September 2017, in which the Company holds 15% of shares. The purpose of the incorporation is for the operation of social enterprise in the development of society, communities, and environment, and promotion of income generation. Employment in the local community is in line with the government policy which encourages the private sector and locals to jointly participate in the country development and problem-solving.

- Financial Management Business

**Thaioil Treasury Center Co., Ltd. (TTC)** registered its incorporation with the Ministry of Commerce on 3 October 2017, with the registered capital of THB 10 million, in which the Company holds 100% of shares. TTC was incorporated for the purpose of engaging in the business of international headquarters (IHQ) and treasury center (TC) for Thaioil Group. The scope of business covers three main activities as follows:

1. Financial consultancy and commercial and industrial management;
2. Exchange rate risk management; and
3. Liquidity.

Centralized financial management through the incorporation of the treasury center for Thaioil Group will enhance the competitiveness with more efficient management of transactions and capital. Currently, TTC was granted a license to operate the treasury center from the Bank of Thailand on 21 November 2017 and a license to engage in the IHQ business from the Revenue Department on 31 January 2018.

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- Information Technology Business

**PTT Digital Solutions Co., Ltd. (PTT Digital)** (former name was PTT ICT Solutions Co., Ltd. (PTT ICT) is a joint venture of the company under PTT Group, in which the Company holds 20% of shares. PTT Digital engages in the business of information technology and communications in order to accommodate the trends towards the full digital age. The companies which are the shareholders of PTT ICT have introduced a policy to PTT ICT to define a strategy regarding digital technology to be in line with such circumstance. The policy is also to change the image of PTT ICT by changing the name to PTT Digital Solutions Co., Ltd. (PTT Digital), along with changing the strategy which aims to enhance the personnel capacity in respect of internet of things and mobility. In addition, PTT ICT outsources new products and services in many aspects through partnerships, such as engineering analysis system, robotic work, in order to create an opportunity for business expansion and support the shareholders' business operations.

### **Business Trends of the Company and its subsidiaries**

- Crude oil and petroleum products market conditions

During the second quarter of 2018, the crude oil price increased from the first quarter as a result of concerns regarding the tensions in the Middle East concerning the crude oil market, which subsequently caused the supply of crude oil to reduce. The major risk which caused market concerns is the fact that the US withdrew from the Iran nuclear deal and decided to once again boycott Iran, causing Iran to commence to export its crude oil to the global market in a limited quantity. In addition, the output of crude oil in Venezuela decreased to its lowest in 30 years, which led to an inability to fund and invest in the domestic petroleum industry. Furthermore, the cooperation between the manufacturers within and outside of OPEC to cut the production capacity was another significant factor contributing to the high crude oil price. Consequently, the OECD oil stocks decreased to the five-year average level, which is the main goal of the manufacturer for the second quarter of 2018. However, the increase in the crude oil price is subject to certain restrictions as the market is still under pressure from the output of crude oil in the US, which is increasing to over 10 million barrels per day. This resulted from the crude oil price having increased to more than the breakeven point of the oil manufacturers in the US of USD 50 – 60 per barrel.

The crude oil price during the second half of 2018 is likely to remain high as a result of influence of the control over the production capacity by the manufacturers within and outside of OPEC, as well as of a decrease in the OECD oil stocks. However, the market is under pressure from the output of crude oil in the US which tends to continually increase. The Energy Information Administration (EIA) predicts that the output of crude oil of the US during the second half of 2018 is likely to increase to 11 million barrels per day, an increase of 1.4 million barrels per day when compared to the same period of the previous year, which is deemed unprecedentedly high.

The refining margin for the second quarter of 2018 decreased from the first quarter by the spreads between benzene and crude oil in Dubai which decreased under the pressure of supply which remained high despite an increase in demand during the

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driving season of the US. In addition, the spreads between diesel and jet fuel and crude oil decreased slightly, as a result of a decrease in the demand for heating oil after the unseasonable cold weather had passed. However, the price benefited from the relatively tight supply for diesel and jet fuel after the diesel and jet fuel stocks dropped below the five-year average level globally.

During the second half of 2018, it is expected that the refining business will benefit from the demand in refined products, which tends to recover, especially diesel and jet fuel, steadily increasing in line with the global economic growth. While the supply increases at a limited rate as there are only two refineries in use in the Middle East and Vietnam, with a total production capacity of 320,000 barrels per day, the refined products market has remained tight. In this regard, it is expected that diesel and jet fuel inventory prices will be below the five-year average level during the second half of 2018. However, the Company is to monitor the refined products exportation of China which is likely to remain high after the commissioning of new refineries in the previous year (Source: FGE Semi-Annual Report, October 2560).

- Aromatics market conditions

The aromatics market during the second quarter of 2018 weakened when compared to the first quarter despite the season of polyester and PET plastic bottle production, resulting in an increase in the demand in the consumption of paraxylene. However, a considerable number of continual maintenance shutdowns of PTE plants in Asia from the first quarter to the second quarter, in addition to PTE plants in Asia operating at their maximum capacity, resulted in PTE stocks remaining high. As a result, the demand in the consumption of paraxylene has decreased. Furthermore, the commissioning of PetroRabigh in Saudi Arabia, with the production capacity of paraxylene of 1,340,000 tons per year, and benzene of 424,000 tons per year in April 2018, has also contributed to market pressure. However, during the second quarter, there were a number of maintenance shutdowns of paraxylene and benzene plants in Asia, which caused the supply to become reduced.

During the second half of 2018, it is expected that the aromatics market will remain stable from the first half of the year, as a result of maintenance shutdowns of aromatics plants at the end of the second quarter, which led to market oversupply. In this regard, another interesting factor is whether the aromatics plant in Vietnam, which delayed commissioning from the first quarter, with the paraxylene production capacity of 800,000 tons per year and benzene of 246,000 tons per year, will be able to be commissioned within this year. However, from the end of the third quarter to the beginning of the fourth quarter, the season of goods and presents production for Christmas and New Year Festival will increase the demand in the consumption of benzene, a precursor for various types of plastic, while the season of fiber production for the winter season will also recover the demand in the consumption of paraxylene (Source: IHS, April 2018, PCI Wood Mackenzie, February 2017).

- Linear Alkyl Benzene (LAB) market conditions

The linear alkyl benzene (LAB) market during the second quarter 2018 remained stable compared to that during the first quarter, as a result of an increase in the

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demand for detergents during the summer season. However, the supply which recovered after the maintenance shutdowns of LAB plants in Asia may put pressure on the market.

During the second half of 2018, it is expected that the LAB market will remain stable when compared to the first half of 2018 as a result of a decrease in the supply arising from more LAB plants in Southeast Asia shutting down for maintenance than during the first half of the year. However, the demand during the second half of the year is likely to decrease due to the rainy season (Source: ICIS, April 2018).

- Lube base oil market conditions

The lube base oil market during the second quarter of 2018 has weakened when compared to the first quarter owing to the feedstock price, which has increased dramatically in line with an increase in the crude oil price and supply. The increase resulted from the re-commissioning of the lube base oil plants after the maintenance shutdown during the first quarter.

During the second half of 2018, it is expected that lube based oil market will weaken when compared to the first half of 2018 in response to an increase in the supply. The increase resulted from the commissioning and capacity expansion of the new lube based oil plants, together with the tendency for there to be a decrease in demand during the rainy season. However, the market is affected by the decrease in the supply as a result of the maintenance shutdowns of lube base oil plants in Asia during the third quarter in 2018 (Source: ICIS Base Oil Weekly Report, April 2018 and Argus Base Oil Weekly Report, April 2018).

- Bitumen market conditions

The bitumen market during the second quarter of 2018 has weakened when compared to the first quarter of 2018 after the regional demand slowed down, as a result of regional major importers, such as Indonesia and Vietnam, maintaining high bitumen stocks. In addition, the demand in Indonesia weakened during May to June, which was the Ramadan period, during which road constructions and maintenances were halted. Furthermore, the supply has tended to increase following the re-commissioning of the bitumen plants in Malaysia and South Korea after the maintenance shutdowns during March to April 2018 (Source: Argus Bitumen Weekly Report, April 2018).

During the second half of 2018, it is expected that the bitumen market will remain stable when compared to the first half of 2018, as a result of the demand in the region which tends to decrease during the rainy season. However, it is expected that the importation of bitumen in Indonesia will recover, due to the end of Ramadan period and the arrival of summer in the third quarter of 2018, during which the road constructions and repairs operate smoothly and increase in number (Source: Argus Bitumen Weekly Report, April 2018).

- Solvent market conditions

In 2018, it is expected that the growth rate of solvent market will be in line with the domestic economic growth, driven mainly by the higher export and service sectors following the growth of Thailand's trade partners, as well as continuously increasing number of tourist arrivals. In addition, the announcement of Thailand's general election has clarified political doubts and increased confidence in the private sector, paving the way for more domestic investments. However, the regional oversupply and higher domestic and regional competition contribute to putting pressure on the solvent market, domestically and internationally.

- Power industry conditions

In 2018, it is expected that the domestic demand in electricity will continually increase.

However, according to the new Power Development Plan (PDP 2015), effective during the year 2015 – 2036, the actual total demand for power has been found to be lower than predicted. Furthermore, the merging of the Energy Efficiency Development Plan (EEDP) and the Alternative Energy Development Plan (AEDP) into the outlining of the PDP 2015 has caused the demand in the electricity consumption to decrease from the existing power development plan, and the power reserve capacity to increase to higher than the standard set at 15%. In the first phase, the reserve capacity is expected to be 25% of the total power installed capacity. This will gradually increase in later stages to reach its peak at 38% – 40% in 2023 – 2024 before gradually decreasing to 30% and 20% in 2026 and 2029 respectively. Furthermore, the new PDP 2015 places emphasis on diversifying the fuels used to generate power, aimed at reducing the dependency on natural gas and increasing supply shares from renewables and imports of hydropower.

- Oil transportation industry conditions

With respect to the oil, petroleum and petrochemical products tanker market in 2018, it is expected that regional and global economic demand will grow, resulting in continuous demand for small vessels used to transport petroleum and petrochemical products, with the exception of medium range (MR) vessels, which are still in oversupply. The demand for VLCCs for crude oil transport is expected to grow. However, the oversupply of vessels in the market continues to pressure the freight rates. In this regard, freight rates of the VLCCs are expected to increase when the vessels available on the market decrease while the US export of crude oil rises following the increase in the crude oil price. With respect to the demand for crew boats in 2018, it is expected to increase due to the announcement of the 21<sup>st</sup> Petroleum Concession, the need to decommission the existing drilling rigs, and it is likely that the increasing exploration and petroleum production activities in the region will subsequently result in the growth of the crew boat business.

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- Ethanol industry conditions

The demand for the consumption of ethanol in 2018 is expected to increase to 4.1 million liters per day as the demand for the consumption of gasohol E10, E20 and E85 tends to continuously grow. Such increase resulted from a government policy to promote the use of gasohol by means of wider spreads among the retail prices of various gasoline products. In addition, the increasing number of vehicles compatible with E20 and E85 gasohol and gas stations with E20 and E85 has contributed to an increase in the demand in consumption of ethanol in the same direction as in 2017.

The Company predicts that two new ethanol plants will commence operations in 2018 (with the production capacity of 0.44 million liters per day in total), whereby one produces molasses-based ethanol (with the production capacity of 0.10 million liters per day), and the other produces cassava-based ethanol (with the production capacity of 0.34 per day). This will result in an increase in the domestic production of ethanol of approximately 6.03 million liters per day, while ethanol shortages in 2018 have tended to slightly decrease compared to that of the year 2017. According to the forecast, the molasses inventory will recover to normal, along with an increase in the production capacity of ethanol as a result of the increase in the output from the new ethanol plants.

## 5.2 Summary of financial statements during the past 3 years and the present year until the latest quarter, as well as the explanation and analysis of financial position and operating result in the past year and the present year until the latest quarter including risk factor which may affect the profit of the Company

### 5.2.1 Statements of Financial Position

Unit: THB million	Audited and Reviewed Consolidated Financial Statements as at			
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
<b>Assets</b>				
<i>Current assets</i>				
Cash and cash equivalents	35,764	31,121	15,623	33,879
Current investments	17,365	29,654	52,318	47,920
Trade accounts receivable	14,177	19,536	22,328	23,260
Other receivables	2,409	934	1,171	1,071
Short-term loans to related parties	90	90	90	45
Inventory	18,883	33,189	32,841	30,953
Prepaid corporate income tax	671	99	60	63
Value added tax receivable	983	942	751	478
Other current assets	148	166	1,029	1,224
<b>Total current assets</b>	<b>90,490</b>	<b>115,731</b>	<b>126,211</b>	<b>138,893</b>
<i>Non-current assets</i>				
Investments held as available-for-sale	136	245	3,103	3,846
Investments in associates	12,986	13,361	13,826	14,116
Investments in joint ventures	455	505	542	564



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Unit: THB million	Audited and Reviewed Consolidated Financial Statements as at			
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
Other long-term investments	779	779	780	780
Investment properties	88	94	103	103
Property, plant and equipment	83,258	82,312	78,612	77,881
Intangible assets	1,906	3,106	3,191	3,125
Deferred tax assets	579	441	508	527
Other non-current assets	1,489	1,157	1,232	1,205
<b>Total non-current assets</b>	<b>101,676</b>	<b>102,000</b>	<b>101,897</b>	<b>102,147</b>
<b>Total assets</b>	<b>192,166</b>	<b>217,731</b>	<b>228,108</b>	<b>241,040</b>
<b>Liabilities and shareholders' equity</b>				
<i>Current liabilities</i>				
Short-term borrowings	413	867	969	1,308
Trade accounts payable	12,053	19,887	18,963	18,631
Other payables	2,958	3,565	3,476	2,498
Current portion of long-term borrowing	1,374	2,206	1,592	1,836
Current portion of debentures	-	4,932	-	3,000
Excise duty payable	1,032	1,450	4,785	5,150
Income tax payable	362	1,239	3,563	4,760
<b>Total current liabilities</b>	<b>18,192</b>	<b>34,146</b>	<b>33,348</b>	<b>37,183</b>
<i>Non-current liabilities</i>				
Long-term borrowings	9,621	9,374	8,068	15,995
Debentures	64,098	58,921	55,839	51,425
Deferred tax liability	-	10	9	9
Other non-current liabilities	3,246	3,683	3,696	3,720
<b>Total non-current liabilities</b>	<b>76,965</b>	<b>71,988</b>	<b>67,612</b>	<b>71,149</b>
<b>Total liabilities</b>	<b>95,157</b>	<b>106,134</b>	<b>100,960</b>	<b>108,332</b>
<i>Shareholders' equity</i>				
Share capital				
Authorised share capital	20,400	20,400	20,400	20,400
Issued and paid share capital	20,400	20,400	20,400	20,400
Share premium on ordinary shares	2,456	2,456	2,456	2,456
Appropriated retained earnings				
Legal reserves	2,040	2,040	2,040	2,040
Other reserves	245	245	245	245
Unappropriated retained earnings	67,131	81,622	96,975	102,583
Other surpluses (deficits)	203	203	203	203
Other components of shareholders' equity	(103)	(109)	(96)	(117)
<b>Equity attributable to owners of the Company</b>	<b>92,372</b>	<b>106,857</b>	<b>122,223</b>	<b>127,810</b>

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Unit: THB million	Audited and Reviewed Consolidated Financial Statements as at			
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
Non-controlling interests	4,637	4,740	4,925	4,898
<b>Total shareholders' equity</b>	<b>97,009</b>	<b>111,597</b>	<b>127,148</b>	<b>132,708</b>
<b>Total liabilities and shareholders' equity</b>	<b>192,166</b>	<b>217,731</b>	<b>228,108</b>	<b>241,040</b>

## 5.2.2 Statements of Comprehensive Income

Unit: THB million	For the year ending			For the three-month period ending
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
<b>Income</b>				
Revenue from sale and rendering of services	293,569	274,739	337,388	91,617
Net derivative gain on hedging	1,489	-	-	102
Net foreign exchange gain	-	446	3,182	1,470
Dividend income	48	247	158	3
Other income	1,498	1,118	1,190	378
<b>Total income</b>	<b>296,604</b>	<b>276,550</b>	<b>341,918</b>	<b>93,570</b>
<b>Expenses</b>				
Cost of sale and rendering of services	(273,819)	(247,261)	(305,386)	(85,628)
Selling expenses	(452)	(451)	(493)	(118)
Administrative expenses	(2,755)	(2,182)	(2,970)	(470)
Net derivative loss on hedging	-	(243)	(133)	-
Net foreign exchange loss	(2,754)	-	-	-
<b>Total expenses</b>	<b>(279,780)</b>	<b>(250,137)</b>	<b>(308,982)</b>	<b>(86,216)</b>
Share of profit of joint ventures and associates	712	930	1,197	333
<b>Profit (loss) before finance costs and income tax expense</b>	<b>17,536</b>	<b>27,343</b>	<b>34,133</b>	<b>7,687</b>
Finance costs	(3,435)	(3,461)	(3,285)	(750)
<b>Profit (loss) before income tax expense</b>	<b>14,101</b>	<b>23,882</b>	<b>30,848</b>	<b>6,937</b>
Reversal of income tax (expense)	(1,597)	(2,295)	(5,529)	(1,209)
<b>Profit (loss) for the year</b>	<b>12,504</b>	<b>21,587</b>	<b>25,319</b>	<b>5,728</b>
<b>Other comprehensive income (loss)</b>				
Profit (loss) on remeasurements of defined benefit plans	(220)	-	(323)	-
Net change in fair value of available-for-sale investments	(2)	11	147	43
Exchange differences on translating foreign operations	73	(21)	(121)	(65)
Share of other comprehensive income of associate	4	5	(16)	(0)
<b>Other comprehensive income (loss) for the year, net of income tax</b>	<b>(145)</b>	<b>(5)</b>	<b>(313)</b>	<b>(22)</b>

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Unit: THB million	For the year ending			For the three-month period ending
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
<b>Total comprehensive income (loss) for the year</b>	<b>12,359</b>	<b>21,582</b>	<b>25,006</b>	<b>5,706</b>
<b>Profit (loss) for the year attributable to:</b>				
Owners of the Company	12,181	21,222	24,856	5,586
Non-controlling interests	323	365	463	120
<b>Profit (loss) for the year</b>	<b>12,504</b>	<b>21,587</b>	<b>25,319</b>	<b>5,706</b>
<b>Total comprehensive income (loss) attributable to:</b>				
Owners of the Company	12,035	21,216	24,546	5,586
Non-controlling interests	324	366	460	120
<b>Total comprehensive income (loss) for the year</b>	<b>12,359</b>	<b>21,582</b>	<b>25,006</b>	<b>5,706</b>
<b>Basic earnings (loss) per share (in Baht)</b>	<b>5.97</b>	<b>10.40</b>	<b>12.18</b>	<b>2.75</b>

### 5.2.3 Statements of Cash Flow

Statement of cash flow	For the year ending			For the three-month period ending
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
<i>Cash flow from operating activities</i>				
<b>Profit (loss) for the year</b>	12,504	21,587	25,319	5,728
<i>Adjustments</i>				
(Reversal of) allowance for decline in value of inventory adjusted to net realisable value	(1,546)	(1,052)	(93)	116
Depreciation and amortisation	6,766	7,761	7,642	1,738
Finance costs	3,435	3,461	3,285	750
Unrealised loss (gain) on foreign exchange	3,369	(97)	(2,335)	(2,040)
Share of profit of associates and joint ventures	(712)	(930)	(1,197)	(333)
Dividend income	(48)	(247)	(158)	(3)
Reversal of impairment loss on property, plant and equipment	-	(1)	546	-
Bad debt	-	28	-	-
Loss on change of shareholding in associates	5	-	-	-
Loss on disposal of investment	10	-	33	(4)
Loss on disposal of property, plant and equipment	99	53	21	2

(Translation)

Statement of cash flow	For the year ending			For the three-month period ending
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
Reversal of impairment loss on property, plant and equipment and investment properties	-	-	-	-
Realisation of deferred land lease and other income	(26)	(26)	(24)	(6)
(Reversal of) income tax expense	1,597	2,295	5,529	1,209
	<b>25,453</b>	<b>32,832</b>	<b>38,568</b>	<b>7,157</b>
<i>Changes in operating assets and liabilities</i>				
Trade accounts receivable	1,960	(5,371)	(2,792)	(934)
Other receivables	(749)	971	(1,389)	(207)
Value added tax receivable	534	40	190	274
Inventory	11,197	(13,237)	441	1,772
Other non-current assets	(263)	146	(157)	12
Trade accounts payable	(5,748)	7,847	(928)	(325)
Other payable	(421)	93	672	(467)
Excise duty payable	149	418	3,335	365
Other non-current liabilities	119	141	(382)	25
Income tax received (paid)	(523)	(698)	(3,141)	(36)
<b>Net cash from operating activities</b>	<b>31,708</b>	<b>23,182</b>	<b>34,417</b>	<b>7,636</b>
<i>Cash flow from investing activities</i>				
Dividends received	453	754	740	45
Purchase of current investments	(369)	(12,057)	(23,423)	-
Sale of current investments	13,250	-	-	4,352
Purchase of investments held as available-for-sale	-	(28)	(3,016)	(680)
Sale of investments held as available-for-sale	16	-	151	-
Cash inflow on sales of investments in associates	-	-	51	-
Cash inflow (outflow) on repayment of short-term loan	-	-	-	45
Cash inflow (outflow) on long-term loans to savings co-operative of employees	45	1	22	6
Purchase of other long-term investments	-	-	0	-
Purchase of property, plant and equipment	(10,867)	(6,393)	(3,679)	(968)
Sale of property, plant and equipment	36	1	2	128

(Translation)

Statement of cash flow	For the year ending			For the three-month period ending
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
Sale of assets held as available-for-sale	-	-	-	-
Purchase of intangible assets	(39)	(626)	(921)	(14)
Exchange differences on translating foreign operations	5	(4)	(19)	(18)
<b>Net cash from (used in) investing activities</b>	<b>2,530</b>	<b>(18,352)</b>	<b>(30,092)</b>	<b>2,896</b>
<i>Cash flow from financing activities</i>				
Finance costs paid	(3,389)	(3,443)	(3,364)	(1,377)
Dividends paid	(3,194)	(6,994)	(9,455)	-
Proceeds from short-term borrowings	461	1,324	3,571	1,710
Repayment of short-term borrowings	(545)	(870)	(3,470)	(1,370)

**Analysis of the operating results according to the consolidated financial statements for the year 2017 and for the three-month period ending 31 March 2018**

Statement of cash flow	For the year ending			For the three-month period ending
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
Proceeds from short-term borrowings from related parties	-	800	-	-
Repayment of short-term borrowings from related parties	-	(800)	-	-
Proceeds from long-term borrowings	4,510	1,967	110	8,636
Repayment of long-term borrowings	(993)	(1,381)	(1,686)	(315)
Redemption of debenture	(11,590)	-	(4,932)	-
<b>Net cash used in financing activities</b>	<b>(14,740)</b>	<b>(9,397)</b>	<b>(19,226)</b>	<b>7,284</b>
<b>Net increase in cash and cash equivalents</b>	<b>19,498</b>	<b>(4,567)</b>	<b>(14,901)</b>	<b>17,816</b>
Effect of exchange rate changes on foreign currency balance at the end of the period	29	(76)	(596)	440
Cash and cash equivalents as at the beginning of the period	16,237	35,764	31,121	15,623
<b>Cash and cash equivalents as at the end of the period</b>	<b>35,764</b>	<b>31,121</b>	<b>15,623</b>	<b>33,879</b>
<i>Non-cash transactions</i>				
Payables on purchase of property, plant and equipment	565	231	392	397

(Translation)

Statement of cash flow	For the year ending			For the three-month period ending
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
Payables on purchase of intangible asset	-	779	202	202
Payables on purchase of securities (Private funds)	-	304	50	36

#### 5.2.4 Financial Ratios

Financial Ratios	Unit	For the year ending			For the three-month period ending
		31 December 2015	31 December 2016	31 December 2017	31 March 2018
<b>Liquidity Ratios</b>					
Current ratio	Times	5.0	3.4	3.8	3.7
Quick ratio	Times	3.7	2.4	2.7	2.8
Cash ratio	Times	1.2	0.9	1.0	0.9
Account receivable turnover	Times	19.4	16.3	16.1	16.1
Average collection period	Day	18.6	22.1	22.3	22.4
Inventory turnover	Times	11.5	9.5	9.2	10.7
Average holding period	Day	31.2	37.9	38.9	33.5
Account payable turnover	Times	18.3	15.5	15.7	18.2
Payment period	Day	19.6	23.3	22.9	19.8
Cash cycle	Day	30.1	36.7	38.4	36.2
<b>Profitability Ratios</b>					
Gross profit margin ratio	%	9.0%	12.8%	11.7%	8.4%
Net profit margin ratio	%	4.2%	7.8%	7.4%	6.1%
Return On Equity	%	13.9%	21.3%	21.7%	7.9%
<b>Efficiency Ratio</b>					
Return On Assets	%	6.5%	10.5%	11.4%	9.8%
Return On Fixed Assets	%	22.8%	34.4%	40.1%	37.3%
Assets Turnover	Times	1.5	1.3	1.5	1.6
<b>Financial Policy Ratios</b>					
Total debt to equity ratio	Times	1.0	1.0	0.8	0.8
Net debt to equity ratio	Times	0.2	0.1	0.0	(0.1)
Interest coverage ratio	Times	7.4	9.4	11.2	9.8

**Remark:**

- (1) The dividend payments for the years 2015 and 2016 were equivalent to THB 2.7 per share and THB 4.5 per share respectively. The interim dividend payment for the year 2017 was THB 1.5 per share. In this regard, the 2018 Annual General Meeting of Shareholders of the Company, convened on 11 April

(Translation)

2018, resolved approved the dividend payment from the operating results of the second half of the year 2017, at THB 3.75 per share. Therefore, the dividend payment from the operating results from 1 January 2017 to 31 December 2017 were totaling to THB 5.25 per share.

### 5.2.5 Explanation of financial position and operating result

#### Operating result according to the consolidated financial statements for the year 2017 and the first quarter of the year 2018

Unit : THB million	For the year ending			For the three-month period ending	
	31 December 2015	31 December 2016	31 December 2017	31 March 2017	31 March 2018
Sales revenue	293,569	274,739	337,388	87,596	91,617
Net Hedging Gain/(Loss)	1,489	(243)	(133)	(86)	(102)
<b>EBITDA</b>	<b>25,492</b>	<b>32,675</b>	<b>36,925</b>	<b>9,548</b>	<b>7,359</b>
Finance costs	(3,435)	(3,461)	(3,285)	(846)	(750)
Net foreign exchange gain/(loss)	(2,754)	446	3,182	1,323	1,470
Income tax expense	(1,597)	(2,295)	(5,529)	(1,461)	(1,209)
<b>Net (Loss) Profit <sup>(1)</sup></b>	<b>12,181</b>	<b>21,222</b>	<b>24,856</b>	<b>7,075</b>	<b>5,608</b>
Basic earnings/(loss) per share	5.97	10.40	12.18	3.47	2.75
Net profit excluding stock gain/(loss) and inventory write-down to NRV <sup>(2)</sup>	17,789	14,043	21,441	7,324	5,336

#### Remark:

- (1) Including dividends received from Thai Petroleum Pipeline Co., Ltd. for the year 2015, 2016, and 2017 of THB 48 million, THB 247 million, and THB 158 million respectively .
- (2) Excluding pre-tax stock gain/(loss) and pre-tax write-down to NRV on petroleum inventory /a reversal of write-down to NRV on petroleum inventory. Such items are included in cost of sale of goods and rendering of services in the financial statements.

For the operating results for the year 2017 compared to the year 2016, Thaioil Group had sales revenue of THB 337,388 million, which was an increase of THB 62,649 million due to increases in the average product selling prices in line with the crude oil price and higher integrated intake. Thaioil Group posted a gross integration margin (GIM) excluding stock gain/(loss) of USD 9.1 per barrel, which was an increase of USD 1.6 per barrel due to higher refined product prices, especially diesel, and fuel oil, and a decline in crude premium. The aromatics market was supported by the sharply recovering benzene market as a result of a limited supply due to a sudden maintenance shutdown of major production plants in the US since late 2016 while the paraxylene market was under pressure due to a new supply from India. The difference between Linear Alkyl Benzene (LAB) price and its precursor remained low due to demand slowdown in India while the lube base oil market recovered due to a lower supply following the planned shutdown of refineries in Thailand. The bitumen market rose from a drop in the regional supply from plants due to several planned shutdowns in Thailand

(Translation)

and Singapore in the first half of the year and certain manufacturers switching their production from bitumen to fuel oil to gain higher margins following the rise in fuel oil prices. The increase of the Dubai crude oil price to USD 9.5 per barrel from the end of 2016 resulted in stock gains of THB 3,343 billion. Aggregated with a net hedging loss of THB 133 million, Thail Group posted EBITDA of THB 36,925 billion, which was an increase of THB 4,250 billion. Moreover, Thail Group had foreign exchange gains of THB 3,182 billion, which was an increase of THB 2,736 billion due to THB 3.15 per USD appreciation in Thai Baht as at the end of 2016. Changes in the marine transportation business and a sluggishness in the petroleum exploration and production business resulted in falling chartering rates and some vessels being under-utilized, causing TM to record its allowance for impairment of assets in the amount of THB 574 million. However, the commercial operation of LABIX and TOP SPP since 2016 continuously provided gains to the Thail Group throughout the year 2017, as did the ethanol business whose gross margin registered a soaring rise following higher selling prices and lower feedstock cost.

In 2017, Thail Group achieved an income of THB 5,505 billion from the Profitability Improvement Project which was higher than the target. The Project consists of four main types of activities: (1) supply and marketing management, (2) hydrocarbon management, (3) Transcendence Project, and (4) Orchestra Project. Thail Group recorded THB 5,529 billion in income tax expense, which was an increase of THB 3,234 billion in line with a rise in profits before tax. Also, Thail refinery took advantage of the BOI tax privileges with regard to emission reduction and energy efficiency projects and a fully-utilized carrying forward of losses, which have now ended. Therefore, Thail Group earned a net profit of THB 24,856 billion or THB 12.18 per share, which increased by THB 3,634 billion from the year 2016.

When compared the operating results for the three month period ending 31 March 2018 and 31 March 2017, Thail Group had a sales revenue of THB 91,617 billion which increased from a sales revenue for the same quarter of the year 2017 by 4,201 billion due to increases in the average product selling prices and higher integrated intake, causing an increase in the overall distribution volume of products. However, Thail Group posted a decrease in the gross profit margin from the production excluding stock loss at USD 1.2 per barrel due to a lower gross refining margin in response to the pressure from a higher crude premium. Furthermore, the declining of price difference of gasoline, fuel oil, and aromatics resulted in Thail Group's EBITDA in the first quarter of the year 2018 of THB 7,359 billion, reducing by THB 2,189 billion from the first quarter of the year 2017. The foreign exchange gains increased by THB 147 million while the finance costs were reduced by THB 96 million after taking into account depreciation cost and income tax expenses, resulting in Thail Group's net profit of 5,608 billion, which decreased by THB 1,467 billion from the first quarter of the year 2017.



(Translation)

### **Financial Position**

<b>Unit : THB million</b>	<b>Audited and Reviewed Consolidated Financial Statements as at</b>			
	<b>31 December 2015</b>	<b>31 December 2016</b>	<b>31 December 2017</b>	<b>31 March 2017</b>
<i>Assets</i>				
Cash and cash equivalents	53,129	60,775	67,941	81,799
Other current assets	37,361	54,956	58,270	57,094
Non-current assets	101,676	102,000	101,897	102,147
<b>Total assets</b>	<b>192,166</b>	<b>217,731</b>	<b>228,108</b>	<b>241,040</b>
<i>Liabilities</i>				
Current liabilities	16,818	27,008	31,756	32,346
Long-term borrowings and debentures (including current portion)	75,093	75,434	65,499	72,256
Non-current liabilities	3,246	3,692	3,705	3,729
<b>Total liabilities</b>	<b>95,157</b>	<b>106,134</b>	<b>100,960</b>	<b>108,332</b>
<i>Shareholders' equity</i>				
Owners of the Company	92,372	106,857	122,223	127,810
Non-controlling interests	4,637	4,740	4,925	4,898
<b>Total shareholders' equity</b>	<b>97,009</b>	<b>115,597</b>	<b>127,148</b>	<b>132,708</b>
Total liabilities and shareholders' equity	192,166	217,731	228,108	241,040

#### Total Assets

As at 31 December 2015, 31 December 2016, 31 December 2017, and 31 March 2018, the total assets of Thaioil Group were THB 192,166 billion, THB 217,731 billion, THB 228,108 billion and THB 241,040 billion, respectively. The total assets as at 31 December 2017, increased by THB 10,377 billion or 4.8% from 31 December 2016 mainly due to cash and cash equivalents from the cash flow from operations for the year 2017.

As at 31 March 2018, the total assets increased by THB 12,932 billion or 5.7% from 31 December 2017 mainly due to more cash and cash equivalents from the cash flow from operations for the three month period during 2018.

#### Total Liabilities

As at 31 December 2015, 31 December 2016, 31 December 2017, and 31 March 2018, the total liabilities of Thaioil Group were THB 95,157 billion, THB 106,134 billion, THB 100,960 billion and THB 108,332 billion, respectively. As at 31 December 2017, the total liabilities decreased by THB 5,174 billion from 31 December 2016 mainly due to repayment of debentures and a reduction in the value of USD-denominated debentures following the appreciation of the Thai Baht compared to the year 2016.

As at 31 March 2018, the total liabilities increased by THB 7,372 billion or 7.3% from 31 December 2017 mainly due to higher long-term loans and debentures of the companies under the Thaioil Group.

(Translation)

### Shareholders' Equity

As at 31 December 2015, 31 December 2016, 31 December 2017, and 31 March 2018, the shareholders' equity of Thairoil Group was THB 97,009 billion, THB 115,597 billion, THB 127,148 billion and THB 132,708 billion, respectively. As at 31 December 2017, the shareholders' equity increased by THB 15,551 billion from 31 December 2016, resulting from the total comprehensive income from the operating results of the year 2017 deducted by dividends paid from Thairoil Group.

As at 31 March 2018, the shareholders' equity increased by THB 5,560 billion from 31 December 2017, resulting from the total comprehensive income from the operating results for the three month period during 2018 deducted by the dividends paid from non-controlling interests of Thairoil Power Co., Ltd.

### Risk factors which may affect the profits of the Company

- Risks associated with trading and management of oil price fluctuation

Crude oil price and spreads of finished products represent key indices directly affecting the Company's profitability as they are highly volatile and likely to fluctuate, dependent on several factors beyond the Company's control. In order to deal with such risk, the Company is, therefore, adopting a strategy for oil hedging by entering into the risk management agreements on crack spreads and on stock loss in the future, including management of oil stocks to be at an appropriate level. In this regard, the internal procedure and control system have been determined appropriately through the screening and setting of goals for entering into the oil hedging transaction, under the oil hedging framework approved by the Risk Management Committee and the Board of Directors which has been regularly reviewed.

In addition, the Company has been reviewing and improving its entire business procedure to be more efficient by improving the Transcendence Project of Thairoil Group, ranging from the processes of crude oil sourcing, production, as well as distribution and delivery of products. Furthermore, the Company also monitors market conditions and analyzes market data, as well as searches for new crude oil sources for the feedstock of the Company and the companies within the group.

- Financial risk

Fluctuation of foreign exchange and interest rates pose risks to funding efficiency. Since the Company's major production costs, i.e. crude oil and other feedstock, is paid in US dollars. The Company, therefore, is restructuring the debt of Thairoil Group to ensure that the US dollar currency portion matches the revenue structure through natural hedging, as well as engages in forward contracts for transactions in foreign currencies, for loan withdrawals and loan repayment to be in line with actual payment, as done in the previous year. In addition, the Company is executing the sourcing of new funds, and the developing of new forms of financial instruments to procure wider alternatives and flexibility of loan sourcing through money and capital markets, as well as capital structuring to secure future growth and closely monitoring the movement of money and capital markets.

- Risks associated with changes in government policies, laws, regulations and obligations

Changes in government policies on energy, economic growth, development of society, communities, and the environment may affect the Company's current businesses, business expansion, and investment in new projects under Thaioil Group's strategic plans. The Company, therefore, requires regular and constantly monitoring of public policies to keep pace with their changes. For instance, setting up of a working team to ensure compliance with newly issued legislation, setting up of a Transfer Pricing Working Team to monitor and ensure suitable and fair operation, in compliance with accounting standards and new tax laws, as well as being evaluated by external authorities. Recently, the Company has passed the audit on law compliance conducted by Management System Certification Institute (Thailand) : MASCI in past October. In addition, the Company schedules surveillance of new legislation to enable itself to promptly cope with changes, including laws concerning Thailand's greenhouse gas reduction as a result of the cooperation in the COP 21 meeting in Paris. Furthermore, the Company fosters awareness of the significance of law compliance among staff and operators of all levels, and undertakes the self-assessment designed to verify the efficiency and effectiveness of the compatibility between its business and the applicable public policies, rules, laws, and regulations.

- Risks associated with severe circumstances which affect the business operation or cause business disruption

The risks of severe incidents affecting the Company's business or causing business disruption may result from both external and internal factors, including natural disasters, security threats, IT threats, unplanned shutdown due to equipment breakdown, and mishaps which may considerably devastate the environment and communities, such as oil spills, major accidents, etc. These factors may adversely affect business operation, corporate image, communities, society, and the environment. Thus, the Company has initiated measures to prevent and mitigate potential impact, by introducing measures concerning safety, security, occupational health, and work environment for employees and relevant parties, collaboration with all sectors, both neighboring communities and local government agencies, to monitor the implementation of accident prevention and establishment of cooperation on equipment and resources to ease the impact of potential accidents. In addition, the Company constantly stages emergency drills, reviews and improves its emergency plans, and prepares the Business Continuity Management : BCM. Besides, together with related sectors, the Company is developing communication guidelines by constantly visiting sites and creating diverse communication channels to establish trust in its operation. Prior to actual implementation, the Company will develop documents and forms to assess safety, security, occupational health, and environment for high-risk tasks to ensure safety and continuing operation.

(Translation)

- Risks associated with the delay in the construction of the Clean Fuel Project (CFP)

Since the Company will engage third party contractors to perform construction works for the CFP Project, such as work with respect to the engineering design, civil works, procurement, and installation of equipment and machinery necessary for the CFP Project. In the event that the contractors deliver the works with delay or deliver the works which are not compliant with technical specifications thereby requiring rectifications, the Company may not be able of controlling costs and the construction may not be complete within the specified timeframe. Initially, the Company expects that the construction will be complete and the commercial operation can be commenced in the first quarter of the year 2023.

Nevertheless, the Company aims to engage contractors who have experience and expertise, taking into account their capability and experience from their past performance. Furthermore, the Company will make an instalment payment to the contractors based on actual complete works, which will be stipulated in the contracts, and will control the request for instalment payment in the amount exceeding the actual complete works. In addition, the insurance for the Project is prepared to ease the impact from the construction delay in the event of force majeure.

- Risks associated with fluctuation or increase of the costs of the CFP Project

The Company has already prepared the preliminary estimation of the construction costs of the CFP Project. The construction of the CFP Project will take approximately 4 – 5 years in total. In this respect, should the Company is not able to control the construction works to be complete by the specified time period, or should there be additional scope of work beyond the estimation, the construction costs may be changed from the amount estimated by the Company. As a result, the return value and the rate of return which the Company expects to receive from this investment may be affected.

However, in preparing the estimation of CFP Project costs, the Company has provided the risk prevention by setting up a reserved budget for the CFP Project, as well as designed a form of a construction contract for the CFP Project to be Lump Sum Turnkey contract. In this regard, the Company expects that the Project development costs will not be much different from what expected.

**5.3 Financial projections in the present year (if any), including assumptions on trade, economics, industry, and review of the figures by a certified public auditor, and the opinions of an independent financial advisor that the projections have been carefully prepared**

None.

(Translation)

**5.4 Names of the Board of Directors, the executives, and the first 10 shareholders as at the date of close of share register book**

**(1) Names of the Board of Directors as at 13 July 2018**

<b>No.</b>	<b>Name of directors</b>	<b>Position</b>
1.	Professor Dr. Thosaporn Sirisumphand	Independent Director / Chairman of the Board
2.	Ms. Chularat Suteethorn	Independent Director / Chairman of the Audit Committee / Member of the Nomination and Remuneration Committee
3.	Mr. Chen Namchaisiri	Independent Director / Member of the Audit Committee
4.	Associate Professor Dr. Pasu Decharin	Independent Director / Member of the Audit Committee
5.	Air Chief Marshal Suttipong Inseeyong	Independent Director / Chairman of the Nomination and Remuneration Committee
6.	Ms. Nitima Thepvanangkul	Director / Member of the Nomination and Remuneration Committee / Member of the Risk Management Committee
7.	Police General Aek Angsanant	Independent Director / Chairman of the Corporate Governance Committee
8.	Mr. Yongyut Jantararotai	Director / Member of the Corporate Governance Committee
9.	Mr. Kanit Si	Independent Director / Member of the Corporate Governance Committee
10.	Mr. Noppadol Pinsupa	Director / Chairman of the Risk Management Committee
11.	Ms. Sriwan Eamrunroj	Director / Member of the Risk Management Committee
12.	Mr. Suchalee Sumamal	Director
13.	Mr. Auttapol Rerkpiboon	Director
14.	Mr. Atikom Terbsiri	Director / Member of the Risk Management Committee / Chief Executive Officer and President, and Secretary to the Board of Directors

(Translation)

**(2) Names of executives as at 13 July 2018**

<b>No.</b>	<b>Name of Executives</b>	<b>Position</b>
1.	Mr. Atikom Terbsiri	Chief Executive Officer and President
2.	Mr. Bandhit Thamprajamchit	Senior Executive Vice President -Refinery and Petrochemical, taking the position of Executive Vice President - Manufacturing
3.	Mr. Chatapong Wungtanagorn	Executive Vice President - Corporate Commercial
4.	Mr. Chawalit Tippawanich	Executive Vice President - Organization Effectiveness
5.	Mr. Pongpun Amornvivat	Executive Vice President – Corporate Strategy, taking the position of Vice President - Business Development
6.	Ms. Pattaralada Sa-NGasang	Executive Vice President - Finance and Accounting, taking the position of Vice President - Financial Planning, and acting as Managing Director, Thairoil Treasury Center Co., Ltd.
7.	Mr. Surachai Saengsamran	Executive Vice President - Operation Excellence, taking the position of Vice President - Engineering
8.	Mr. Viroj Meenaphant	Assistant Executive Vice President - Corporate Governance
9.	Mr. Jeerawat Pattanasomsit	Vice President - Refinery
10.	Mr. Charlee Balmongkol	Vice President, acting as Managing Director, TOP SPP Co., Ltd. and taking the position of Vice President, acting as Managing Director, Thairoil Power Co., Ltd.
11.	Mr. Narongsak Chaviengpob	Vice President - Asset Development
12.	Ms. Duangporn Teerapabpaisit	Senior Vice President, acting as Managing Director, LABIX Co., Ltd.
13.	Ms. Torsang Chaipravat	Vice President - Strategic Planning
14.	Mr. Teardchart Padungrat	Vice President - Corporate Affairs
15.	Mr. Nikom Kongnok	Vice President - Accounting
16.	Mr. Nitas Krongvanitchayakul	Senior Vice President, acting as Managing Director, Thairoil Marine Co., Ltd.
17.	Ms. Prapin Thongnium	Vice President -Corporate Internal Systems Audit
18.	Mr. Prasert Raemwanith	Vice President - Quality Management
19.	Ms. Panumas Chuchartchaikulkarn	Vice President - Corporate Compliance
20.	Mr. Phumchit Tatsanaprasert	Vice President - Movement Marine and Logistic

(Translation)

<b>No.</b>	<b>Name of Executives</b>	<b>Position</b>
21.	Mr. Mongkol Janchookiat	Vice President - Efficient Operations Support
22.	Ms. Rungtip Maneesarachun	Vice President - Treasury
23.	Ms. Rungnapa Janchookiat	Vice President - Technology
24.	Mr. Viroj Wongsathirayakhun	Senior Vice President - Human Resources, taking the position of Senior Vice President, and acting as Managing Director, Thairoil Energy Services Co., Ltd.
25.	Mr. Saran Harinsuta	Vice President - Business Development, taking a position of Vice President and acting as Managing Director, Thairoil Ethanol Co., Ltd.
26.	Mr. Sarunyu Limwongse	Vice President - Petrochemical and Lube Base, taking the position of Vice President, and acting as Managing Director, Thai Lube Base Plc and Thai Paraxylene Co., Ltd.
27.	Ms. Somporn Bunluesriruang	Vice President - Supply Chain Optimization
28.	Mr. Santi Wasanasiri	Vice President - Innovation and Sustainability
29.	Ms. Suchada Deechaiya	Vice President - Organization Development
30.	Mr. Suchart Monyanont	Senior Vice President - Special Affairs
31.	Ms. Sudarat Orrattanasakul	Vice President - Commercial Planning
32.	Mr. Anawat Chansaksoong	Vice President - Commercial
33.	Miss. Acharee Tiyaabhorn	Vice President, acting as Managing Director, TOP Solvent Co., Ltd.
34.	Mr. Ampon Singsakda	Vice President, acting as Managing Director, Sak Chaisidhi Co., Ltd.
35.	Mr. Udom Wongsirinopphakhun	Vice President - Procurement and Contract

(Translation)

**(3) First 10 shareholders as at as at 13 July 2018**

<b>No.</b>	<b>Name of shareholders</b>	<b>No. of shares</b>	<b>Percentage</b>
1.	PTT Public Company Limited	1,001,149,183	49.03
2.	Thai NVDR Co., Ltd.	363,105,448	17.80
3.	STATE STREET EUROPE LIMITED	78,360,055	3.84
4.	SOUTH EAST ASIA UK (TYPE C) NOMINEES LIMITED	42,286,439	2.07
5.	SOCIAL SECURITY OFFICE	25,636,000	1.26
6.	THE BANK OF NEW YORK (NOMINEES) LIMITED	25,094,145	1.23
7.	BNY MELLON NOMINEES LIMITED	15,132,500	0.74
8.	GIC PRIVATE LIMITED	14,505,700	0.71
9.	SE ASIA (TYPE B) NOMINEES LLC	14,304,380	0.70
10.	SOUTH EAST ASIA UK (TYPE A) NOMINEES LIMITED	11,468,474	0.56
<b>Total</b>		<b>1,590,042,324</b>	<b>77.94</b>

**5.5 Other information that may materially affect the decision of investors (if any)**

None.

**6. Opinions of the Board of Directors on the sufficiency of the working capital**

The Board of Directors is of the view that the Company has sufficient sources of funds for CFP Project, which are derived from the 3 following parts:

Part One: The remaining cash flow and current investments of the Company. At present, as at the end of the first quarter of 2018, the Company's remaining cash flow and current investments is approximately USD 2,500 million.

Part Two: The estimation of cash flow from the Company's business operations during 2019-2022 after deduction of loan repayment and dividend payment amounting to approximately USD 400 million per year. It is estimated that the cash flow for this part will be approximately USD 1,600 million.

Part Three: The incurrence of new debts in the amount of USD 1,500-2,000 million because the estimated cash flow is sufficient for the Company to seek additional sources of funds solely from taking out loans without increasing its capital derived from the shareholders. Therefore, the Company is preparing plans to incur new debts in the appropriate timeframe in order to mitigate the impact on the credit rating and loan interest.



(Translation)

## 7. Pending material lawsuits or claims

As at 31 March 2018, the Company and its subsidiaries are not currently subject to any legal dispute that may cause damage to the Company and its subsidiaries by more than 5% of the shareholders' equity as presented in the consolidated financial statements of the Company and its subsidiaries, and are not subject to any legal dispute that which may give rise to any material effect on the operating results of the Company and its subsidiaries.

## 8. Interests or connected transactions between the Company and its directors, executives, and shareholders directly or indirectly holding shares amounting to 10 percent or more

### 8.1 Connected transactions between the Company and its directors or executives

For the fiscal year 2017, the Company and/or its subsidiaries entered into significant business transactions with subsidiaries and related parties with common major shareholders and/or directors as seen in the notes to the Company's financial statements. Connected transactions were based on market prices or, in the absence of relevant market prices, the prices agreed in previous contracts. The details of the Company's relationships with various companies are as follows:

Company Name	Relationship with Thaioil as at 30 December 2017
PTT Public Company Limited (PTT)	- Major shareholder with 49.10% of Thaioil's shares
Thai Paraxylene Co., Ltd. (TPX)	- Wholly owned by Thaioil - Common director : Mr. Atikom Terbsiri - Thaioil executive members on TPX's Board: Mr. Bandhit Thamprajamchit, Mr. Chatapong Wungtanagorn and Mr. Sarunyu Limwongse
Thai Lube Base Public Company Limited (TLB)	- Wholly owned by Thaioil - Common director : Mr. Atikom Terbsiri - Thaioil executive members on TLB's Board: Mr. Bandhit Thamprajamchit, Mr. Chatapong Wungtanagorn, Ms. Rungtip Manesarachun and Mr. Sarunyu Limwongse
Thaioil Marine Co., Ltd. (TM)	- Wholly owned by Thaioil - Common director : Mr. Atikom Terbsiri - Thaioil executive members on TM's Board: Mr. Chatapong Wungtanagorn, Ms. Pattaralada Sa-Ngasang, Mr. Viroj Meenaphant, Ms. Acharee Tiyaabhorn and Mr. Nitas Krongvanitchayakul
Thaioil Energy Services Co., Ltd. (TES)	- Wholly owned by Thaioil - Thaioil executive members on TES's Board: Mr. Bandhit Thamprajamchit, Mr. Chatapong Wungtanagorn, Ms. Pattaralada Sa-Ngasang, Mr. Surachai Saengsamran, Mr. Chawalit Tippawanich and Mr. Viroj Wongsathirayakhun

(Translation)

Company Name	Relationship with Thairoil as at 30 December 2017
Thairoil Solvent Co., Ltd. (TOS)	<ul style="list-style-type: none"> <li>- Wholly owned by Thairoil</li> <li>- Common director : Mr. Atikom Terbsiri</li> <li>- Thairoil executive members on TOS's Board: Flight Sergeant First Class Nikom Kongnok and Ms. Acharee Tiyaabhorn</li> </ul>
Thairoil Ethanol Co., Ltd. (TET)	<ul style="list-style-type: none"> <li>- Wholly owned by Thairoil</li> <li>- Thairoil executive members on TET's Board: Mr. Bandhit Thamprajamchit, Mr. Chatapong Wungtanagorn, Ms. Pattaralada Sa-Ngasang, Mr. Pongpun Amornvivat and Mr. Saran Harinsuta</li> </ul>
Thairoil Power Co., Ltd. (TP)	<ul style="list-style-type: none"> <li>- 26.01% shares owned by PTT Public Company Limited</li> <li>- 73.99% shares owned by Thairoil</li> <li>- Common director : Mr. Atikom Terbsiri</li> <li>- Thairoil executive members on TP's Board: Mr. Bandhit Thamprajamchit, Mr. Chawalit Tippawanich, Mr. Viroj Meenaphant and Mr. Charlee Balmongkol</li> </ul>
TOP SPP Co., Ltd. (TOP SPP)	<ul style="list-style-type: none"> <li>- Wholly owned by Thairoil</li> <li>- Common director : Mr. Atikom Terbsiri</li> <li>- Thairoil executive members on TOP SPP's Board: Mr. Charlee Balmongkol and Flight Sergeant First Class Nikom Kongnok</li> </ul>
TOP Solvent Co., Ltd. (TS)	<ul style="list-style-type: none"> <li>- Wholly owned by Thairoil Solvent Co., Ltd.</li> <li>- Common director : Mr. Atikom Terbsiri</li> <li>- Thairoil executive members on TS's Board: Mr. Chatapong Wungtanagorn, Mr. Pongpun Amornvivat, Ms. Acharee Tiyaabhorn and Ms. Rungtip Maneesarachun</li> </ul>
Sak Chaisidhi Co., Ltd. (SAKC)	<ul style="list-style-type: none"> <li>- 80.52% shares owned by TOP Solvent Co., Ltd.</li> <li>- Thairoil executive members on SAKC's Board: Mr. Chatapong Wungtanagorn, Mr. Pongpun Amornvivat, Mr. Surachai Saengsamran, Ms. Acharee Tiyaabhorn, Flight Sergeant First Class Nikom Kongnok, Mr. Jeerawat Pattanasomsit, and Mr. Ampon Singsakda</li> </ul>
TOP Solvent (Vietnam) LLC. (TSV)	<ul style="list-style-type: none"> <li>- Wholly owned by TOP Solvent Co., Ltd.</li> <li>- Thairoil executive members on TSV's Board: Ms. Acharee Tiyaabhorn, Ms. Rungtip Maneesarachun and Ms. Sudarat Orrattanasakul</li> </ul>
Sapthip Co., Ltd. (SAP)	<ul style="list-style-type: none"> <li>- 50% shares owned by Thairoil Ethanol Co., Ltd.</li> <li>- Thairoil executive members on SAP's Board: Mr. Pongpun Amornvivat, Mr. Surachai Saengsamran, Ms. Pattaralada Sa-Ngasang and Mr. Saran Harinsuta</li> </ul>

(Translation)

Company Name	Relationship with Thairoil as at 30 December 2017
TOP Maritime Service Co., Ltd. (TMS)	<ul style="list-style-type: none"> <li>- 55% shares owned by Thairoil Marine Co., Ltd.</li> <li>- Thairoil executive members on TMS's Board: Ms. Pattaralada Sa-NGasang, Mr. Nitas Krongvanitchayakul and Mr. Viroj Meenaphant</li> </ul>
Labix Co., Ltd. (LABIX)	<ul style="list-style-type: none"> <li>- 75% shares owned by Thai Paraxylene Co., Ltd.</li> <li>- Common director : Mr. Atikom Terbsiri</li> <li>- Thairoil executive members on LABIX's Board: Ms. Pattaralada Sa-NGasang, Mr. Sarunyu Limwongse and Ms. Duangporn Teerapabpaisit</li> </ul>
PTT Digital Solutions Co., Ltd. <sup>(1)</sup>	<ul style="list-style-type: none"> <li>- 20% shares owned by PTT Public Company Limited</li> <li>- 20% shares owned by Thairoil</li> <li>- Thairoil executive members on PTT Digital Solutions' Board: Mr. Chawalit Tippawanich</li> </ul>
PTT Energy Solutions Co., Ltd.	<ul style="list-style-type: none"> <li>- 40% shares owned by PTT Public Company Limited</li> <li>- 20% shares owned by Thairoil</li> <li>- Thairoil executive members on PTT Energy Solutions' Board: Mr. Surachai Saengsamran</li> </ul>
Global Power Synergy Public Company Limited (GPSC)	<ul style="list-style-type: none"> <li>- 22.58% shares owned by PTT Public Company Limited</li> <li>- 8.91% shares owned by Thairoil</li> <li>- 20.79% shares owned by Thairoil Power Co., Ltd. (73.99% shares owned by Thairoil)</li> <li>- Common director : Mr. Atikom Terbsiri</li> <li>- Thairoil executive members on GPSC's Board: Mr. Bandhit Thamprajamchit</li> </ul>
Sarn Palung Social Enterprise Co., Ltd. <sup>(2)</sup>	<ul style="list-style-type: none"> <li>- 20% shares owned by PTT Public Company Limited</li> <li>- 15% shares owned by Thairoil</li> <li>- Thairoil executive members on Sarn Palung Social Enterprise's Board: Mr. Teardchart Padungrat</li> </ul>
Thai Petroleum Pipeline Co., Ltd. (THAPPLINE)	<ul style="list-style-type: none"> <li>- 40.40% shares owned by PTT Public Company Limited</li> <li>- 9.19% shares owned by Thairoil</li> <li>- Thairoil executive members on THAPPLINE's Board: Mr. Pongpun Amornvivat</li> </ul>
PTT International Trading Pte. Ltd.	<ul style="list-style-type: none"> <li>- Wholly owned by PTT Public Company Limited</li> </ul>
PTT Tank Terminal Co., Ltd.	<ul style="list-style-type: none"> <li>- Wholly owned by PTT Public Company Limited</li> </ul>

(Translation)

<b>Company Name</b>	<b>Relationship with Thairoil as at 30 December 2017</b>
PTT Exploration and Production Public Company Limited (PTTEP)	- 65.29% shares owned by PTT Public Company Limited
Energy Complex Co., Ltd.	- 50% shares owned by PTT Public Company Limited
PTT Global Chemical Public Company Limited (PTTGC)	- 48.89% shares owned by PTT Public Company Limited - Common director : Mr. Auttapol Rerkpiboon
IRPC Public Company Limited	- 38.51% shares owned by PTT Public Company Limited
Thai ABS Co. Ltd.	- Wholly owned by IRPC Public Company Limited
PTT Maintenance and Engineering Co., Ltd.	- Wholly owned by PTT Global Chemical Public Company Limited
PTT Phenol Co., Ltd.	- Wholly owned by PTT Global Chemical Public Company Limited
Thai Styrenics Co., Ltd.	- Wholly owned by PTT Global Chemical Public Company Limited
Solution Creation Co., Ltd.	- Wholly owned by PTT Global Chemical Public Company Limited
Vencorex (Thailand) Co., Ltd.	- Wholly owned by PTT Global Chemical Public Company Limited
Global Green Chemicals Public Company Limited (GGC)	- 72.29% shares owned by PTT Global Chemical Public Company Limited
Thai Tank Terminal Ltd.	- 51% shares owned by PTT Global Chemical Public Company Limited

**Remarks:**

- (1) Name changed from “PTT ICT Solutions Co., Ltd.”, effective from 22 June 2017.
- (2) On 7 September 2017, Thairoil invested in Sarn Palung Social Enterprise Co., Ltd. together with companies in PTT Group, in which Thairoil owned 15% of its shares. Sarn Palung Social Enterprise Co., Ltd. has a share capital of 1 million ordinary shares with a par value of THB 10 per share, totaling the registered capital of THB 10 million. The first call for payment of the share price was 25% of the par value or equivalent to THB 0.38 million.

(Translation)

**8.2 Material Connected transactions between the Company and shareholders directly or indirectly holding shares amounting to 10 percent or more**

**Connected transactions with major shareholders**

Connected transaction	Value of connected transaction	
	For accounting year 2016	For accounting year 2017
	(THB million)	(THB million)
<u>Transactions with Thaioil</u>		
Revenue from the sale of oil products	127,877	147,470
Other income		
- Crack Spread Swap Agreements	4	-
- Other income	20	13
Expenses		
- Purchase of oil and natural gas products	100,076	100,709
Other expenses	42	129
Trade accounts receivable	7,884	10,188
Other receivables	1	4
Trade accounts payable	11,119	9,773
Other payables	1	4
<u>Transactions with Thaioil Power Co., Ltd.</u>		
Expense - natural gas	2,475	2,372
Trade accounts payable	183	378
<u>Transactions with Thaioil Marine Co., Ltd.</u>		
Transportation income	-	1
Other income	1	-
Purchase of oil products	2	3
Other expenses	1	1
<u>Transactions with Thai Lube Base Public Company Limited</u>		
Sales of lube base products	2,961	3,260
Expense - natural gas	429	490
Expense - chemical feedstock	18	10
Trade accounts receivable	143	149
Trade accounts payable	47	42
Other payables	1	1
<u>Transaction with Thai Paraxylene Co., Ltd.</u>		
Expense - oil products whose feedstocks are Mixed Xylene and LPG	274	-

(Translation)

Connected transaction	Value of connected transaction	
	For accounting year 2016	For accounting year 2017
	(THB million)	(THB million)
<u>Transactions with TOP SPP Co., Ltd.</u>		
Expense - natural gas	2,934	4,095
Other expenses	1	-
Purchase of assets	149	-
Trade accounts payable	326	674
Other payables	1	-
<u>Transactions with TOP Solvent Co., Ltd.</u>		
Sales of solvents	2	5
Purchase of solvents and petrochemical products	-	8
Trade accounts receivable	2	2
Trade accounts payable	-	2
<u>Transactions with Sak Chaisidhi Co., Ltd.</u>		
Expense - natural gas	58	74
Other expenses	2	-
Trade accounts payable	5	6
<u>Transactions with Saphip Co., Ltd.</u>		
Sales of ethanol products	633	620
Purchase of ethanol products	6	6
Trade accounts receivable	66	77
Trade accounts payable	2	-
<u>Transactions with TOP Maritime Service Co., Ltd.</u>		
Purchase of oil products	7	3
Other payables	1	-
<u>Transactions with Labix Co., Ltd.</u>		
Expense - natural gas	434	588
Purchase of assets	57	-
Trade accounts payable	48	53

(Translation)

**Connected transactions between Thairoil and its subsidiaries (Thairoil holds shares less than 100%) and other related companies**

Connected Transactions	Value of connected transaction	
	For accounting year 2016	For accounting year 2017
	(THB million)	(THB million)
<b><u>Transactions with Thairoil Power Co., Ltd.</u></b>		
Revenue		
- Service and infrastructure fee under Services and Supplies Agreements, and Infrastructure Sharing Agreements	744	837
- Land lease income under Land Lease and Sublease Agreement	3	3
- Dividend	728	769
Expenses		
- Power and steam availability payment under Power and Steam Purchase Agreements	1,680	1,659
Trade accounts receivable	48	36
Other receivables	27	30
Trade accounts payable		
- Payable for power and steam availability payment to Thairoil under Power and Steam Purchase Agreement	135	129
<b><u>Transactions with Global Power Synergy Public Company Limited</u></b>		
Revenue		
- Sale of automotive diesel oil	2	2
- Income under Assistance Agreements, Compensation for Cost of Raw Water Pipeline Agreement, and Reserved Fuel Purchase Agreement.	21	30
- Land lease income under Land Sublease Agreement	8	8
- Dividend	140	153
Other expenses	16	-
Trade accounts receivable	-	3
Other receivables	7	5
<b><u>Transactions with PTT Energy Solutions Co., Ltd.</u></b>		
Expenses		
- Service fee under Technical Assistance Agreement	106	99
Purchase of assets	21	24
Other receivables	1	-

(Translation)

Connected Transactions	Value of connected transaction	
	For accounting year 2016	For accounting year 2017
	(THB million)	(THB million)
Other payables	-	26
<b><u>Transactions with Thai Petroleum Pipeline Co., Ltd.</u></b>		
Dividend income	247	158
Expenses		
- Transportation fee, other expenses, and related expenses under Throughput Agreement	66	39
Other payables	8	2
<b><u>Transactions with PTT Digital Solutions Co., Ltd.</u></b>		
Dividend income	13	16
Expenses		
- Service fee under Technology and Communication Service Agreement	116	160
Purchase of assets	84	65
Other payables	21	61
<b><u>Transaction with PTT Global Chemical Public Company Limited</u></b>		
Other expenses	1	1
<b><u>Transactions with IRPC Public Company Limited</u></b>		
Sales of oil products	2	4
Other expenses	95	95
Trade accounts receivable	2	-
Other payables	8	8
<b><u>Transactions with Energy Complex Co., Ltd.</u></b>		
Other expenses	60	64
Other payables	1	1
<b><u>Transactions with PTT Maintenance and Engineering Co., Ltd.</u></b>		
Other expenses	1	-
Other receivables	1	-
<b><u>Transactions with Global Green Chemicals Public Company Limited</u></b>		
Purchase of oil products	998	1,098
Other expenses	2	2
Trade accounts payable	50	68



(Translation)

Connected Transactions	Value of connected transaction	
	For accounting year 2016	For accounting year 2017
	(THB million)	(THB million)
<b><u>Transactions with PTT International Trading Pte. Ltd.</u></b>		
Sales of oil products	91	280
Other income	7	2
Purchase of oil products	472	-
Other expenses	38	1
Trade accounts receivable	-	36
Other payables	37	-

**Connected transactions between subsidiaries and subsidiaries or related companies**

Company	Connected transaction	Value of connected transaction	
		For accounting year 2016	For accounting year 2017
		(THB million)	(THB million)
<b>Thaioil Marine Co., Ltd.</b>	<b><u>Transactions with IRPC Public Company Limited</u></b>		
	- Transportation service of products	12	10
	- Purchase of oil products	12	16
	- Trade accounts receivable	1	-
	<b><u>Transaction with PTT International Trading Pte. Ltd.</u></b>		
	- Transportation service of products	-	2
	<b><u>Transaction with PTT Global Chemical Public Company Limited</u></b>		
- Transportation service of products	-	2	
<b>TOP Maritime Service Co., Ltd.</b>	<b><u>Transactions with PTT Exploration and Production Public Company Limited</u></b>		
	- Marine transportation service of crew and supplies in the Gulf of Thailand	73	71
	- Trade accounts receivable	14	16
<b>Thaioil Power Co., Ltd.</b>	<b><u>Transactions with Thai Paraxylene Co., Ltd.</u></b>		
- Sales of electricity and steam and service of steam reserve under Power and Steam Purchase Agreements	1,112	1,101	

(Translation)

Company	Connected transaction	Value of connected transaction	
		For accounting year 2016	For accounting year 2017
		(THB million)	(THB million)
	- Purchase of steam, Steam Purchase Agreements	32	28
	- Trade accounts receivable	94	92
	- Trade accounts payable	2	3
	<b><u>Transactions with Thai Lube Base Public Company Limited</u></b>		
	- Sales of electricity and steam under Power and Steam Purchase Agreements	605	588
	- Trade accounts receivable	49	51
	<b><u>Transaction with Labix Co., Ltd.</u></b>		
	- Sales of electricity under Power Purchase Agreements	92	-
	<b><u>Transactions with Global Power Synergy Public Company Limited</u></b>		
	- Income from reserved power under Reserved Power Purchase Agreements	1	1
	- Dividend	327	358
	- Purchase of steam, Steam Purchase Agreements.	1	-
	- Service fee, Service Agreements.	3	-
	- Other payables	3	-
<b>TOP SPP Co., Ltd.</b>	<b><u>Transactions with Global Power Synergy Public Company Limited</u></b>		
	- Income from reserved power under Reserved Power Purchase Agreements	-	2
	- Trade accounts receivable	-	2
<b>Thai Lube Base Public Company Limited</b>	<b><u>Transactions with IRPC Public Company Limited</u></b>		
	- Sales of by-products	4	20
	- Purchase of by-products	280	327
	- Trade accounts payable	37	-

(Translation)

Company	Connected transaction	Value of connected transaction	
		For accounting year 2016	For accounting year 2017
		(THB million)	(THB million)
Thai Paraxylene Co., Ltd.	<b><u>Transactions with IRPC Public Company Limited</u></b>		
	- Sales of aromatics	819	1,178
	- Trade accounts receivable	21	134
	<b><u>Transaction with PTT Global Chemical Public Company Limited</u></b>		
	- Sales of aromatics	136	-
	<b><u>Transaction with PTT International Trading Pte. Ltd.</u></b>		
	- Sales of aromatics	2,254	2,913
TOP Solvent Co., Ltd.	<b><u>Transactions with IRPC Public Company Limited</u></b>		
	- Sales of solvents	61	81
	- Purchase of solvents	1,217	1,258
	- Trade accounts receivable	8	8
	- Trade accounts payable	104	116
	<b><u>Transactions with PTT Global Chemical Public Company Limited</u></b>		
	- Sales of solvents	98	109
	- Purchase of solvents	9	12
	- Trade accounts receivable	13	11
	- Trade accounts payable	1	-
	<b><u>Transactions with PTT Phenol Co., Ltd.</u></b>		
	- Purchase of solvents	146	186
	- Trade accounts payable	10	11
	<b><u>Transaction with Thai ABS Co., Ltd.</u></b>		
	- Sales of solvents	21	-
	<b><u>Transaction with PTT MCC Biochem Co., Ltd.</u></b>		
	- Purchase of solvents	12	15
<b><u>Transaction with Thai Styrenics Co., Ltd.</u></b>			
- Purchase of solvents	-	35	

(Translation)

Company	Connected transaction	Value of connected transaction	
		For accounting year 2016	For accounting year 2017
		(THB million)	(THB million)
	<u><b>Transaction with Solution Creation Co., Ltd.</b></u> - Sales of solvents	-	2
	<u><b>Transactions with Vencorex (Thailand) Co., Ltd.</b></u> - Sales of solvents - Trade accounts receivable	- -	4 2
<b>Sak Chaisidhi Co., Ltd.</b>	<u><b>Transactions with IRPC Public Company Limited</b></u> - Purchase of feedstock - Trade accounts payable <u><b>Transactions with PTT Global Chemical Public Company Limited</b></u> - Purchase of feedstock - Trade accounts payable <u><b>Transaction with PTT Tank Terminal Co., Ltd.</b></u> - Service fee of product tanks <u><b>Transaction with Thai Tank Terminal Co., Ltd.</b></u> - Service fee of product tanks	251  8  1,581 150  20  15	314  10  1,830 178  21  13
<b>TOP Solvent (Vietnam) LLC.</b>	<u><b>Transactions with IRPC Public Company Limited</b></u> - Purchase of solvents - Trade accounts payable <u><b>Transactions with PTT Phenol Co., Ltd.</b></u> - Purchase of solvents - Trade accounts payable <u><b>Transactions with PTT Digital Solutions Co., Ltd.</b></u> - Service of technology and communication - Other payables	738  40  70 10  - -	450  22  150 20  1 1

(Translation)

Company	Connected transaction	Value of connected transaction	
		For accounting year 2016	For accounting year 2017
		(THB million)	(THB million)
<b>Thaioil Energy Services Co., Ltd.</b>	<b><u>Transaction with PTT Energy Solutions Co., Ltd.</u></b> - Counseling service	1	1
<b>Labix Co., Ltd.</b>	<b><u>Transactions with Thai Tank Terminal Co., Ltd.</u></b> - Service fee of product tanks - Other payables	31 1	21 2

## 9. Summary of Material Agreements

### 9.1 Connected Transactions between Thaioil and/or its Subsidiaries and Major Shareholders

#### (1) Connected transactions between Thaioil and PTT Public Company Limited

##### Description of Transactions

- Thaioil entered into the Product Offtake and Crude Oil Supply Agreement (POCSA) with PTT Public Company Limited, whereby PTT Public Company Limited and Thaioil agree to buy and sell refined petroleum products at the market price in accordance with the procedure for fixing the product quantity, terms, and conditions specified in the agreement. PTT Public Company Limited shall propose the type and quantity of the products that it requires for domestic distribution and/or export which must be at least at least 49.99 percent of Thaioil's production capacity and Thaioil shall notify the type and quantity of the product it can deliver within the agreed timeframe. PTT Public Company Limited shall purchase the products in the quantities Thaioil agrees to deliver. In addition, PTT Public Company Limited has the special right under the agreement to purchase the products at the market price before other customers at the maximum quantity of 100 percent of Thaioil's production capacity subject to the conditions specified in the Agreement. PTT Public Company Limited will procure and Thaioil will agree to purchase raw petroleum oil and/or raw materials to feed the refineries at 49.99 percent of Thaioil's production capacity. The terms of payment for raw petroleum oil shall be as agreed by the parties.

This agreement may be terminated for certain events, including the case that either party notifies the other party in writing at least 12 months in advance, provided that the parties cannot not notify such intention prior to the 10 year anniversary from 28 July 2014.

(Translation)

- Thairoil entered into natural gas supply agreements with PTT Public Company Limited for a period of 10 years (2014 - 2023) and for a period of 15 years (2007 - 2022) to be used in Thairoil's refinery at the agreed quantities. Thairoil may change such agreed quantities by notifying PTT Public Company Limited in advance. The natural gas price in each month comprises of the cost of natural gas calculated based on the formula specified in the agreements while the cost of use of natural gas pipeline is in accordance with the ordinary course of business. Both parties may renew the terms of the agreement by notifying the other party in writing at least 6 months in advance.
- Thairoil entered into the Crack Spread Swap Agreements with PTT Public Company Limited from time to time in the ordinary course of business for spread swaps of refined oil and crude oil with PTT Public Company Limited. At every swap, PTT Public Company Limited or Thairoil must pay the difference between the fixed price and floating price in each period, as the case may be, as security against risk of the oil price which is always fluctuating.
- Thairoil entered into the land lease agreement with PTT Public Company Limited for a period of 15 years (September 2011 – August 2026) for use in the construction of crude oil storage tanks and refined product storage tanks. If Thairoil does not notify its intention to terminate the agreement within one month from the expiry of the agreement, the agreement will be renewed for another 15 years.
- Thairoil entered into the agreement with PTT Public Company Limited for the use of wharf and pipeline facilities for transportation of oil via the pipeline of PTT Public Company Limited for a period of 20 years from the commencement date of service at the service fee specified in the Agreement. The Agreement can be terminated after the first 10 years after the commencement date of service, provided that a party shall notify its intention to terminate the Agreement in writing at least 3 years in advance. Both parties may renew the terms of agreement by notifying the other party in writing at least 1 year in advance and the Agreement will be renewed for another 5 years.
- Thairoil entered into an agreement with PTT Public Company Limited to provide the pipeline service for distribution of jet fuel for a period of 20 years from the commencement date of service (at present, the service has not yet commenced) at the service fee specified in the agreement. The agreement can be terminated after the first 10 years after the commencement date of service, provided that either party shall notify the other party of its intention in writing to terminate the Agreement at least 3 years in advance. Either party may renew the agreement by notifying the other party in writing at least 1 year in advance and the agreement will be renewed for another 5 years.

(Translation)

- Thairoil entered into the loan agreements with PTT Public Company Limited for the purposes of managing the liquidity of Thairoil, under which the short-term credit facilities, uncommitted and unsecured are provided. Credit facilities provided under each agreement is amounting to not exceeding THB 2,000 million. The interest rate is BIBOR or LIBOR plus difference in interest rates by taking into consideration of the short-term loan interest rate, rate of return for short-term investment, and the credit rating of Thairoil and the contractual party. The term of each agreement is 1 year which will expire in December 2018.

**(2) Connected transactions between the subsidiaries of Thairoil and PTT Public Company Limited**

**Description of Transactions**

- Thairoil Power Co., Ltd. entered into the agreement to purchase natural gas from PTT Public Company Limited for a period of 25 years (1998-2022) for procurement of natural gas in generating electricity in the power plant of Thairoil Power Co., Ltd. Thairoil Power Co., Ltd. has an annual commitment to purchase natural gas at a minimum quantity or pay for natural gas at the amount as specified in the agreement (Take-or-Pay). The price of natural gas is the market price on an arm's length basis. Either party may renew the agreement by notifying the other party of its intention to renew the agreement in writing at least 1 year in advance.
- Thairoil Marine Co., Ltd. entered into agreements with PTT Public Company Limited from time to time in the ordinary course of business for the provision of oil and chemicals transportation with the terms and conditions on an arm's length basis.
- Sak Chaisidhi Co., Ltd. entered into the agreement with PTT Public Company Limited for the purchase of raw materials at an agreed quantity at the price calculated based on the formula which relies on the market price. The term of the agreement is 15 years from 1 March 2003 and may be renewed for another 5 years at each renewal. Either party may renew the agreement by notifying the other party of its intention to renew the agreement at least 1 year in advance (this agreement is currently under the renewal process).
- Thai Lube Base Public Company Limited entered into the natural gas purchase agreement with PTT Public Company Limited. PTT Public Company Limited will provide natural gas to the Company at the volume and price specified in the agreement. The agreement is effective from 1 April 2017 and will expire 31 December 2026. Either party may renew the agreement by notifying the other party in writing of its intention to renew the agreement at least 6 months in advance.

(Translation)

- TOP SPP Co., Ltd. entered into the natural gas purchase agreement with PTT Public Company Limited. The agreement is divided into two periods, that is, from the execution of the agreement to the date prior to the date on which natural gas is used for commercial purpose, and for a period of 25 years from the date on which natural gas is used for commercial purpose (2016-2041) for procurement of natural gas for generating electricity in the power plant of TOP SPP Co., Ltd. TOP SPP Co., Ltd. has an annual commitment to purchase natural gas at a minimum quantity or pay for natural gas at the amount as specified in the agreement (Take-or-Pay). The price of natural gas is the market price on an arm's length basis. Either party may renew the agreement by notifying the other party of its intention to renew the agreement at least 1 year in advance.
- Labix Co., Ltd. entered into the natural gas purchase agreement with PTT Public Company Limited. PTT Public Company Limited will provide natural gas to the Company at the volume and price specified in the agreement. The agreement will expire in October 2025. Either party may renew the agreement by notifying the other party of its intention to renew the agreement at least 6 months in advance.

## **9.2 Connected transactions of Thaioil with its subsidiaries or related parties**

### **(1) Transactions with Thaioil Power Co., Ltd.**

#### **Description of Transactions**

- Thaioil entered into the agreement with Thaioil Power Co., Ltd. to provide maintenance, repair, and other supporting services, and supply of feedstock and parts, as well as reserved fuels ("Service and Procurement Agreement") for a period of 24 years from 1 April 1998 or until the land lease agreement or the land sublease agreement between Thaioil and Thaioil Power Co., Ltd. will expire, whichever is earlier. The service fee is calculated based on cost plus marginal profit on an arm's length basis. This agreement may be terminated for certain events, as well as the case that a party notifies the other party of its intention to terminate the agreement.
- Thaioil entered into an infrastructure sharing agreement with Thaioil Power Co., Ltd. for the right to use and/or to use Thaioil's infrastructure, such as the transmission system for electricity, steam, water, control system, and other public utilities in the power plant area for a period 24 years from 1 April 1998 or until the land lease agreement or the land sublease agreement between Thaioil and Thaioil Power Co., Ltd. expires, whichever is earlier. Thaioil Power Co., Ltd. will pay for the consumption of infrastructure every month at the rate of 2% of the monthly revenue of Thaioil Power Co., Ltd. The agreement may be terminated for certain events, and by either party notifying the other party of its intention to terminate the agreement.
- Thaioil entered into agreements for lease and sublease of land with Thaioil Power Co., Ltd. for a period of 25 years and 9 months (December 1996 – September 2022) for the partial use of a plot of land in Sri Racha that Thaioil



(Translation)

takes the possession of under the land lease agreement for the state property with the Ministry of Finance and a part of land owned by Thaipower for the construction and operation of a power plant and other related businesses. The rental fee shall be on a yearly basis and will be adjusted every 5 years in accordance with the adjustment method specified in the land lease agreement for state property. When the land lease/sublease agreements expires, the ownership of the building, as well as its components and equipment that are not a part of the plant shall be the property of Ministry of Finance and/or Thaipower, as the case may be.

- Thaipower entered into an agreement to purchase electricity energy and steam energy with Thaipower Power Co., Ltd. for a period of 25 years (1998-2022) for the agreed volume and the price of electricity energy and steam energy shall be the market price. The agreement may be terminated for certain events, as well as either party giving the other party advance notice of its intention to terminate the agreement.

## **(2) Transactions with Global Power Synergy Public Company Limited**

### **Description of Transactions**

- Thaipower entered into the agreement with Global Power Synergy Public Company Limited to provide supporting services in various functions such as human resources function, training, personnel selection and recruitment, coordination with government agencies, and other services as requested by Global Power Synergy Public Company Limited from 28 July 1998. The service fee is calculated based on cost plus marginal profit on an arm's length basis. The agreement will expire when the power purchase agreement with EGAT expires. Nevertheless, the agreement may be terminated for certain events, as well as either party notifying its intention to terminate the agreement to the other party at least 120 days in advance.
- Thaipower entered into the agreement with Global Power Synergy Public Company Limited to compensate the construction cost for the right to use raw water pipeline facilities for a period of 25 years from 28 July 1998 or until the power purchase agreement with EGAT expires, whichever is earlier. Thaipower had invested in the construction cost for raw water pipeline facilities for use in its refinery in Sri Racha district. Global Power Synergy Public Company Limited had requested to the right to use the raw water pipeline facilities and agrees to compensate the construction cost to Thaipower on a yearly basis. The compensation is calculated based on the cost plus marginal profit on an arm's length basis.
- Thaipower entered into an agreement with Global Power Synergy Public Company Limited for sublease of land for a period of 25 years and 9 months (December 1996 – September 2022) for the construction and operation of a power plant and related business. The rental fee shall be on a yearly basis and will be adjusted every 5 years in accordance with the adjustment method specified in the land lease agreement for state property. When the land

(Translation)

sublease agreement expires, the ownership of the building, as well as its components and equipment that are not a part of the plant shall be the property of the Ministry of Finance.

- Thaipol entered into the agreement with Global Power Synergy Public Company Limited to purchase reserved fuel for a period of 25 years (August 2000 - August 2025), with the exception of any renewal of the power purchase agreement between Global Power Synergy Public Company Limited and EGAT or termination of such power purchase agreement. Thaipol will procure reserved fuel as notified by Global Power Synergy Public Company Limited and provide a tank for storage of reserved fuel at the agreed quantity. The service fee is calculated based on the cost plus marginal profit on an arm's length basis.

**(3) Transaction with Thai Petroleum Pipeline Co., Ltd.**

- Thaipol entered into the agreement with Thai Petroleum Pipeline Co., Ltd. for use of the oil transportation service via pipeline at the service fee specified in the agreement for a period of 20 years from 17 May 1994 or when the target is achieved and the agreement can be renewed (at present, the target has not yet been achieved).

**(4) Transaction with PTT Digital Solution Co., Ltd.**

- Thaipol entered into the agreement to use information, communication and technology services with PTT Digital Solution Co., Ltd. at the service fee specified in the agreement. The agreement is for a period of three years which will expire in December 2018. The agreement will be renewed from time to time to be agreed by the parties until either party terminates the agreement by notifying the other party in writing of its intention to terminate the agreement at least 180 days in advance.

**(5) Transaction with PTT Energy Solutions Co., Ltd.**

- Thaipol entered into the agreement with PTT Energy Solution Co., Ltd. for the provision of advisory service relating to the energy and petrochemical industry with the service fee as specified in the agreement. The term of the agreement is 3 years which will expire in December 2019.

**(6) Transaction with Energy Complex Co., Ltd.**

- Thaipol entered into the agreement for the lease and use of office and services with Energy Complex Co., Ltd. for a period of 3 years which will expire in November 2018. The term of the agreement may be renewed for 3 years at each renewal and the rental fee and service fee and the conditions shall be as specified in the agreement.

(Translation)

**(7) Transaction with IRPC Public Company Limited**

- Thairoil entered into two agreements with IRPC Public Company Limited for the use of two crude oil storage tanks. The term of the agreements is 2 years which will expire in September 2018 and December 2019 and the service fee is specified in the agreements.

**9.3 Connected transactions of the subsidiaries or related companies with the subsidiaries or related companies**

**Description of Transactions**

- Thairoil Power Co., Ltd. entered into the reserve power purchase agreement with Global Power Synergy Public Company Limited. Thairoil Power Co., Ltd. must reserve electricity energy for the agreed volume and the electricity price is calculated based on the cost plus marginal profit on an arm's length basis for a period of 25 years from 6 January 2000 or until the power purchase agreement between Global Power Synergy Public Company Limited and EGAT expires, whichever is the earlier. Either party may terminate the agreement for certain events by notifying its intention to terminate the agreement to the other party in advance.
- Thairoil Power Co., Ltd. entered into the agreement to purchase electric and steam energy with Thai Paraxylene Co., Ltd and Thai Lube Base Public Company Limited for a period of 25 years which will expire in 2022 for distribution of electric and steam energy at the agreed volume. The price of electric and steam energy shall be the market price. The parties are committed to purchase a minimum volume of electric and steam energy or make a payment for electric and steam energy at the minimum volume as specified in the agreement. Either party may terminate the agreement for certain events by notifying its intention to terminate the agreement to the other party in advance.
- Thai Paraxylene Co., Ltd entered into the agreement to sell steam energy to Thairoil Power Co., Ltd. at the agreed volume for a period of 25 years which will expire in 2022. The price of steam energy shall be the market price. Either party may terminate the agreement for certain events by notifying its intention to terminate the agreement to the other party in advance.
- Sak Chaisidhi Co., Ltd. entered into the agreements for the purchase of raw materials with IRPC Public Company Limited at the agreed quantity. The price shall be calculated in accordance with the formula which relies on the market price. The term of the agreements is one year which will expire on 31 December 2017. The agreement may be terminated if either party notifies its intention in writing to the other party at least 3 months in advance (the agreements are currently under the renewal process).
- Sak Chaisidhi Co., Ltd. entered into the agreement for the purchase of raw materials with PTT Global Chemical Public Company Limited at the agreed quantity. The price shall be calculated in accordance with the formula which

(Translation)

relies on the market price. The effective date of the agreement is 1 March 2005. The agreement may be terminated if either party notifies its intention in writing to the other party at least 18 months in advance.

#### **9.4 Agreements of Thaioil and/or its subsidiaries with third party agencies**

##### **Description of Transaction**

- Thaioil entered into the agreement for the lease of state property with the Treasury Department, Ministry of Finance, for a period of 30 years from 1994 – September 2022. Recently, the Cabinet resolved to approve that Thaioil renew the lease term of the lease agreement for 30 years until September 2052.
- Sak Chaisidhi Co., Ltd. entered into two agreements with the Industrial Estate Authority of Thailand for lease of plots of land I-8 and I-6 in the Map Ta Phut Industrial Estate. The lease term of the two lease agreements is 30 years and will expire in January 2019 and November 2042 respectively.

#### **10. Proxy form with at least one name of a member of the Audit Committee being nominated as shareholder's proxy**

The Proxy Forms, and the profiles of the independent directors who are nominated for shareholders to appoint as proxies, are attached to the Invitation to the Extraordinary General Meeting of Shareholders No. 1/2018 (Attachment 4 and Attachment 6).



*- Translation -*

**The Opinion of the Independent Financial Advisor  
regarding Acquisition Transaction of  
the Clean Fuel Project (CFP)**

Of



**Thai Oil Public Company Limited**

Presented to

**Shareholders of Thai Oil Public Company Limited**

Prepared by



**Maybank Kim Eng Securities (Thailand) Public Company Limited**

**31 July 2018**

This English report of the Independent Financial Advisor's Opinions has been prepared solely for the convenience of foreign shareholders of Thai Oil Public Company Limited and should not be relied upon as the definitive and official document. The Thai language version of the Independent Financial Advisor's Opinion is the definitive and official document and shall prevail in all aspects in the event of any inconsistency with this English Translation.

31 July 2018

Attention: Shareholders  
Thai Oil Public Company Limited

Re: Opinions of the Independent Financial Advisor Concerning the Acquisition of Assets

In light of the Board of Directors' Meeting of Thai Oil Public Company Limited (the "**Company**"), No. 6/2018, held on 29 June 2018, in which the resolution has been given for the Company to invest in the Clean Fuel Project (the "**CFP Project**" / "**CFP**" / "**Transaction**"), the total value of which accounts for approximately US\$ 4,825 million or approximately THB 160,279million (The exchange rate to Thai Baht referred in this report is based on the foreign exchange rate from the Bank of Thailand. The average selling rate for US Dollar as of 28 June 2018 is equivalent to THB 33.2185 to US\$ 1) and the interest of which, throughout the project's construction period, was estimated to be US\$ 151million or approximately THB 5,016million, below shown are the details of the aforementioned Project:

At present, the Company's oil refinery plant is a complex refinery comprising of the processing units, transforming crude oil into high value petroleum products, in order to optimize the best benefit, while also taking into account the types and prices of the targeted products, as well as the types and prices of crude oil or other raw materials (feedstock) purchased by the Company for the purpose of having them transformed into petroleum products. The Company's oil refinery plant operates utilizing a multi-stage refinery process during which there are various operational units at work: Separation Process; Conversion/Reforming Process; and Treatment Process.

Based upon the study on the Company's business competitiveness, in term of oil refinery capacity referring to Nelson Complexity Index and Return on Investment capital (ROIC), the competitiveness ranking of the Company in comparison to other refineries in the region has tendency to decrease as there are new refineries with a higher production capacity and using more advanced technologies. In addition, the performance of the crude distillation unit 1 and the crude distillation unit 2 have decreased as they have been in use for approximately 54 years and 48 years, respectively. As a result, additional investment to increase their performance and cost of maintenance are relatively not worthwhile. In view of the above, the Company has researched and explored various approaches in order to enhance the competitiveness of the refineries and put its refineries in the forefront of the industry by increasing the profitability ratio per unit with the development of the Clean Fuel Project (CFP).

The CFP Project will improve effectiveness in the production process by means of increasing the refinery processing (distillation) units in order to increase both value and quality of the products, resulting in the Company's refinery, following this additional investment, to become capable of refining 'heavy crude oil' and of decreasing the raw material procurement cost. Furthermore, the CFP Project will also include the distillation unit serving in providing value-added to the products by transforming fuel oil and bitumen, both having relatively low value, into jet fuel and diesel, both of which are more highly priced and environment-friendly, thus being in positive response to the market fluctuation by which fuel oil consumption is expected to become decreased, not to mention the change in terms of quality of the oils to be utilized for marine navigation from 2020 onwards. In addition, an increase in production of jet fuel and diesel also corresponds with the upcoming market demand in future. The CFP Project, all the more, will enable the oil refinery plant to produce more of light naphtha and heavy naphtha, both being

the feedstock utilized in petroleum industry. Note that the Company, in cooperation with the companies in the PTT Group, is also currently conducting a feasibility study in light of the endeavor to provide value-added to petrochemicals utilizing these products.

Given the aforementioned improvement, the company will carry out the construction project of a new crude distillation unit with the capacity of 220,000 barrels per day, as opposed to that of 95,000 barrels per day as achieved by a pair of the currently existing crude distillation units. Note that both of the currently existing crude distillation units will cease processing once the newly constructed one has commenced its operation, thus resulting in the Company's overall productivity being increased from 275,000 barrels per day to 400,000 barrels per day.

In addition, it is also to be noted that, at present, the Environmental Impact Assessment (EIA) report on the CFP Project has been officially approved by the Office of Natural Resources and Environmental Policy and Planning (ONEP). In consequence, the Company is in process of selecting qualified contractors for the CFP Project. The Company also estimates that a period of four to five years approximately will be required for the CFP Project construction, the general implementation of which, based upon the Project's investment plan, will commence by the end of September 2018, and the actual construction of which should begin in May 2019. The construction of the entire Project (CFP) is estimated to come to closure and immediately for the Project to commence for commercial purposes in the first quarter of 2023.

The investment in the CFP Project is deemed as the acquisition transaction pursuant to the Notifications on Assets Acquisition or Disposal. The highest value is 68.58 percent calculated based on the total value of consideration basis compared with the total assets value of the Company from the reviewed consolidated financial statement of the Company for the period ending 31 March 2018. Considering the other acquisition transaction incurred during the 6-month period prior the Board of Directors approval on CFP Project, which is the acquisition transaction of shares of Top Maritime Service Company Limited, the total transaction value is 68.61 percent calculated based on the total value of consideration basis. As a result, the transaction is classified as a "Class 1 Asset Acquisition Transaction" pursuant to the Notifications on Assets Acquisition or Disposal.

Therefore, the Company shall comply with the Notifications on Assets Acquisition or Disposal as follows:

- (1) Disclose an information memorandum on the investment in the CFP Project of the Company to the Stock Exchange;
- (2) Convene a shareholders meeting in order to seek approval on the investment in the CFP Project and other related matters, whereby the Company shall obtain the affirmative votes of no less than three-quarters of the total votes cast by the shareholders attending the Meeting and entitled to vote, without counting the votes cast by shareholders having interest; and
- (3) Arrange for an independent financial advisor (IFA) to provide opinions on the reasonability, benefits of the investment in the CFP Project, reasonableness of the price, and conditions of the transaction and to deliver such opinions to the SEC Office, the Stock Exchange, and the shareholders.

According to the Board of Directors Meeting No. 6/2018 dated 29 June 2018, the Board of Directors has approved the appointment of Maybank Kim Eng Securities (Thailand) Public Company Limited ("**Independent Financial Advisor**" or "**IFA**"), as financial advisor approved by the Office of the Securities and Exchange Commission ("**SEC**") and the IFA does not have any relationship with the Company, and is authorized to be an independent financial advisor of the Company to provide an opinion to shareholders as supporting information for their voting consideration with respect to the Transaction. In this regards, the IFA



The Opinion of the Independent Financial Advisor regarding Acquisition of Assets

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hereby warrant that the IFA has all qualifications in accordance with the notification regarding the approval of the financial advisor and scope of works and the IFA had already performed, as the financial advisor, pursuant to the related criteria.

This IFA report was prepared based on the information gathered from interviews with the Company's management, documents provided by the Company, publicly available information as well as the IFA's assessment of current economic conditions. Any significant changes to this information in the future may alter the IFA's opinion on the transaction accordingly.

Information and documents used in preparing this report included but are not limited to the following:

- The Resolutions of the Company's Board of Director's Meetings relating to the Transaction
- Information Memorandum on Asset Acquisition Transaction from the Investment in the Clean Fuel Project (CFP)
- The Company's Information disclosure (Form 56-1)
- The Company's audited financial statements as of 31 December 2015 - 2017 and the Company's reviewed financial statement for 3 months period ended 31 March 2018
- Information from managements and officers of the Company
- Information and document provided by the Company
- Industry study report for CFP Project by S&P Global Platts ("**Certain Experts In Petroleum Industry**") in which IFA has considered that this report is reasonable to be used as a reference on preparing this opinion report

Limitation of the IFA in preparation of this opinion report

The opinion of the IFA has been prepared on the limited accessible information of the Company and CFP Project. Therefore, the IFA has prepared this opinion report based on the information provided by the Company or related persons of the Company. In this regards, IFA did not have access to some highly sensitive and confidential information, such as EPC contract and detail of licensor. Such information is very sensitive, and will affect the competitive landscape of the Company. The disclosure of such information will adversely affect the operation of the Company significantly and may cause the Company to lose its competitiveness. The disclosure of the information might affect the Company's business significantly and will make the Company disadvantageous to competitors. Nevertheless, the IFA views that such limitation does not materially affect the IFA's duty on preparing this opinion report.

In addition, the IFA's opinion was based on the following assumptions:-

- All information and documents provided by the Company and the information from management of the Company were valid and true. The opinion obtained was credible and close to the current situation.
- No past events or imminent events or impending events would create significant negative impacts on the Company's operating performance.
- All business contracts related to the Company were legal and binding. There would not be any amendments, revocation or cancellation of the laws related to the Transaction.

The IFA has prepared this report on 3 March 2017 and hereby certified that we have studied, analyzed and prudently performed our duties as an Independent Financial Advisor, complying with the generally accepted professional standard and rendered our opinion based on the unbiased analysis with regards to the best benefit of the minority shareholders. However, it is important to note that the IFA's opinions are based on the information and documents received from the Company and other

The Opinion of the Independent Financial Advisor regarding Acquisition of Assets

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publicly available information. The IFA assumes that such information is accurate and reliable at the time the IFA prepared this opinion report. However, if such information is found to be inaccurate and/or incomplete and/or unreliable and/or have any significant changes in the future, the opinion provided by the IFA may differ accordingly. As a result, the IFA will not be held responsible for any adverse impacts on the Company and its shareholders resulting from the transaction. In addition, the objective of this report is merely to provide an opinion on the transaction to the Company's shareholders only. Notwithstanding, the decision to vote is the sole discretion of the shareholders, which shall include the consideration of advantages, disadvantages, and risk associated with the transaction as well as consideration of the attached documents submitted to the shareholders along with the invitation letter so as to make the most appropriate decision. In this regard, the opinion of the IFA does not certify the success of the Transaction as well as the possible impacts to the Company. The IFA does not hold any responsibilities for the impacts that might arise from such transaction both directly and indirectly.

The IFA has considered the reasonableness of the transaction in detail described below:

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**Glossary**

**Abbreviation**

CFP Project	Clean Fuel Project
Company or Thairoil	Thairoil Public Company Limited
Company Group	Thairoil Public Company Limited and its subsidiaries
PTT	PTT Public Company Limited
PTT Group	PTT Public Company Limited and its subsidiaries and associates
TOP SPP	TOP SPP Company Limited
EGAT	Electricity Generating Authority of Thailand
Independent Financial Advisor or IFA	Maybank Kim Eng Securities (Thailand) Public Company Limited
SET	The Stock Exchange of Thailand
SEC	The Securities and Exchange Commission
IRR	Internal rate of return
NPV	Net present value
WACC	Weighted average cost of capital
The Notifications on Assets Acquisition or Disposal	The Notification of the Capital Market Supervisory Board No. Tor Jor. 20/2551, Re: Rules on Entering into Material Transactions Deemed as Acquisition or Disposal of Assets, dated 31 August 2008, 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 and Disposition of Assets, 2004, dated 29 October 2004 (as amended)
Notifications on Connected Transactions	the Notification of the Capital Market Supervisory Board No. Tor Jor 21/2551 re: the requirements on the conclusion of connected transactions, dated 31 August 2008 (as amended), and the notification of the Board of Governors of the Stock Exchange of Thailand re: disclosure of information and operations of the listed company regarding connected transactions B.E. 2546, dated 19 November 2003 (as amended)

Executive Summary

In light of the Board of Directors' Meeting of Thai Oil Public Company Limited (the "**Company**"), No. 6/2018, held on 29 June 2018, in which the resolution has been given for the Company to invest in the Clean Fuel Project (the "**CFP Project**" / "**CFP**"), the total value of which accounts for approximately US\$ 4,825 million or approximately THB 160,279 million, and the interest of which, throughout the project's construction period, was estimated to be US\$ 151 million or approximately THB 5,016 million, below shown are the details of the aforementioned Project

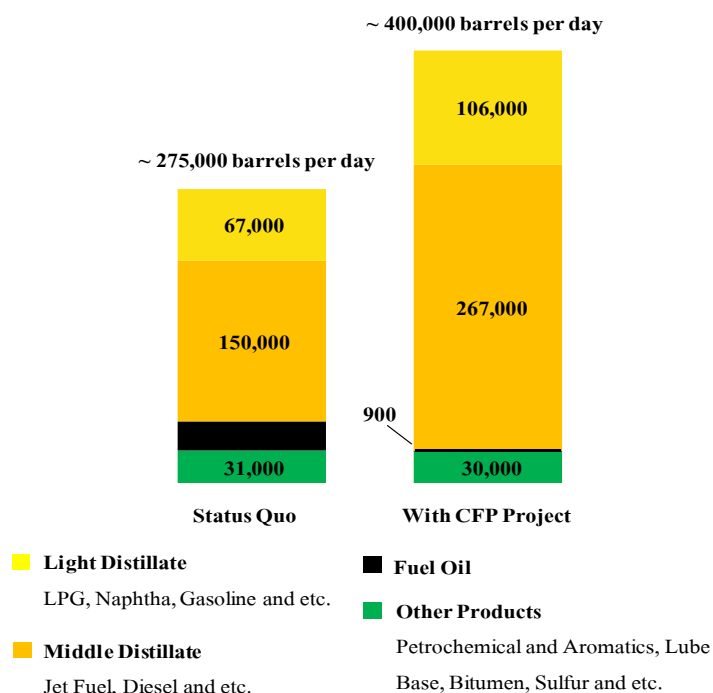
At present, the Company's oil refinery plant is a complex refinery comprising of the processing units, transforming crude oil into a high value petroleum product, in order to optimize the best benefit, while also taking into account the types and prices of the targeted products, as well as the types and prices of crude oil or other raw materials (feedstock) purchased by the Company for the purpose of having them transformed into petroleum products. The Company's oil refinery plant operates utilizing a multi-stage refinery process during which there are various operational units at work: Separation Process; Conversion/Reforming Process; and Treatment Process.

Based upon the study on the Company's business competitiveness, in term of capacity of oil refinery plant referred to Nelson Complexity Index and Return on Investment capital (ROIC), the competitiveness ranking of Thailoil in comparison to other refineries in the region has tendency to decrease as there are new refineries with a higher production capacity and using more advanced technologies. In addition, the performance of the crude distillation unit 1 and the crude distillation unit 2 have decreased as they have been in use for approximately 50 years and 40 years, respectively. As a result, additional investment to increase their performance and cost of maintenance are relatively not worthwhile. In view of the above, the Company has researched and explored various approaches in order to enhance the competitiveness of the refineries and put its refineries in the forefront of the industry by increasing the profitability ratio per unit with the development of the Clean Fuel Project (CFP).

The CFP Project will improve effectiveness in the production process by means of increasing the refinery processing (distillation) units in order to increase both value and quality of the products, resulting in the Company's refinery, following this additional investment, to become capable of refining 'heavy crude oil' and of decreasing the raw material procurement cost. Furthermore, the CFP Project will also include the distillation unit serving in providing value-added to the products by transforming fuel oil and bitumen, both having relatively low value, into jet fuel and diesel, both of which are more highly priced and environment-friendly, thus being in positive response to the market fluctuation by which fuel oil consumption is expected to become decreased, not to mention the change in terms of quality of the oils to be utilized for marine navigation from 2020 onwards. In addition, an increase in production of jet fuel and diesel also corresponds with the upcoming market demand in future. The CFP Project, all the more, will enable the oil refinery to produce more of light naphtha and heavy naphtha, both being the feedstock utilized in petroleum industry. Note that the Company, in cooperation with the companies in the PTT Group, is also currently conducting a feasibility study in light of the endeavor to provide value-added to petrochemicals utilizing these products.

Given the aforementioned improvement, the company will carry out the construction project of a new crude distillation unit with the capacity of 220,000 barrels per day, as opposed to that of 95,000 barrels per day as achieved by a pair of the currently existing crude distillation units. Note that both of the currently existing crude distillation units will cease processing once the newly constructed one has commenced its operation, thus resulting in the Company's overall productivity being increased from 275,000 barrels per day to 400,000 barrels per day.

Production Capacity Comparison between Status Quo and with CFP Project



- Note
1. The production volume depends upon actual production, which may differ from the aforementioned estimate.
  2. The estimate of the production volume includes the period of repairs and maintenance. Fuel oil being produced in the case that there is the CFP Project is the result from the closure for repairs and maintenance.

In addition, it is also to be noted that, at present, the Environmental Impact Assessment (EIA) report on the CFP Project has been officially approved by the Office of Natural Resources and Environmental Policy and Planning (ONEP). In consequence, the Company is in process of selecting qualified contractors for the CFP Project. The Company also estimates that a period of four to five years approximately will be required for the CFP Project construction, the general implementation of which, based upon the Project's investment plan, will commence by the end of September 2018, and the actual construction of which should begin in May 2019. The construction of the entire Project (CFP) is estimated to come to closure and immediately for the Project to commence for commercial purposes in the first quarter of 2023.

The investment in the CFP Project is deemed as the acquisition transaction pursuant to the Notifications on Assets Acquisition or Disposal. The highest value is 68.58 percent calculated based on the total value of consideration basis compared with the total assets value of the Company from the reviewed consolidated financial statement of the Company for the period ending 31 March 2018. Considering the other acquisition transaction incurred during the 6-month period prior the Board of Directors approval on CFP Project, which is the acquisition transaction of shares of Top Maritime Servics Company Limited, the total transaction value is 68.61 percent calculated based on the total value of consideration basis. As a result, the transaction is classified as a "Class 1 Asset Acquisition Transaction" pursuant to the Notifications on Assets Acquisition or Disposal.

Therefore, the Company shall comply with the Notifications on Assets Acquisition or Disposal as follows:

- (1) Disclose an information memorandum on the investment in the CFP Project of the Company to the Stock Exchange;

(2) Convene a shareholders meeting in order to seek approval on the investment in the CFP Project and other related matters, whereby the Company shall obtain the affirmative votes of no less than three-quarters of the total votes cast by the shareholders attending the Meeting and entitled to vote, without counting the votes cast by shareholders having interest; and

(3) Arrange for an independent financial advisor (IFA) to provide opinions on the reasonability, benefits of the investment in the CFP Project, reasonableness of the price, and conditions of the transaction and to deliver such opinions to the SEC Office, the Stock Exchange, and the shareholders.

According to the Board of Directors Meeting No. 6/2018 dated 29 June 2018, the Board of Directors has approved the appointment of Maybank Kim Eng Securities (Thailand) Public Company Limited ("**Independent Financial Advisor**" or "**IFA**"), as financial advisor approved by the Office of the Securities and Exchange Commission ("**SEC**") and the IFA does not have any relationship with the Company, and is authorized to be an independent financial advisor of the Company to provide an opinion to shareholders as supporting information for their voting consideration with respect to the Transaction. In this regards, the IFA hereby warrant that the IFA has all qualifications in accordance with the notification regarding the approval of the financial advisor and scope of works and the IFA had already performed, as the financial advisor, pursuant to the related criteria. The date to record the names of the shareholders who shareholders entitled to attend the meeting (record date) is 13 July 2018. The shareholder name will be collected in accordance to the section 225 Securities and Exchange Act. B.E. 1992 (as revised in B.E. 2008) in which by mean of book closing on 12 July 2018.

The Independent Financial Advisor is of the opinion that, in terms of '**reasonableness**', the act of entering into this Transaction is considered to be '**reasonable**' due to the following reasons: an increase in the Company's competitive capacity; reduction of raw material (feedstock) cost; providing value-added; as well as increasing business opportunities within Petrochemical industry. In addition, the CFP Project operation will also benefit the Kingdom of Thailand and the country's overall economy by enhancing Thailand's domestic long-term energy security, providing support to Phase 4 of the state-owned petrochemical project; and creating the opportunity for Thailand to become the region's energy hub among ASEAN Economic Community (AEC); etc.

However, entering into the Transaction also has its own disadvantages and poses risks, all of which the Shareholders should additionally take into account in light of their decision-making process. Such disadvantages may include the interest burden, and the increase in the debt-to-equity ratio as a result of borrowing, the risk of demand and supply, the risk of oil price fluctuation, the risk of Project operation, etc. The Shareholders may consult with Part 2 (the Second Part) of this Report concerning additional details of strength and weaknesses, as well as the risks, of the investment in the CFP Project

In addition, The Independent Financial Advisor is of the opinion that, concerning its '**reasonableness**', the entering into the Transaction is reasonable in terms of the transacted price and conditions. Investment in the CFP Project will enable the Company to realize the internal rates of return between 11.89% and 12.30%, particularly with the base-case one accounting for 12.10% for this Project, which is greater than the weighted average cost of capital (WACC), the latter amounting to 8.55%, where the internal rate of returns to Shareholders' equity are between 14.62% and 15.15%, particularly with the base-case one accounting for 14.89%, thus higher than the rate of return to the Company's common shareholders, which is equal to 10.78%. The CFP Project holds the present value of incremental cash flows as 'positive', thus comprised of the Project's present value ranging from US\$ 779.89 million to US\$ 1,882.10 million, with the base-case value accounting for US\$ 1,286.33 million, and the Project's present shareholder value ranging from US\$ 579.17 million to US\$ 1,294.72 million, with the base-case value accounting for US\$ 908.90 million.

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	<b>IRR / NPV</b>	<b>WACC / Cost of Equity</b>
Project IRR from CFP Project	11.89% - 12.30% per year	8.55% per year
Equity IRR from CFP Project	14.62% - 15.15% per year	10.78% per year
Net Present Value of CFP Project (US\$ million)	779.89 - 1,882.10	-
Net Present Value of Shareholders' Equity from CFP Project (US\$ million)	579.17 - 1,294.72	-

Note that this financial forecast of the CFP Project covers merely a 20-year period. In addition, the Project's terminal value has been forecasted utilizing the scrap value calculation method, thereby not taking into account the Company's future operations under the CFP Project afterwards, the manner of which, therefore, is considered to be somewhat cautious, as, in reality, the Company may be able to operate the CFP Project longer than the aforementioned forecast period, given the reference of the Company's own operational units, which last for 40-50 years.



<b>Section 1    Characteristics and Details of the Transaction</b>
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**1.1        General Characteristics of the Transaction**

The Board of Directors' Meeting of Thai Oil Public Company Limited (the "**Company**"), No. 6/2018, held on 29 June 2018, in which the resolution has been given for the Company to invest in the Clean Fuel Project (the "**CFP Project**" / "**CFP**"), the total value of which accounts for approximately US\$ 4,825 million or approximately THB 160,279 million, and the interest of which, throughout the project's construction period, was estimated to be US\$ 151 million or approximately THB 5,016 million<sup>1</sup>

Thai Oil Group operates in 'oil refinery' business, 'petrochemical' and 'lube base oil' businesses, 'power generation' business, 'transportation' business, others; note that oil refinery signifies the Group's major business while Petrochemical and Lube Base Oil businesses are income supplementary whereas other businesses are implemented so as to provide support to the Group's operations, as well as providing for higher effectiveness and stabilit.

At present, the Company's refinery, having been designed as a complex refinery type, utilizes the process by which crude oils are transformed into petroleum products, thus resulting in the higher total value of the aforementioned products. The Company's oil refinery operates utilizing a multi-stage refinery process during which there are various operational units at work as follows:

(1) Separation Process: The process is intended so as to separate crude oils in accordance with the boiling points as required. The separation units -- for hydrocarbon groups -- are comprised of three crude oil distillation units and three vacuum distillation units. All three crude oil distillation units have been operating for 54 years, 48 years and 26 years respectively, all with the overall refinery capacity of 275,000 barrels per day.

(2) Conversion/Reforming Process: The process is intended so as to produce high-value finished products of petroleum such as benzene, jet fuel and diesel. There are seven conversion units altogether, each having been operating on average for 32 years.

(3) Treatment Process: The process is intended so as to improve product quality by separating contaminants and impurities such as sulfur. There are seven treatment units altogether, each having been operating on average for 29 years.

Based upon the study on the Company's business competitiveness, in term of capacity of oil refinery referred to Nelson Complexity Index and Return on Investment capital (ROIC), the competitiveness ranking of Thaioil in comparison to other refineries in the region has tendency to decrease as there are new refineries with a higher production capacity and using more advanced technologies. In addition, the performance of the crude distillation unit 1 and the crude distillation unit 2 have decreased as they have been in use for approximately 50 years and 40 years, respectively. As a result, additional investment to increase their performance and cost of maintenance are relatively not worthwhile. In view of the above, the Company has researched and

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<sup>1</sup> The calculation of US dollar currency rate and its Thai Baht equivalent being referred hereto within this instrument is based upon the foreign currency exchange rates issued by the Bank of Thailand dated 28 June 2018 (daily average selling rate for US dollar currency), upon which THB 33.2185 was equal to US\$ 1.

explored various approaches in order to enhance the competitiveness of the refineries and put its refineries in the forefront of the industry by increasing the profitability ratio per unit with the development of the Clean Fuel Project (CFP).

The CFP Project will improve effectiveness in the production process by which the Company's refinery, following this additional investment, will become capable of refining 'heavy crude oil', the prices of which are lower than those of the 'light crude oil', the latter type of which the Company is currently producing, thus resulting in the average raw material procurement cost reduction for approximately US\$ 4-5 per barrel. Furthermore, within its premises, the CFP Project will also include the distillation unit serving in providing value-added to the products by transforming heavy oil products yet with relatively low value, i.e. fuel oil and bitumen, into jet fuel and diesel, both of the latter of which are more highly priced and environment-friendly, thus possibly making for an increase in the total value of the Company's products, not to mention signifying the Company's positive response to and its preparation for both market expansion within the aviation industry in particular, and economic growth and expansion in Thailand and this region. The Shareholders may consult with 'Attachment 2' hereof concerning additional details of industrial situations pertaining to the investment in the CFP Project. As a result increase variety and value-added of products, the gross profit margin will be increase by approximately US\$ 1-2 per barrel.

In addition, in association with the CFP Project and thereby as part of the plan to expand its overall productivity from 275,000 barrels per day to 400,000 barrels per day, the Company will carry out a construction project of a new Crude Distillation Unit, namely the Crude Distillation Unit 4, with the capacity of 220,000 barrels per day, as opposed to that of 95,000 barrels per day as achieved by a pair of the currently existing crude distillation units. Note that both of the currently existing Crude Distillation Units will cease processing once the Crude Distillation Unit 4 has commenced its operation.

CFP Project was first developed in 2012 following the approval given by the Company's Board of Directors for the long-term business growth plan. In 2014, the Company would conduct the feasibility study on the CFP Project, followed by its designing of the preliminary production process and preliminary engineering, the selection of technologies, as well as hiring Foster Wheeler (Thailand) Limited, which is a subsidiary of Amec Foster Wheeler Plc., one of global leaders in engineering and technology services for the Power industry, as an engineering consultant. In 2017, concerning the CFP Project, the Company issued a written invitation to bid for the EPC Contractor job(s). Note that, at present, the Environmental Impact Assessment (EIA) report on the CFP Project has been officially approved by the Office of Natural Resources and Environmental Policy and Planning (ONEP). In consequence, the Company is in process of selecting qualified EPC contractor(s) for the CFP Project. The Company also estimates that it will be spending a period of four to five years approximately for the CFP Project construction, the general implementation of which, based upon the Project's investment plan, will commence by the end of September 2018, and the actual construction of which should begin in May 2019. The construction of the entire Project (CFP) is estimated to come to closure, and immediately for the Project to commence for commercial purposes in the first quarter of 2023.

## **1.2 Transaction Date**

The Company expects that the investment in the CFP Project will be commenced within September of 2018, and the construction is expected to be commenced in May of 2019 and completed by the first quarter of 2023.

### 1.3 Name of Related Party and its Relationship with the Company

Upon being granted approval from the shareholders meeting, the Company will engage those parties who have experience and expertise with respect to the engineering design, procurement, construction, and installation of equipment and machinery necessary for the investment in the CFP Project in accordance with its procedures and regulations.

At first, the Company deemed that such relevant parties are not connected persons of the Company. Nevertheless, during the investment in the CFP Project, if it appears that any of the relevant parties is a connected person of the Company, the Company will strictly comply with 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 (2003) (including any amendment thereto) (collectively, the “**Notifications on Connected Transactions**”).

### 1.4 Transaction Value

The investment in the CFP Project is deemed as the acquisition transaction pursuant to the Notifications on Assets Acquisition or Disposal. The highest value is 68.58 percent calculated based on the Total Value of Consideration Basis compared with the total assets value of the Company from the reviewed Consolidated Financial Statement of the Company for the period ending 31 March 2018. Considering the other acquisition transaction, with the transaction value of THB 81 million, incurred during the 6-month period prior this transaction, the total transaction value is 68.61 percent calculated based on the total value of consideration basis. As a result, the transaction is classified as a “Class 1 Asset Acquisition Transaction” pursuant to the Notifications on Assets Acquisition or Disposal.

Therefore, the Company shall comply with the Notifications on Assets Acquisition or Disposal as follows:

- (1) Disclose an information memorandum on the investment in the CFP Project of the Company to the Stock Exchange;
- (2) Convene a shareholders meeting in order to seek approval on the investment in the CFP Project and other related matters, whereby the Company shall obtain the affirmative votes of no less than three-quarters of the total votes cast by the shareholders attending the Meeting and entitled to vote, without counting the votes cast by shareholders having interest; and
- (3) Arrange for an independent financial advisor (IFA) to provide opinions on the reasonability, benefits of the investment in the CFP Project, reasonableness of the price, and conditions of the transaction and to deliver such opinions to the SEC Office, the Stock Exchange, and the shareholders.

The details of the calculation of the transaction size of CFP project are as follows:

- (1) Net Tangible Asset (NTA) Basis  
= Net Tangible Asset Proportionated as to be Acquired  
Net Tangible Asset of the Company and its subsidiaries

Not applicable as the investment in the CFP Project is considered as an investment in additional assets.

- (2) Net Profit Basis
- = Proportionated Net Profit Proportionated as to be Acquired  
Net Profit of the Company and its subsidiaries

Not applicable as the investment in the CFP Project is considered as an investment in additional assets.

- (3) Total Value of Consideration Basis
- = Total value of consideration  
Total asset value of the Company and its subsidiaries
- = Total value of consideration of the CFP Project  
Total asset value of the Company and its subsidiaries
- = THB 165,295 million  
THB 241,040 million
- = approximately 68.58

Considering the other acquisition transaction, with the transaction value of THB 81 million, incurred during the 6-month period prior this transaction, the total transaction value is 68.61 percent.

- (4) Value of Securities issued by the Company
- Not applicable as there is no issuance of new securities.

### 1.5 Information regarding CFP Project

At present, the Company's oil refinery plant operates with its full capacity of 275,000 barrels of crude oils per day. Note that , having been designed as a complex refinery type, the Company's refinery utilizes the process by which crude oils are transformed into petroleum products, thus resulting in the higher total value, in order for utmost benefits, whereby all processing units at work within the Company's refinery will be taken into account also in tandem with the prices of products both at present and in the future, the types of required products, as well as the prices of crude oil and raw materials. In consequence, The Company's oil refinery plant operates utilizing a multi-stage refinery process during which there are various operational units at work as follows:

Unit	Function	Amount of Unit
<b>(1) Separation Process Unit</b>		
Crude Distillation Unit (CDU)	To separate crude oils in accordance with the boiling points as required as follows: Liquefied petroleum gas; Light naphtha; Heavy naphtha; Jet fuel; Diesel; and Fuel Oil	3 Units

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<b>Unit</b>	<b>Function</b>	<b>Amount of Unit</b>
High Vacuum Unit (HVU)	To separate long residue properties of crude oils in accordance with the boiling points as required as follows: Light vacuum gas oil; Heavy vacuum gas oil; and Short residue properties.	3 Units
<b>(2) Conversion/Reforming Process Unit</b>		
Isomerization Unit (ISOM)	To transform light naphtha, which has low octane, into isomerate, which has high octane and does not have any aromatic compound; the purpose of which is for isomerates to be utilized for the production of unleaded gasoline, using catalysts and hydrogen.	1 Unit
Continuous Catalyst Regeneration Platformer Unit (CCR)	To transform low-octane oils into the ones with higher octane, by using catalysts, in order to be utilized for the production of unleaded gasoline and aromatics.	2 Units
Fluidized Catalytic Cracking Unit: (FCCU)	To transform the long residue and the heavy vacuum gas oil into gasoline, diesel and fuel oil, using catalysts.	1 Unit
Hydrocracking Unit (HCU)	To transform heavy vacuum gas oil into gasoline, jet fuel, kerosene and diesel, using hydrogen and catalysts.	2 Units
Thermal Cracking Unit (TCU)	The transformation process of short-residue to be a value-added one, with high temperature but without any catalyst being utilized.	1 Unit
<b>(3) Treating Process</b>		
Hydrosulfurization Unit (HDS)	The process of reducing both sulfur content and contaminants in diesel, using hydrogen and catalysts.	2 Units
Hydro Treating Unit (HDT)	The process of reducing both sulfur content and contaminants in gasoline, using hydrogen and catalysts.	3 Units
Kerosene Merox Treater Unit (KMT)	The process of removing mercaptan from jet fuel utilizing catalysts in order to improve jet fuel quality in accordance with the distributable/sellable standards.	2 Units

In order to enhance productivity and business competitiveness of its oil refinery plant so that the Company will be able to make a return to becoming the industrial leader once again, by increasing the profitability per unit, the Company has developed

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the CFP Project, which will contribute to the expansion of the Company's refinery's overall productivity from 275,000 barrels per day to 400,000 barrels per day. Note that the Company will carry out the construction project of a new crude distillation unit, with the capacity of 220,000 barrels per day, as opposed to that of 95,000 barrels per day as achieved by a pair of the currently existing crude distillation units. Both of the aforementioned currently existing crude distillation units will cease processing once the crude distillation unit 4 has commenced its operation. In addition, there will be an increase in the number of refinery processing units within the refinery plant in order to provide value-added to, and to improve the quality of, the products. The scope of CFP Project operation will cover the construction project of additional refinery processing units, with certain currently existing units being discontinued, the details of which are as follows:

(1) Additional Processing Units

Unit	Function	Amount of Unit
<b>(1) Separation Process Unit</b>		
Crude Distillation Unit (CDU)	To separate crude oils in accordance with the boiling points as required as follows: Liquefied petroleum gas; Light naphtha; Heavy naphtha; Jet fuel; Diesel; and Fuel Oil	1 Unit
High Vacuum Unit (HVU)	To separate long residue properties of crude oils in accordance with the boiling points as required as follows: Light vacuum gas oil; Heavy vacuum gas oil; and Short residue properties.	1 Unit
<b>(2) Conversion/Reforming Process Unit</b>		
Hydrocracking Unit (HCU)	To transform heavy vacuum gas oil into gasoline, jet fuel, kerosene and diesel, using hydrogen and catalysts.	1 Unit
Vacuum Residue Hydrocracking Unit (RHCU)	It is the new technology to be utilized for the CFP by enhancing the value of short residue for the production of oil products with higher value, utilizing both hydrogen and catalysts, prior to being delivered to the molecule-breaking unit, in which the bonds will be broken with catalysts and hydrogen (HCU), in order that the value-added be provided to the product(s), and for further separation.	1 Unit
<b>(3) Treating Process Unit</b>		
Hydrodesulfurization Unit (HDS)	The process of reducing both sulfur content and contaminants in diesel, using hydrogen and catalysts.	1 Unit
Hydro Treating Unit (HDT)	The process of reducing both sulfur content and contaminants in gasoline, using hydrogen and catalysts.	1 Unit

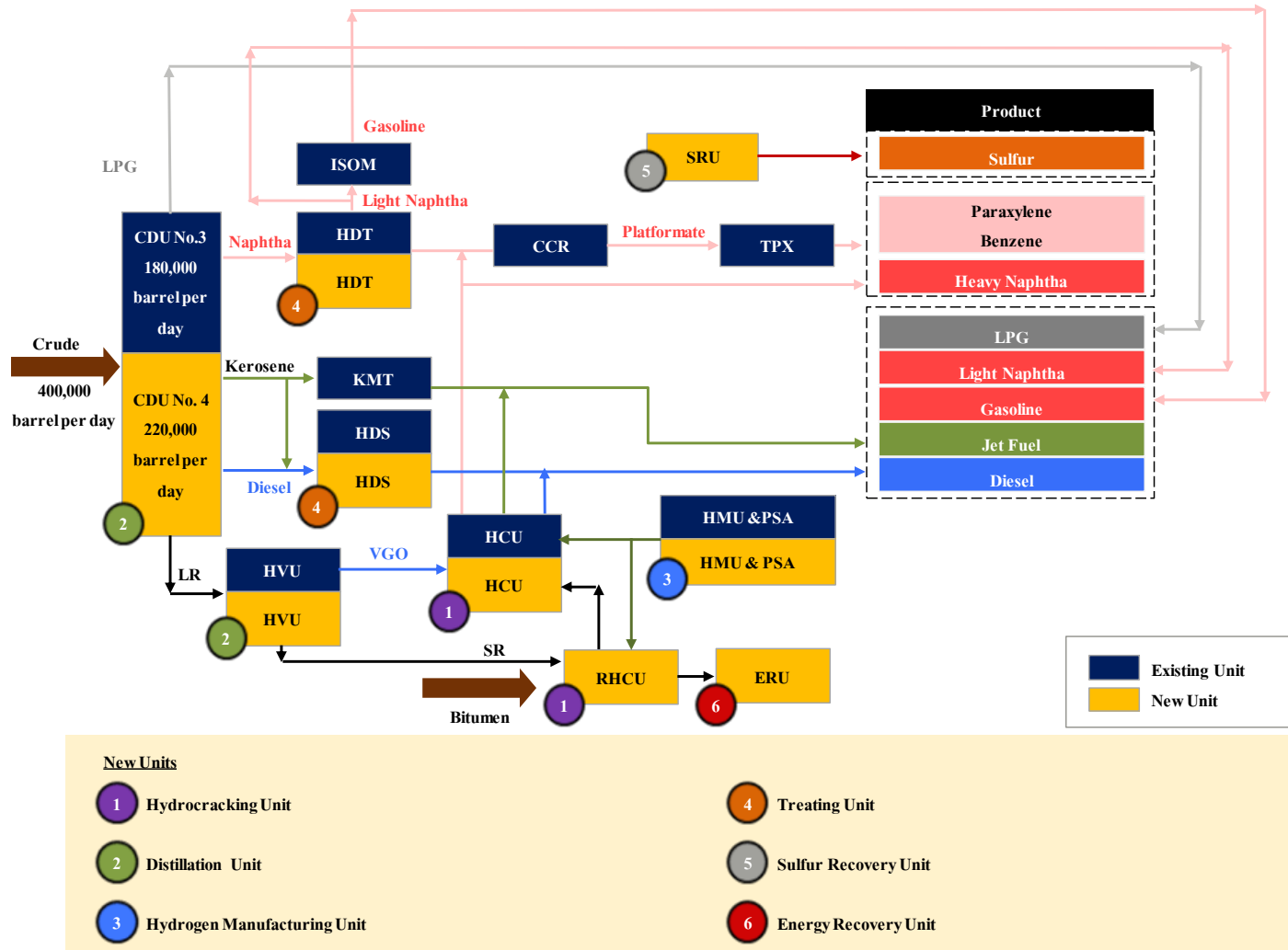
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(2) The Discontinued Processing Units

<b>Unit</b>	<b>Function</b>	<b>Amount of Unit</b>
Crude Distillation Unit No. 1 and Unit No. 2 (CDU-1/2)	To separate crude oils in accordance with the boiling points as required as follows: Liquefied petroleum gas; Light naphtha; Heavy naphtha; Jet fuel; Diesel; and Fuel Oil	2 Unit
High Vacuum Unit No. (HVU-1)	To separate long residue properties of crude oils in accordance with the boiling points as required as follows: Light vacuum gas oil; Heavy vacuum gas oil; and Short residue properties.	1 Unit
Hydrotreating Unit:No. 1 and No. 2 (HDT-1/2)	The process of reducing both sulfur content and contaminants in gasoline, using hydrogen and catalysts.	2 Unit
Fluidized Catalytic Cracking Unit (FCCU)	To transform the long residue and the heavy vacuum gas oil into gasoline, diesel and fuel oil, using catalysts.	1 Unit
Thermal Cracking Unit (TCU)	The transformation process of short-residue to be a value-added one, with high temperature but without any catalyst being utilized.	1 Unit

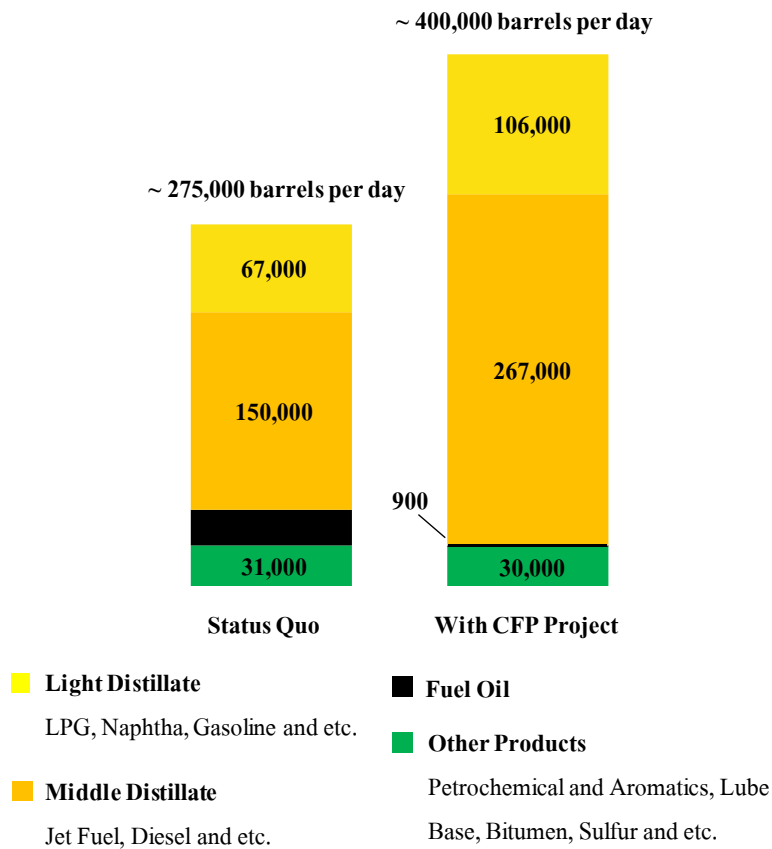
**Manufacturing Process Chart of Oil Refinery Plant with CFP Project**





According to the above-shown diagram, there are various additional processing units installed and functioning together with the currently existing ones, whereby more of petroleum products with the high total value, i.e. liquefied petroleum gas, gasoline, jet fuel and diesel, will be produced, while at the same time the production of lube base oil, petroleum product(s) and aromatics will still remain in status quo. Given the CFP Project, it is to be noted, there will be a decrease in production of fuel oil and bitumen, both products yielding relatively lower profits than do others.

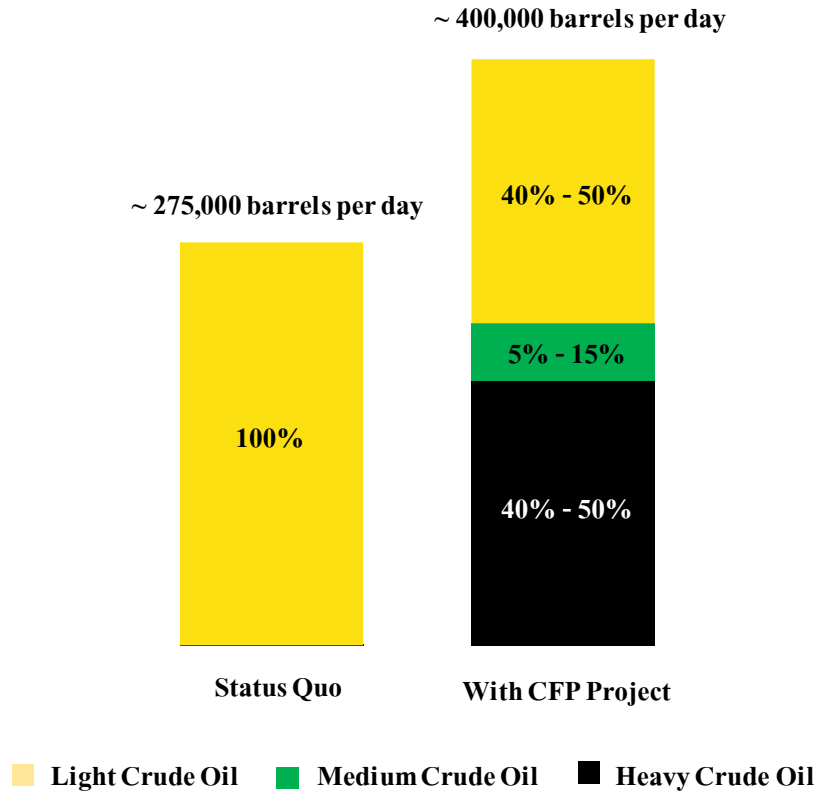
**Production Capacity Comparison between Status Quo and with CFP Project**



- Note
1. The production volume depends upon actual production, which may differ from the aforementioned estimate.
  2. The estimate of the production volume includes the period of repairs and maintenance. Fuel oil being produced in the case that there is the CFP Project is the result from the closure for repairs and maintenance.

Regarding crude oil, the CFP Project will be able to utilize heavy crude oil due to the increase in the number of product quality improvement unit whereas the Company's currently existing Refinery is able to use light crude oil only. The Company expects that it will utilize light crude oil for the crude distillation unit 3 and heavy crude oil for the crude distillation unit 4 following the CFP Project commencement.

**Crude Oil Volume Proportion for Status Quo and with CFP Project**



Note: The crude oil volumes utilized in the oil refinery depends upon actual production, which may differ from the aforementioned estimate

In addition, a number of public utilities necessary for and relevant to the Project will also be constructed such as electrical system/power supply, water treatment system, crude oil well(s), storage tanks for crude oil and products, crude oil and product distribution pipes, etc.

Regarding the collective source of electrical power supply for the currently existing refinery, excluding power supply requirements for Thai Lubes Public Co., Ltd., Thai Paraxylene Co., Ltd. and Labix Co., Ltd., electricity is generated by the oil refinery plant's steam turbine electric generator, and from the purchasing of additional power supplies from subsidiaries of the Company, namely TOP SPP Co., Ltd., and Thairoil Power Co., Ltd. Once the Company has commenced the CFP Project operation, there will be an increase in the demand for electrical power by approximately 250 megawatts; therefore, the Company has the plan to increment the energy recovery unit by utilizing the short residue obtained from the distillation unit as fuel. Note that the planned energy recovery unit will have the installation capacity of 250 megawatts, thus resulting in the ability to generate electrical power supply in meeting the oil refinery plant's future demand. Furthermore, the CPF Project will be able to utilize the power reserve from the Electricity Generating Authority of Thailand (EGAT) as well.

At present, the Company's oil refinery plant has four sources of water supply in total as follows: the Regional Irrigation Office 9; Eastern Water Resources Development and Management Public Co., Ltd.; Global Power Synergy Public Co., Ltd.; and the oil refinery plant's own water supply unit. Once the CFP Project has commenced its operation, there will be an increase in the

demand for water supply, in response to which the Company, thus, has the plan to procure additional water supplies from the Regional Irrigation Office 9 and Eastern Water Resources Development and Management Public Co., Ltd. The Company is in the process of discussing regarding the matter of the alternative source of water supply specifically for the CFP Project as well.

The Project has the investment value of US\$ 4,825 million approximately, or about THB 160,279 million

#### 1.6 Summary of Essential Details of the Related Contracts/Agreements

##### (1) Contract Related to the Investment

At present, the Company is in process of selecting EPC contractor(s) by mean of making invitation to tender, in consequence of which the draft of the Contract/Agreement related to the investment in the CFP Project cannot be revealed.

##### (2) Ratchaphatsadu Lease Agreement

The CFP Project will be constructed within the same location as the Company's currently existing oil refinery plant, which is near Laem Chabang Port, Sukhumvit Road Km 124, Tambon Thung Suk La, Amphoe Si Racha, Chon Buri Province. The Company's refinery covers the entire space of 2,300 Thai Rai, which is comprised of Ratchaphatsadu plots of land amounting to "1,499-3-26" Thai Rai, and the Company-owned plots of land amounting to approximately 800 Thai Rai. At present, Ratchaphatsadu plots of land amounting to "1,499-3-26" Thai Rai is being leased from the Treasury Department for a period of 30 years from 11 September 1992 through 10 September 2022. The Company has made an official request to extend the Lease Agreement for another 30 years, which was approved by the Cabinet of Thailand on 27 June 2018 for the Company to be on another 30-year lease term from 11 September 2022 to 10 September 2052. Note that in the event that the CFP Project is not approved by the Shareholders during the Shareholders' Meeting for the Company to enter into the Transaction, the Company will still remain legally bound to the aforementioned Agreements in light of its ongoing business operations. The details of the Land Lease Agreement are as follows:

Summary of the Details of the Land Lease Agreement		
Party to the Contract/Agreement	:	Ministry of Finance.
Total Leased Space	:	"1,499-3-26" Thai Rai.
Lease Period	:	A period of 30 years from September 11, 2022 to September 10, 2052.
Rental Fee	:	Total rental fee of TH 12,000 million

##### (3) Memorandum of Understanding between PTT Public Co., Ltd. and the Company

Terms and Conditions of the Draft Agreement		
Title of the Contract/Agreement	:	Memorandum of Understanding on the CFP Project Cooperation.
Party to the Contract/Agreement	:	PTT Public Co., Ltd. ("PTT") and the Company.
Date	:	24 May 2018
Agreement Status	:	No obligation i.e. the actual entering into Contract/Agreement will be carried out after the CFP Project implementation has been approved.

<b>Conditions for Purchasing of Products</b>	<ul style="list-style-type: none"><li>- PTT will purchase such products as liquefied petroleum gas, unleaded gasoline, base gasoline, jet fuel, diesel, fuel oil, bitumen, etc.</li><li>- The purchasing, as earlier mentioned, will not be lower than 49.99% of the Company's production volume, and at competitive prices.</li></ul>
<b>Conditions for Feedstock Procurement</b>	<ul style="list-style-type: none"><li>- PTT will make a delivery of crude oils for not lower than 49.99% of the Company's production volume, and at competitive prices.</li><li>- PTT will make a delivery of heavy crude oils for not lower than 25% of the crude oils procured by PTT.</li><li>- PTT will be the only one to carry out procurement both domestic and Government-to-Government (G-to-G) crude oils for the Company.</li></ul>

### 1.7 Conditions for Entering into the Transaction

The entering into Transaction will occur after the approval has been given by the Shareholders during the Shareholders' Meeting.

### 1.8 Source of Fund for Entering into the Transaction

The primary sources of funds used for the operation of the CFP Project are expected to be obtained from the remaining cash of the Company in the amount of approximately US\$ 2,500 million, long-term loans secured from financial institutions and/or the capital derived from the issuance and offer for sale of the debt instruments, e.g., debentures, amounting to approximately US\$ 1,500 – 2,000 million, and the rest of funds will be obtained from the cash flow from the Company's future business operation, amounting to approximately US\$ 1,600 million.

The IFA has considered the source of fund for CFP Project. As of 31 March 2018, the Company has cash, cash equivalent and short-term investment amounting THB 81,798.98 million or approximately US\$ 2,604.54 million (the average selling rate of US Dollar as of 31 March 2018 is equal to THB 31.4063 to US\$). In addition, the Company will be able to raise fund of US\$ 1,500 - 2,000 million by mean of borrowing or issuance of debt securities. IFA views that raising fund by such debt will not cause the Company to breach the covenant which is to maintain the financial ratio (please find more detail in Section 2.2.2 Disadvantages of Entering into the Transaction item 2) Interest Burden and the Increase in Debt-to-Capital Ratio). Furthermore, the Company has a good performance and continuously generates cash flow. In 2016-2018, the Company generates the operating cashflow of approximately THB 23,181.63 - 34,417.18 million per year or approximately US\$ 653.75 - 1,009.28 million per year (calculated by the average selling rate of US Dollar for each particular year). Accordingly, the operating cashflow is sufficient for budget of the Company forecasted for CFP Project.

## **Section 2    Appropriateness of the Transaction**

### **2.1    Objective and Benefit of the Transaction**

The Company's oil refinery is currently operating with its three Crude Distillation Units (CDUs) with the capacity of 275,000 barrels per day, being capable of producing the finished petroleum approximately 14,000 million liters per annum, accounting for 25% of Thailand's domestic total refinery capacity<sup>2</sup>. The Company's oil refinery is designed to add highest value utilizing the currently existing production system and as it is a complex refinery type, it operates utilizing a multi-stage refinery process with various operational units at work, all of which contribute to producing the finished products of petroleum of high value, as follows: Crude Distillation Unit, Quality Improvement Unit, and Value-added Unit.

However, according to the study on the Company's business competitiveness based on Nelson Complexity Index and Return on Investment Capital (ROIC), in terms of business competitiveness compared to other refineries, the Company's rank has gradually been declining due to a series of introductions of brand new technologies to the construction projects of the new generation of other business entities' several oil refineries with higher productivity level. Furthermore, Thai Oil's Crude Distillation Units 1 and 2 have already been operating for 54 years and 48 years respectively, resulted in the relatively high costs of repairs and maintenance in order to maintain the efficiency.

The Company therefore has conducted a series of studies in order to increase its competitiveness to be a leader in the industry by increasing profitability per unit, and the Clean Fuel Project (also known as the CFP Project) was developed. With the introduction of the CFP Project, the efficiency of the production process will be improved by adding the refinery processing (distillation) units in order to increase both value and quality of the products, resulting in the Company's refinery, following this additional investment, becoming capable of refining 'heavy crude oil' which can decrease cost of raw material procurement, expected the reduction of approximately US\$ 4 - 5 per barrels. In addition, the CFP Project will also include the distillation unit serving in adding value to the products by transforming fuel oil and bitumen which have low value, into jet fuel and diesel with relatively higher value and environment-friendly, thus being able to respond to the market change that fuel oil consumption is expected to be decreased, not to mention the change in terms of quality of the oils to be utilized for marine navigation from 2020 onwards. Furthermore, an increase in production of jet fuel and diesel also corresponds with the upcoming market demand in future. The CFP Project, all the more, will enable the oil refinery to produce more of light naphtha and heavy naphtha, both being the feedstock utilized in petroleum industry. Note that the Company, in cooperation with the companies in the PTT Group, is also currently conducting a feasibility study to add value to petrochemicals utilizing these products. Concerning the aforementioned improvement, the Company will carry out the construction project of a new Crude Distillation Unit with the capacity of 220,000 barrels per day, as opposed to that of 95,000 barrels per day as achieved by Crude Distillation Unit 1 and 2, thus resulting in the Company's overall productivity being increased from 275,000 barrels per day to 400,000 barrels per day. Consequently, the Company's refinery operation will experience cost advantages as in terms of the economies of scale, thus the Company's sustainable business development in Petroleum/Oil Refinery industry in the future, as well as its ability to help promote Thailand's domestic energy security.

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<sup>2</sup> Total domestic distillation capacity does not include the condensate spiller of 135,000 barrels per day by PTT Global Chemical Public Co., Ltd.

## **2.2 Comparison between Advantages and Disadvantages of Entering and Not Entering into the Transaction**

### **2.2.1 Advantages of Entering into the Transaction**

#### **1) Benefits to the Company and Company Group**

##### **1.1) Increase in Competitiveness**

Given the incessantly ongoing competitive situations in Oil Refinery industry, in which a series of advanced technologies have been introduced, as well as the improvement to effectiveness in energy consumption and the use of alternative energy, the investment in the CFP Project will be of use to the Company in terms of business competitiveness in the future.

##### **1.2) Reduction of Feedstock Cost**

After the completion of the CFP Project construction, the Company will become capable of refining 'heavy crude oil', which in general is less costly than 'light crude oil', thus decreasing the feedstock cost while at the same time enhancing the flexibility in the ability to obtain crude oils from a wider variety of sources.

##### **1.3) Adding Value to the Products**

the CFP Project will include the distillation unit serving in adding value to the products by transforming fuel oil into jet fuel and diesel, which are more highly priced and environment-friendly, thus being able to respond to the market change that high-sulfur fuel oil consumption is expected to become decreased from 2020 onwards, not to mention an increase in production volume of jet fuel and diesel in correspondence to the market's future demand.

##### **1.4) Increase in Business Opportunities within Petrochemical Industry**

The CFP Project will also enable the Company to produce more of light naphtha and heavy naphtha, both being raw materials utilized in petroleum industry. In fact, the Company, in cooperation with the companies in the PTT Group, is also currently conducting a feasibility study to add value to petrochemicals utilizing these products.

#### **2) Benefits to Thailand**

In addition to benefits to the Company, the CFP Project will also become beneficial to Thailand and the country's overall economy as follows:

- Enhance Thailand's domestic long-term energy security in replacement of product importation in the future, especially regarding jet fuel, of which Thailand, it is forecasted, may need commencing the importation in 2022 due to its rapidly growing demand.
- Be able to produce high quality finished products of oils with low level of sulfur and more environment-friendly, in accordance with the Euro 5 Emission Standards.
- Provide support to Phase 4 of the state-owned petrochemical project in its production of light naphtha and heavy naphtha, both of which are substrates utilized in petrochemical industry.

- Be able to refine more of domestically produced crude oils by utilizing more advanced technologies, as well as taking advantage of the higher production capacity, thus enhancing the flexibility in the ability to obtain crude oils from a wider variety of sources including the ones obtained in Thailand, which will promote and support the state policy concerning Thailand's domestic crude oil consumption.
- Create the opportunity for Thailand to become the region's energy hub among ASEAN Economic Community (AEC).
- Support economic propulsion upon the grounds that the CFP Project is domestically invested and privately owned, thus resulting in more employments, directly and indirectly, which will make for Thailand's domestic economy to further move forward.

## 2.2.2 Disadvantages of Entering into the Transaction

### 1) Large Amount of Financial Investment Required

Based upon the Company's financial forecast, the CFP Project will require the amount of financial investment accounting for approximately US\$ 4,825 million (excluding financial costs or approximately THB 160,279 million. The aforementioned amount of financial investment is considered to be substantial, considering the Company's financial position.

### 2) Interest Burden and the Increase in Debt-to-Equity Ratio

The Company expects that the source of fund will be long-term loan from financial institutions and/or cash from issuing and selling debt instruments, such as issuing bonds worth US\$ 1,500 million - 2,000 million, resulting in the incremental interest burden which will pose higher risk to the Company.

In addition to the issuance of bonds, the Company currently has loan credit line obtained from various financial institutions approximately THB 19,323 million or about US\$ 582 million, which is comprised of committed credit line amounting to THB 11,540 million or approximately US\$ 348 million and uncommitted credit line amounting to THB 7,783 million or approximately US\$ 234 million, which is sufficient for the Transaction. Note that some of the loans mentioned above are bound to the major covenants as follows: (1) To maintain Liquidity ratio not lower than 1.05 times and (2) To maintain Non-current Liability to Equity ratio not exceeding 1.50 times, calculating from the Company's separate financial statements.

If the aforementioned ratios are calculated in reference to the Company's financial statements for three-month period ending 31 March 2018, assuming the funds obtained from the aforementioned facilities are utilized for the entering into the Transaction, the Company should be able to retain the aforementioned ratios as per the covenant as follows:

	Current	With the CFP Project	Covenants
Liquidity ratio <sup>1</sup>	3.77 x	1.68 x	$\geq 1.05$ x
Non-current Liability to Equity ratio	0.51 x	0.98 – 1.13 x	$\leq 1.50$ x

Remarks:

1. Liquidity ratio = current assets / current liabilities
2. Calculation is based upon the assumption that the Company spends cash and short-term investments amounting to THB 77,664 million in total based upon the Company's separate financial statements concerning the investment in the CFP Project
3. Calculation is based upon the assumption that the Company spends long-term loans obtained from financial institutions amounting to US\$ 1,500 million - 2,000 million or THB 49,828 million - 66,437 million

In addition, an increase in debts for approximately US\$ 1,500 million - 2,000 million will affect the Debt-to-Equity ratio based upon the Company's financial statements for three-month period ending 31 March 2018 as follows:

	Current	With the CFP Project <sup>1</sup>
Interest-bearing Debt-to-Equity Ratio	0.55 x	0.93 – 1.05 x
Debt-to-Equity Ratio	0.82 x	1.19 – 1.32 x

Remarks:

1. Calculation is based upon the assumption that the Company spends long-term loans obtained from financial institutions amounting to US\$ 1,500 million - 2,000 million or THB 49,828 million to 66,437 million

Given that, at present, the Company has a low Debt-to-Equity ratio, it is expected that, following the entering into the Transaction, the Company will be able to maintain an appropriate level of the Debt-to-Equity ratio.

**3) Potential Impact to the Company's Ability to Pay Dividends**

The CFP Project will require the amount of financial investment accounting for approximately US\$ 4,825 million which is considered substantial, considering the Company's financial position. The sources of funds will be derived from the remaining cash balance, long-term loans from financial institutions, and/or the funds from issuing and selling debt instruments, as well as cash flows from the Company's business operations in the future. With such requirement for a huge amount of financial investment from the current cash balance and the cash flow in the future, as well as from the increase in interest burden in the future, it may affect the Company's ability to pay dividends.

Note that currently the Company has the dividend policy to pay dividends not lower than 25% of net profit of the consolidated financial statements after deduction of all types of capital reserves as per the articles of association, and by laws, whereby the fiscal years 2015 to 2017 the Company's dividend payment rates amounted to 45%, 43% and 43% respectively.

However, the Independent Financial Advisor expects that the entering into this Transaction in question will not affect the Company's ability to pay dividends upon grounds that, during the CFP Project construction, the Company's currently existing oil refinery will remain at business as usual, and that, upon the completion of the aforementioned Project construction, the amounts of cash flow will become increased, thus enable the Company to retain the status quo of both its performance and the operational cash flow.



### **2.2.3 Advantages of Not Entering into the Transaction**

#### **1) The Company Not Having to Lose Cash to this Transaction**

If the Company does not enter into the Transaction, it will be able to spend an amount of cash for approximately US\$ 2,500 million in investing in other projects, and the Company's liquidity will not be affected by this Transaction.

### **2.2.4 Disadvantages of Not Entering into the Transaction**

#### **1) Lack of Competitiveness in the Industry**

Oil refinery business is gradually becoming more competitive due to a series of introductions of brand new technologies to the construction projects of the new generation of other business entities' oil refineries, higher efficiency in energy consumption, as well as utilization of more of alternative energies. If the Company does not opt to invest in the CFP Project in lieu of its currently existing Crude Distillation Units which have been operating over a course of 50 years, such decision could possibly result in the Company becoming unable to remain competitive in the future which will impact upon the Company's income and business operations in the future, and will be unable to respond to the state-imposed policy upon the issue of future improvement of oil quality in the governmental sector.

#### **2) Loss of the Opportunity to Increase Profit Margin from Producing More Value-added Products**

If the Company does not invest in the CFP Project, it will lose the opportunity to increase profit margin and improve operating performance from producing more value-added products by transforming fuel oil and bitumen which have low value, into jet fuel and diesel with relatively higher value and higher demand in the future.

### **2.3 Risk of Entering into the Transaction**

#### **1) Risk of Deceleration of Fuel Consumption Demand**

According to the Petroleum Industry Expert, it is estimated that the gasoline demand has the propensity to decrease due to more consumption of alternative energy in passenger vehicles such as electric vehicle, etc., and the improvement to engine quality in terms of energy saving (for gasoline), whereas, on the other hand, the demand for jet fuel and diesel will become less affected due to the currently existing limited number of alternative energy options to the jet fuel, not to mention that electric vehicles have yet to be improved in terms of effectiveness in order to truly become the replacement for the diesel-consuming counterparts. Therefore, investment in the CFP Project will help the Company increase both jet fuel and diesel products and in turn slightly decrease the production of gasoline.

In the future, however, if there are additional alternative energies to jet fuel and diesel available, or if deceleration of Transport and Tourism industries takes place, as well as there being more technological developments, the Company thus may be affected in terms of being unable to attain the forecasted sales volume, in consequence of which such drawback may also affect the Company's performance result as a whole in the future. Nevertheless, the Company at present has domestic sales of approximately 85% and export to other countries such as Asean countries approximately 15% and the Company has the Purchase Agreement with the PTT whereby the PTT will purchase products amounting to 49.99% of the Company's production volume; in addition, the Company at present has entered

into the Memorandum of Understanding with the PTT whereby the PTT will also purchase products amounting to 49.99% of the incremental production volume derived from the Company's CFP Project operation, thus securing the Company's sales of the products. In addition, the Company expects that after the completion of the CFP Project, it will expand the products sales to countries with growing in demand, especially in jet fuel which is expected to grow with tourism industry and in diesel which increases in accordance with economic expansion. The Company estimates the average sale proportion over 20 years of the project lifetime to be 75% domestic and 25% export to other countries such as Asean countries which have demand to import oil.

## **2) Risk from Feedstock Procurement**

Given the CFP Project, the Company will become capable of refining heavy crude oils, which are less costly. However, should the Company become unable to procure a sufficient volume of quality heavy crude oils required for oil refinery operation, its return on investment may be affected.

Regarding its design, the Company's CFP Project is designed to have flexibility in terms of its sustainability of a wide variety of quality crude oils, thus increasing its procurability of crude oils from multiple sources of production. Furthermore, the Company at present has entered into the Purchase Agreement with the PTT whereby the PTT will procure crude oils amounting to 49.99% of the Company's production volume; in addition, the Company at present has entered into the Memorandum of Understanding with the PTT whereby the PTT will also procure crude oils amounting to 49.99% of the incremental production volume derived from the Company's CFP Project operation, including the Company's heavy crude oils, thus helping to reduce the risk of future's oil demand fluctuation.

## **3) Risk of Product and Feedstock Price Fluctuation**

Oil products and crude oils prices may be fluctuated depending upon various factors beyond the Company's control such as climate and season, change in technologies, as well as overall economic situations. Note that, the Company benefits from profit margins of the prices of products and feedstock, both of which are commodities; therefore, the price factor of both of the aforementioned commodities will affect the Company's performance result in the future. The Company, however, may take into account the matter of reducing the risk of oil price fluctuation by entering into commodity futures contracts as appropriated.

## **4) Risk from Delay of the Project**

Should the Project construction become slow, the Company may benefit less from the Project than expected such as in terms of loss of business opportunity otherwise to sell jet fuel and diesel in a larger volume and for higher prices, according to professional forecasts by the Petroleum Industry Expert, etc., the phenomenon of which may cause the profits to differ from the forecast.

However, the Company has prepared to carry out effective management and administration of the CFP Project in order to complete the Project construction as per the schedule, whereby manpower will be properly deployed in accordance with the effective project management standards, and whereby the Project Management Consultant (PMC) will be hired to be at service accordingly; in addition, the Company will purchase insurance policies for the Project with an aim to alleviate impacts of the CFP Project's delay in the case of force majeure.

**5) Plant Operation Risk**

Investment in the CFP Project concerns an entire project; therefore, the Company may be facing plant operation risk such as the case in which machineries cease operating or fail to function at its fullest capacity, the case in which production is below par in terms of quality, or there incur additional operational costs, etc.

The designing of the CFP Project utilizes most of the technologies of which the Company has expertise. Regarding the EPC Contract, the Company will stipulate the performance guarantee clause, which includes mechanical performance, hydraulic performance, utility consumption, etc.; in addition, the licensors of the plant technology will also have to make a performance guarantee. The aforementioned will help to reduce operational risk as a whole.

**6) Risk from Electricity and Steam Procurement**

Regarding the currently existing collective source of electrical power supply for the currently existing refinery, electricity is generated by the Refinery's steam turbine electric generator, and from the purchasing of additional power supplies accounting for 45 megawatts from both "TOP SPP Co., Ltd.", which is one of the Company's subsidiaries, and another company named Thaioil Power Co., Ltd. In regard to the steam power, the Company purchases all of the aforementioned from "TOP SPP Co., Ltd." With the upcoming CFP Project in operation, there will be an increase in the demand for electrical power by approximately 250 megawatts; in consequence, the Company may be risk prone toward the issue of additional electrical and steam power supply procurement.

Nevertheless, for the CFP Project operation, the Company has the plan to install the Energy Recovery Unit (ERU) in order to generate electricity and steam power. The newly installed Energy Recovery Unit will have the installation capacity of 250 megawatts, thus resulting in the ability to generate both electrical and steam power supplies in meeting the Refinery's future demand, as well as helping to reduce the risk of electrical and steam power supply procurement. Furthermore, in case of emergency, the CPF Project will also be able to utilize the power reserve from the Electricity Generating Authority of Thailand (EGAT) as per the agreement to buy/sell electrical power reserve with EGAT. Furthermore, in case of any malfunction in the aforementioned power reserve system, the Project will utilize another source of power reserve from the emergency electric generator for safe suspension of the operation. Whereas the utilization of EGAT-generated power reserve may increase the electrical power consumption cost, it is expected not to produce any significant impact upon the Company's business operation as the aforementioned cost constitutes merely a relatively tiny part of the Company's total production cost.

**7) Risk of Ratchaphatsadu Lease Agreement**

The Company utilizes plots of land leased from Ratchaphatsadu for commercial purpose as the location of its oil refinery and employees' dormitory buildings. The aforementioned plots of land, subject to a 30-year lease agreement, are situated in the total area of 1,499 Rai, 3 Ngarn and 26 square Wah, accounting for 65% of the Company's existing entire oil-refinery premises at Amphoe Si Racha. The 30-year lease agreement will expire on September 10, 2022, upon which, if the Company cannot renew it, the failure to do so will produce a significant impact upon the Company's operation.

Nevertheless, the Company would make an official request to extend the Lease Agreement for another 30 years, which was approved by the Cabinet of Thailand on 27 June 2018 for the Company to be on another 30-year lease term to

be expired on September 10, 2052. It is expected that the Company will sign the Agreement with the Treasury Department by the end of year 2018.

**8) Risk of Currency Exchange Rates**

Due to the commercial transactions pertaining to feedstocks and products carried out by the Company in multiple foreign currencies, as well as the planned procurement of machineries and the outsourcing of experts and consultants from overseas, the Company is risk prone toward the case of currency exchange rate fluctuation, which will affect business operations of both the CFP Project and the Company. That being said, such risk is part of business as usual, which the Company has been constantly addressing with its managerial approaches.

**9) Risk of Impacts from the Company's Other Major Projects**

According to the Board of Directors' Meeting of the Company's Subsidiary, namely Global Power Synergy Public Co., Ltd. ("GPSC"), special meeting No. 2018, dated 19 June 2018, the resolution was given for the GPSC to buy shares and make offers to purchase all securities of Glow Energy Public Co., Ltd. for THB 141 million. In addition, GPSC may increase the capital not more than THB 74,000 million by the rights offering to GPSC's existing shareholders, the private placement, and/or the public offering. Note that, at present, the Company holds the GPSC shares accounting for 8.91% of GPSC's paid-in capital, and is in its indirect shareholding via Thairoil Power Co., Ltd. accounting for 15.38% of GPSC's paid-in capital (the Company holds stock shares in Thairoil Power Co., Ltd. accounting for 74.00% and Thairoil Power Co., Ltd. holds stock shares in the GPSC accounting for 20.79%), thus totally accounting for 24.29% of GPSC's paid-in capital. On the Company's Board of Directors' Meeting dated 19 June 2018, the resolution was given to support GPSC's transaction as per the written notification to the Stock Exchange of Thailand dated 20 June 2018.

Therefore, if the GPSC increases the share capital to its current shareholders by means of rights offering amounting to THB 74,000 million, the Company may require an amount of money not exceeding THB 17,975 million for the aforementioned share capital increase. In consequence, it may affect the Company's procurement of sources of funds for the CFP Project investment. The Company, however, has a financial plan to deal with it should there happen the aforementioned share capital increase, whereby at the present, the Company has cash and short-term investment totalling of THB 81,799 million based on the Company's consolidated financial statement as at 31 March 2018, which is sufficient for the Transaction, and the Company may consider using long-term loan from financial institutions and/or cash from issuing and selling debt as well as the Company's future operating cash flows.

<b>Section 3 Fairness of the Transaction Price and Conditions</b>
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### **3.1 Fairness of the Transacted Price**

#### **3.1.1 Key Assumptions of the Independent Financial Advisor to Provide the Opinions**

The opinions of the Independent Financial Advisor depend upon the following assumptions:

- The Independent Financial Advisor has found *no* grounds to become suspicious of any of the information and/or of these documents -- i.e. financial statements, the information on the CFP Project, public information, financial budget and business plan, all of which have been prepared by the Company's Executives/Management Team, and other documents that the Independent Financial Advisor has obtained from the Company, as well as the interviews with the Company's Executives/Management Team -- to be in the absence of accuracy or to be in wants of essential details, which otherwise would have produced significant negative impacts upon the Advisor's analytical process.
- Upon the assumption by which the Independent Financial Advisor provides its opinion, there is neither any currently existing incident, precedent, nor will there be any incident significantly affecting the Company's performance result or (Its) financial status, including the following:
  - There are no other risks which may result in tardiness or impacts for which the investment value of the CFP Project becomes increased.
  - The IFA Report has been produced in reference with economic circumstances and other factors all having been taking place during the period of its preparation. In consequence, the Independent Financial Advisor will not be able to assess any of the impacts incurred in light of changes in circumstances and certain components *after* the period of the study, and the Independent Financial Advisor is not obliged to transform, or to make amendment to, those pieces of information into the currently existing ones.
  - There are no any of the material adverse events/effects including but not limited to economic status, politics or laws, which otherwise would have produced significant impacts upon the CFP Project.
- Regarding its analysis of reasonableness of the price of asset acquisition, the Independent Financial Advisor has not gained any access to bodies of intelligence, either sensitive or businesswise confidential, such as some pieces of important information on the Feedstock Sales/Purchase Agreement(s), some pieces of important information on the Agreement(s) to Use Production Technologies, etc., whereby the aforementioned pieces of information, each being sensitive, will affect the competitive situation within Petroleum industry in which there are relatively fewer yet similar manufacturers; disclosure of such pieces of information may significantly produce adversarial impacts upon the CFP Project's business operation, and thus may render the Company a disadvantageous position apropos of business competition.

#### **3.1.2 Methodology to Consider the Reasonableness of the Investment Value of the CFP Project**

The Investment Financial Advisor would carry out a cash flow forecast in the case of the CFP Project in operation by comparing the aforementioned cash flow with the one in the case of no investment being made in the CFP Project, the latter of which also provided the condition that the Company had to operate with its currently existing assets. Regarding the cash flow forecast in the case of the CFP Project in operation, the Investment Financial Advisor has carried out the cash flow forecast in the

case of the CFP Project in operation in tandem with the one under the condition that the Company must operate with its currently existing assets. The Company has the plan to cease operation of both of its Crude Distillation Units 1 and 2, and thus to operate with the Crude Distillation Unit 3 only. The CFP Project operation will inevitably depend upon the assets and the currently existing operational/processing units in order to achieve highest effectiveness in its overall business operation; therefore, it is impractical for the cash flow from the CFP Project alone to be exclusively taken into account. In order to provide the Shareholders with the image of the cash flow from the CFP Project alone, the Independent Financial Advisor would carry out the cash flow forecast in the case of no investment being made in the CFP Project, and also would carry out the incremental cash flow forecast, concerning the matter of reasonableness of the Company entering into the Transaction.

The Independent Financial Advisor would carry out the aforementioned cash flow forecasts for a 20-year period of operation commencing from year 2023, from which the CFP Project is expected to start operating, to year 2042. Note that the period between year 2018 and 2022 is considered to be the one during which the CFP Project investment will have carried out as per the operational plan. In addition, despite the extension of the lease agreement for another 30-year period between the Company and the Treasury Department commencing from September 11, 2022, the Independent Financial Advisor is of the opinion that utilizing a period of 20 years in the forecasting is considered to be more prudent upon the grounds that, based upon the estimates (“forecasts”) by the Company and its Independent Engineering Advisor, the production technologies utilized in the CFP Project will be fully beneficial for a course of 20 years.

Once the Independent Financial Advisor had carried out the forecasting of cash flows and taken into account the differences between the cash flows in both cases, it would calculate the net present value of incremental cash flow and the internal rate of return in order to provide the opinion on the entering into the Transaction and reasonableness, as to whether or not it be reasonable to do so.

### **3.2 Free Cash Flow Forecasting**

The Independent Financial Advisor would carry out the incremental free cash flows from the CFP Project and would also calculate the net present value of cash flows. The aforementioned method of calculation is utilized in identifying the net present value of cash flows expected from the business operation in the future, with the adjustment also being made with the suitable discount rate(s). Regarding the CFP Project valuation, the Independent Financial Advisor has utilized the Company’s weighted average cost of capital (WACC) as the discount rate for the calculation of the net value of cash flows, based upon both public information and the forecasts prepared by the Company. With the CFP Project located upon the currently existing oil refinery premises, both being jointly utilized and with the CFP Project intended so as to help (to) improve production of the Company’s main businesses, the Independent Financial Advisor is of the opinion that the Company’s weighted average cost of capital (WACC) is the suitable discount rate for the calculation of the CFP Project’s net present value of free cash flows.

The assumptions utilized for the CPF Project valuation may be summarized as follows:

#### **Discount rate**

The discount rate used in calculation of the net present value is 8.55%, which is a weighted average cost of capital (WACC). The IFA calculated the discount rate pursuant to the following formula:

$$\text{WACC} = \frac{D/E}{(1 + \frac{D}{E})} (K_d)(1 - T) + \frac{1}{(1 + \frac{D}{E})} (K_e)$$

Where  $K_e$  is Cost of Equity, equaling 10.78% per year (Please see the calculation in next section)

$K_d$  is average cost of debt of the Company, equaling 4.50% per year representing existing average cost of debt of the Company and projected rate on source of funds from this Transaction

T is the Thai corporate income tax rate of 20.00%

D/E is interest bearing debt-to-equity ratio of the Company for entering into this Transaction, in which target interest bearing debt-to-equity ratio is approximately of 0.45 times (not exceeding 1 time). Reference is made to the Company's funding plan for the Transaction which has total investment cost of US\$ 4,825 million where it plans to borrow approximately of US\$ 1,500 million.

#### Cost of Equity

The cost of equity could be estimated from the Capital Asset Pricing Model (CAPM), detailed as follows.

$$K_e = R_f + \beta(R_m - R_f)$$

Where  $R_f$  is the risk-free return rate based on 10-year government bond yield on 28 June 2018 of 2.77% per year (Source: Thai Bond Market Association). It was anticipated that the 10-year government bond could well reflect the risk-free rate. Most government bonds with a term of over 10-year usually have low liquidity in the market and should not be used for reference.

$\beta$  is the coefficient of variation of return between the Company's equity returns and market returns which  $\beta$  equals to 0.996 (Source: Bloomberg)

$R_m$  is based on the 30-year historical average of a rate of return from investment in the SET, which is expected to cover the cycle of the investment in the SET and could represent the expected return rate of investors in the future. The 30-year historical average rate of return from investment in the SET was 10.81% (Source: Stock Exchange of Thailand)

$K_e$  Is the cost of equity calculated from Capital Asset Pricing Model (CAPM) which equals to 10.78%

#### Terminal Value

The Independent Financial Advisor has specified that the terminal value at the end of year 2042 accounts for 10.00% of the asset replacement value at present, based upon the forecasts by the Company and its Independent Engineering Advisor, which are considered to be prudent upon the grounds that the Independent Financial Advisor expects that, in year 2042, the Company will still be able to benefit from the assets, with reference to the Company's two currently existing Crude Distillation Units which have been operating for 40-50 years.

### **3.2.1 Key Operating Assumptions**

#### **3.2.1.1 Revenues**

The projected income is calculated from the forecasted sales volume and the prices of the Company's products, which include refinery product, "petrochemical and aromatics" product, lubes product, as follows:

##### **Sales Volume**

###### In the case of there being no CFP Project

The Independent Financial Advisor has forecasted the sales volume based upon the Company's sales plan, in reference to both the factory's current production capacity and the past performance results. Capacity utilization rate is in a range between 94.39% and 100% throughout the forecast period.

###### In the case of there being the CFP Project

The Independent Financial Advisor has forecasted the sales volume based upon the Company's sales and marketing plan. Note that, in the case of there being the CFP Project, the Company will be able to obtain a wider variety of products than in the case of there being no CFP Project, thus resulting in an increase in the types and sales volume of the products, be it refinery product, petrochemical product and lube base product. In addition, the Company also has the plan to temporarily close its factory/factories once every three years, resulting in the capacity utilization rate being in a range between 86.15% and 100% throughout the forecast period. The Company also has the plan to produce more of middle distillates strategically in response to the propensity for the demand for the aforementioned fuel type to become increased in accordance with changes in the relevant laws and with Thailand's economic expansion.

##### **Products' Selling Prices**

Given a wide variety of quality products of which the Company is in possession, the sales forecast has been carried out based upon the market price, with reference to the forecasts made by certain experts in Petroleum industry. The Independent Financial Advisor is of the opinion that the result of the aforementioned study of the price trend for both feedstocks and products is trustworthy upon the grounds that there are a series of demand-supply analyses, rationales, as well as its being prepared by world-renowned experts. Most of the prices of the products featured in the financial forecast in both cases of there being the CFP Project and there being no CFP Project, it is to be noted, are the same, save for other products additionally producible utilizing technologies and machineries from the CFP Project; in addition, note that the aforementioned prices will be in reference to the current market rates and the forecasts made by certain experts in Petroleum industry, expected to increase gross integrated margin by US\$ 1-2 per barrel.

#### **3.2.1.2 Variable Costs**

The "forecasted" variable costs are calculated from the forecasted production volume and the selling prices of the Company's products, the details of which are as follows:

##### **1) Raw Material (Feedstock) Cost**

Feedstocks utilized for production process are crude oil and other relevant types of feedstock, etc. Note that most of the prices of feedstocks are in observance of the existing sales-purchase agreements, with reference to the product's market prices and the forecasts made by certain experts in Petroleum industry. The production volume utilized in



the financial forecast(s) has been prepared by the Company's executives/management team by taking into account the feedstock utilization rate and the past performance results, as well as the future production forecast. In the case of there being the CFP Project, the Company will be able to utilize heavy sour crude oil, which has lower costs than those of the light sweet crude oil. Note that, at present, with more advanced technologies, an option to invest in the CFP Project has such advantages as in the matter of utilization of feedstocks and long-term cost(s), where it is expected to decrease average feedstock cost of US\$ 4-5 per barrel.

**2) Chemical Substance and Catalyst Cost**

Chemical substances and catalysts are important, collectively as a cost, in accelerating a reaction and changing the conditions of products obtained from the production process in order to meet with specific requirements given by each type of the clients. Note that, in both cases of there being the CFP Project and there being no CFP Project, the estimated cost of chemical substances/catalysts is equal to US\$ 0.11 per barrel, which is the base case, according to the Company's forecast with reference to the past record, from which the 3-year retro average from 2015 to 2017 accounts for US\$ 0.10 per barrel, with the stipulation of annual increase by 1.96% per annum, with reference to the 20-year retro inflation rate obtained from the Bank of Thailand. In the case of there being the CFP Project, the Company expects that there will be an increase in the chemical substance and catalyst cost from the aforementioned base case, thus the aforementioned cost becoming higher than in the case of there being no CFP Project.

**3) Electricity and Steam Power Cost**

The Company had the electricity and steam power cost incurred from plant operation and production process. The Company has entered into electricity sales-purchase agreement(s) with its subsidiary, a company which has been operating in power plant business for a period of 25 years; note that the details of the volume and the contracted prices of both electricity and steam power are in observance of the aforementioned legal instrument. In the case of there being the CFP Project, the Company expects that there will be an increase in the electricity and steam power cost due to both higher production capacity and the corporate plan on manufacturing a wider variety of products in comparison with the case of there being no CFP Project.

**3.2.1.3 Fixed Costs**

The "forecasted" fixed costs are comprised of "employee" (labor) cost, repairs and maintenance cost, rental cost (land lease) and other relevant cost, the details of which are as follows:

**1) Employee (Labor) Cost**

Employee (Labor) cost includes that for hiring or employing the Company's personnel to operate in the production process and to carry out relevant managerial tasks. The aforementioned cost is based upon the past record, with the stipulation of annual increase by 5.00% per annum according to the general employee remuneration increase rate. However, in the case of there being an investment in the CFP Project, the Company will be required to recruit more employees in order to cover the projected additional production capacity, for which it is expected that there will be an increase in the employee (labor) cost by 14.00% in comparison with the case of there being no CFP Project.

**2) Repairs and Maintenance Cost**

The Company has carried out the forecasting of repairs and maintenance cost, which is recorded as Project expenditure (“expense for the Project”). It is expected that, in the case of there being the CFP Project, the Company will have lower repairs and maintenance cost during the first four to five years than in the case of there being no CFP Project upon the grounds that there will be an investment in a large number of newly acquired assets, thus resulting in the repairs and maintenance cost in the initial stage becoming lower than the one in the case of there being no CFP Project. That being said, after the aforementioned period, the repairs and maintenance cost in the case of there being the CFP Project will become gradually higher and eventually higher than in the case of there being no CFP Project, throughout the forecast period in accordance with the repairs and maintenance of more of the newly acquired assets and with the assets becoming depreciative in the future.

**3) Cost of Insurance**

Cost of insurance includes insurance premium paid for the coverage of significant (important) assets utilized for business operation. The cost of insurance is set to be equal to 0.13% of the aforementioned asset replacement value according to the Company’s forecast with reference to the past record, from which the 3-year retro average from 2015 to 2017 accounts for 0.10%. The cost of insurance is calculated from the increase in the insurance coverage in the case of there being the CFP Project, also with the stipulation of annual increase by 1.96% per annum, with reference to the 20-year retro inflation rate obtained from the Bank of Thailand.

**4) Overhead Cost**

Overhead cost is considered to be a variable cost commensurate with production volume. The overhead cost is set to be equal to US\$ 0.32 per barrel in the case of there being no CFP Project; the 3-year retro average of the overhead cost from 2015 to 2017 accounts for US\$ 0.29 per barrel. In the case of there being the CFP Project, the unit cost of overhead will become decreased to US\$ 0.27 per barrel thanks to the economies of scale, according to the Company’s forecast with reference to the past record, with the stipulation of annual increase in the overhead cost by 1.96% per annum, with reference to the 20-year retro inflation rate obtained from the Bank of Thailand.

**5) Rental Cost**

A portion of the Company’s assets is (was) constructed and operates upon the leased premises, for which the Company has entered into long-term lease agreement with the Treasury Department, and the lease agreement of which, with the already given approval by the Cabinet of Thailand, will be extended for another 30-year period, expired in September 2052. The rental fees and the lease term are in accordance with the aforementioned legal instrument. Note that the rental cost is a fixed cost for which payment will be made by the Company in the future as per the lease agreement -- with or without the investment in the CFP Project being made.

**6) “Land and Building Tax” Cost**

The estimated cost of land and building tax is in accordance with the relevant laws.

#### **3.2.1.4 Corporate Income Tax**

According to the relevant laws, the corporate income tax rate is equal to 20.00% per year.

#### **3.2.1.5 Working Capital**

The Company has carried out the forecasting of working capital assets, which are comprised of account receivable, inventory and account payable, with reference to the past record and the estimate for the future, as well as the legal reserve for production, the details of which may be summarized as follows:

##### **1) Working Capital**

The Company expects that, in the case of there being the CFP Project, the Company will be required to carry out procurement of crude oils from a larger number of sources, which may result in a more lengthy period of goods delivery and different credit terms from the currently existing ones. In consequence, the net cash conversion cycle in the case of there being the CFP Project will be equal to 35.53 days in comparison with 25.72 days in the case of there being no CFP Project.

##### **2) Lega Reserve**

The Company will be required to have the legal reserve, the calculation of which is carried out with the crude oil volume in legal reserve multiplied with the weighted average cost of capital of crude oils utilized for production. The legal reserve varies from one year to another.

#### **3.2.1.6 Capital Expenditure**

The details of the Company's capital expenditure in both cases of there being the CFP Project and there being no CFP Project, are as follows:

##### In the case of there being no CFP Project

##### **1) Discretionary Capital Expenditure**

The Company expects that, in the case of there being no CFP Project, it will need making additional investments on the currently existing assets for another US\$ 250,000,000 during the next four to five years in order to maintain the proper condition of those assets. Therefore, the Independent Financial Advisor has determined that the Company makes such investment in year 2022.

##### **2) General Maintenance Capital Expenditure**

The Company expects that there will be the general maintenance expenditure incurred, amounting to US\$ 40,000,000 per annum, the amount of which corresponds with the 3-year retro general maintenance capital expenditures from 2015 to 2017 equal to US\$ 27,000,000 per annum. Note that the Independent Financial Advisor has determined that the Company has such expenditure for US\$ 40,000,000 in year 2018, also with the annual increase by 1.96% per annum, with reference to the 20-year retro inflation rate obtained from the Bank of Thailand.

In the case of there being the CFP Project

**1) Discretionary Capital Expenditure**

The Company expects that there will be investment expenditure for the CFP Project amounting to US\$ 4,825,000,000 as per the resolution given during the Company's Board of Directors' Meeting, No. 6/2561, held on 29 June 2018, whereby the Company will gradually invest in construction upon a yearly basis in order to ensure that the Project will commence as scheduled in 2023. The aforementioned investment will cause value-added tax to annually incur in accordance with the construction value; however, it is expected that the Company will be eligible for lodging the tax return in the upcoming year.

**2) General Maintenance Capital Expenditure**

The Company expects that there will be the general maintenance expenditure incurred, amounting to US\$ 40,000,000 per annum. Note that the Independent Financial Advisor has determined that the Company has such expenditure for US\$ 40,000,000 in year 2018, also with the annual increase by 1.96% per annum, with reference to the 20-year retro inflation rate obtained from the Bank of Thailand. This assumption is the similar to the case in which there be no investment in the CFP Project; note that, whereas the Company will cease the operation of some of its Crude Distillation units in the wake of the CFP Project investment, thus resulting in this type of expenditure becoming lower, the Independent Financial Advisor, however, in its forecasting of the aforementioned expenditure, has established that the estimated general maintenance expenditure in the case of there being CFP Project investment corresponds with the one in the case of there being no CFP Project investment.

**3) Additional Sustaining Capital Expenditure**

The Company is expected to have the additional sustaining capital expenditure for 0.50% of the initial investment value. The aforementioned expenditure will be incurred after the first five years of CFP Project investment as it is expected that there will not be any significant repairs and maintenance expenditure for newly acquired assets being incurred during the first five-year period; also, with the annual increase in the aforementioned expenditure by 1.96% per annum, with reference to the 20-year retro inflation rate obtained from the Bank of Thailand throughout the forecast period.

**3.2.1.7 Loan Assumption for the Project**

The Company has yet to establish a clear plan on business loans. However, it is expected that the Company may issue a 10-year debenture, and that the interest rate will be equal to 4.50% approximately, with reference to the current market's interest rate for debenture. Therefore, the Independent Financial Advisor has the assumption that the Company will issue debentures in year 2020 amounting to US\$1,500,000,000 pro rata with the Company's business loan plan, and the redemption can be made in the next 10 years commencing from the issuance date (for selling), and with the annual interest rate at 4.50%.

### **3.2.1.8 Other Assumptions**

In addition to the aforementioned, there are other significant assumptions as follows:

- The forecasted cash flows to be obtained by the Company at the end of every year will be utilized in determining the net present value of cash flows of the business.
- Extraordinary items are not included in the calculation of the forecasts.

### 3.2.2 Results of Free Cash Flow Forecasting

The IFA conducts forecasting of free cash flows in case of there being the CFP Project and there being no the CFP Project and calculates incremental cash flows from couple scenarios, which details are as below:

#### Period of Investment of CFP Project

Unit : US\$ million	2018	2019	2020	2021	2022
Incremental Gross Integrated Margin from CFP Project (US\$ per barrel)	-	-	-	-	-
Incremental EBITDA from CFP Project	-	-	-	-	-
EBIT	-	-	-	-	-
Depreciation and Amortisation	-	-	-	-	-
Capital Expenditure and Value Added Tax	(114.76)	(1,262.71)	(1,919.65)	(826.61)	(323.92)
Working Capital Needs	-	-	-	-	-
<b>Free Cash Flows to Firm</b>	<b>(114.76)</b>	<b>(1,262.71)</b>	<b>(1,919.65)</b>	<b>(826.61)</b>	<b>(323.92)</b>
Interest Expense after Tax	-	-	(27.00)	(54.00)	(54.00)
Loan Drawdown / Repayment	-	-	1,500.00	-	-
<b>Free Cash Flows to Equity</b>	<b>(114.76)</b>	<b>(1,262.71)</b>	<b>(446.65)</b>	<b>(880.61)</b>	<b>(377.92)</b>

#### Period of which CFP Project starts the operation

Unit : US\$ million	2023	2024	2025	2026	2027
Incremental Gross Integrated Margin from CFP Project (US\$ per barrel)	6.20	5.90	5.87	5.09	5.56
Incremental EBITDA from CFP Project	1,223.42	1,093.34	1,124.90	757.44	1,026.74
EBIT	792.94	684.92	710.17	416.20	631.65
Depreciation and Amortisation	232.25	237.19	237.19	237.19	237.19
Capital Expenditure and Value Added Tax	(64.06)	6.92	-	-	-
Working Capital Needs	(192.12)	18.92	(26.47)	66.89	(62.98)
<b>Free Cash Flows to Firm</b>	<b>769.01</b>	<b>947.94</b>	<b>920.88</b>	<b>720.29</b>	<b>805.86</b>
Interest Expense after Tax	(54.00)	(54.00)	(54.00)	(54.00)	(54.00)
Loan Drawdown / Repayment	-	-	-	-	-
<b>Free Cash Flows to Equity</b>	<b>715.01</b>	<b>893.94</b>	<b>866.88</b>	<b>666.29</b>	<b>751.86</b>

Unit : US\$ million	2028	2029	2030	2031	2032
Incremental Gross Integrated Margin from CFP Project (US\$ per barrel)	5.40	4.58	5.21	5.20	4.55
Incremental EBITDA from CFP Project	1,036.30	488.35	1,012.53	1,015.41	667.66
EBIT	639.29	199.77	617.94	619.05	339.62

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<b>Unit : US\$ million</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>
Depreciation and Amortisation	237.19	238.63	240.10	241.60	243.13
Capital Expenditure and Value Added Tax	(28.87)	(29.43)	(30.01)	(30.60)	(31.20)
Working Capital Needs	(25.33)	138.65	(159.27)	(12.16)	76.89
<b>Free Cash Flows to Firm</b>	<b>822.28</b>	<b>547.62</b>	<b>668.77</b>	<b>817.90</b>	<b>628.45</b>
Interest Expense after Tax	(54.00)	(54.00)	(27.00)	-	-
Loan Drawdown / Repayment	-	-	(1,500.00)	-	-
<b>Free Cash Flows to Equity</b>	<b>768.28</b>	<b>493.62</b>	<b>(858.23)</b>	<b>817.90</b>	<b>628.45</b>

<b>Unit : US\$ million</b>	<b>2033</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>
Incremental Gross Integrated Margin from CFP Project (US\$ per barrel)	4.97	4.84	4.40	4.97	5.03
Incremental EBITDA from CFP Project	930.83	801.99	560.14	931.19	970.58
EBIT	548.91	444.57	249.79	545.31	575.47
Depreciation and Amortisation	244.69	246.28	247.90	249.56	251.24
Capital Expenditure and Value Added Tax	(31.81)	(32.43)	(33.07)	(33.72)	(34.38)
Working Capital Needs	(87.70)	63.67	9.78	(101.80)	(34.27)
<b>Free Cash Flows to Firm</b>	<b>674.09</b>	<b>722.09</b>	<b>474.40</b>	<b>659.35</b>	<b>758.07</b>
Interest Expense after Tax	-	-	-	-	-
Loan Drawdown / Repayment	-	-	-	-	-
<b>Free Cash Flows to Equity</b>	<b>674.09</b>	<b>722.09</b>	<b>474.40</b>	<b>659.35</b>	<b>758.07</b>

<b>Unit : US\$ million</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>	<b>2041</b>	<b>2042</b>
Incremental Gross Integrated Margin from CFP Project (US\$ per barrel)	4.38	4.85	4.96	4.36	5.16
Incremental EBITDA from CFP Project	633.18	762.09	932.13	480.49	1,001.58
EBIT	304.17	405.90	540.50	176.04	593.12
Depreciation and Amortisation	252.96	254.72	256.50	260.44	260.18
Capital Expenditure and Value Added Tax	(35.05)	(35.74)	(36.44)	(37.15)	(37.88)
Working Capital Needs	74.11	8.83	(121.20)	132.00	(192.67)
<b>Free Cash Flows to Firm</b>	<b>596.20</b>	<b>633.71</b>	<b>639.36</b>	<b>531.33</b>	<b>622.74</b>
Interest Expense after Tax	-	-	-	-	-
Loan Drawdown / Repayment	-	-	-	-	-
<b>Free Cash Flows to Equity</b>	<b>596.20</b>	<b>633.71</b>	<b>639.36</b>	<b>531.33</b>	<b>1,115.72</b>

**3.2.3 Conclusion of Valuation in terms of Net Present Value and Internal Rate of Returns**

<b>Unit : US\$ million</b>	<b>31 December 2018</b>
Present value of free cash flows (2018 – 2042)	1,217.44
Terminal value	68.89
<b>Net Present Value of CFP Project</b>	<b>1,286.33</b>
<b>Net Present Value of Shareholders' Equity from CFP Project</b>	<b>908.90</b>
<b>Project IRR from CFP Project (Per year)</b>	<b>12.10%</b>
<b>Equity IRR from CFP Project (Per year)</b>	<b>14.89%</b>

Based upon the calculation of business stock/share valuation by means of determining the net present value of cash flows of the CFP Project, the present value of the aforementioned project will be equal to US\$ 1,286,330,000, and the present value of shareholders' equity will be equal to US\$ 908,900,000, both of which, when calculated for the Project's internal rate of return and the shareholders' internal rate of return, account for 12.10% and 14.89% respectively.



### 3.3 Sensitivity Analysis

The outcomes of the Project's valuation and the Shareholders' equity value concerning the CFP Project depends upon several significant assumptions; therefore, the Independent Financial Advisor has carried out the sensitivity analysis in order to show impacts of the significant assumptions upon the stocks/shares. The Independent Financial Advisor is of the opinion that the change in gross integrated margin and discount rate is a major factor which could possibly affect the Project's present value and/or its internal rate of return. The details of the sensitive analysis are as follows:

#### 1. Sensitivity Analysis of Net Present Value of CFP Project

Unit : US\$ million		Change in Gross integrated margin				
		-2.00%	-1.00%	-	+1.00%	+2.00%
WACC (Per year)	6.55%	2,182.27	2,283.01	2,383.69	2,484.31	2,584.88
	7.55%	1,611.95	1,702.06	1,792.10	1,882.10	1,972.04
	8.55%	1,124.62	1,205.50	<b>1,286.33</b>	1,367.12	1,447.86
	9.55%	707.03	779.89	852.71	925.48	998.21
	10.55%	348.30	414.15	479.96	545.73	611.46

#### 2. Sensitivity Analysis of Net Present Value of Shareholders' Equity from CFP Project

Unit : US\$ million		Change in Gross integrated margin				
		-2.00%	-1.00%	-	+1.00%	+2.00%
K <sub>e</sub> (Per year)	8.78%	1,437.70	1,515.12	1,592.56	1,670.00	1,747.46
	9.78%	1,085.46	1,155.20	1,224.95	1,294.72	1,364.49
	10.78%	782.83	845.86	<b>908.90</b>	971.95	1,035.02
	11.78%	522.03	579.17	636.33	693.49	750.67
	12.78%	296.64	348.60	400.57	452.55	504.54

#### 3. Sensitivity Analysis of Project IRR

Unit : Percent (per year)		Change in Gross integrated margin				
		-2.00%	-1.00%	-	+1.00%	+2.00%
Project IRR (%)		11.68%	11.89%	<b>12.10%</b>	12.30%	12.51%

#### 4. Sensitivity Analysis of Equity IRR

Unit : Percent (per year)		Change in Gross integrated margin				
		-2.00%	-1.00%	-	+1.00%	+2.00%
Equity IRR (%)		14.36%	14.62%	<b>14.89%</b>	15.15%	15.41%

The Independent Financial Advisor has summarized the present value and the internal rate of return in range as a result of the change in gross integrated margin and discount rate as follows:

The Opinion of the Independent Financial Advisor regarding Acquisition of Assets

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- The CFP Project's present value is equal to a range between US\$ 779.89 million and 1,882.10 million with the base case value amounting to US\$ 1,286.33 million
- The CFP Project's shareholders' equity net present value is equal to a range between US\$ 579.17 million and 1,294.72 million with the base case value amounting to US\$ 908.90 million.
- The internal rate of return from the Project is equal to a range between 11.89% and 12.30%, with the base case value amounting to 12.10%.
- The internal rate of return for the Shareholders is equal to a range between 14.62% and 15.15%, with the base case value amounting to 14.89%.

The Independent Financial Advisor is of the opinion that, concerning its reasonableness, the entering into the Transaction is reasonable in terms of the transacted price and conditions. Investment in the CFP Project will enable the Company to realize the internal rates of return between 11.89% and 12.30%, particularly with the base-case one accounting for 12.10% for this Project, which is greater than the weighted average cost of capital (WACC), the latter amounting to 8.55%, where the internal rate of returns to Shareholders' equity are between 14.62% and 15.15%, particularly with the base-case one accounting for 14.89%, thus higher than the rate of return to the Company's common shareholders, which is equal to 10.78%. The CFP Project holds the present value of incremental cash flows as 'positive', thus comprised of the Project's present value ranging from US\$ 779.89 million to US\$ 1,882.10 million, with the base-case value accounting for US\$ 1,286.33 million, and the Project's present shareholder value ranging from US\$ 579.17 million to US\$ 1,294.72 million, with the base-case value accounting for US\$ 908.90 million.

	<b>IRR / NPV</b>	<b>WACC / Cost of Equity</b>
Project IRR from CFP Project	11.89% - 12.30% per year	8.55% per year
Equity IRR from CFP Project	14.62% - 15.15% per year	10.78% per year
Net Present Value of CFP Project (US\$ million)	779.89 - 1,882.10	-
Net Present Value of Shareholders' Equity from CFP Project (US\$ million)	579.17 - 1,294.72	-

Note that this financial forecast of the CFP Project covers merely a 20-year period. In addition, the Project's terminal value has been forecasted utilizing the scrap value calculation method, thereby not taking into account the Company's future operations under the CFP Project afterwards, the manner of which, therefore, is considered to be somewhat cautious, as, in reality, the Company may be able to operate the CFP Project longer than the aforementioned forecast period, given the reference of the Company's own operational units, which last for 40-50 years.

**Section 4 Summary of the Independent Financial Advisor's Opinion**

Based upon a series of analyses carried out by the Independent Financial Advisor regarding the reasonableness of the Transaction, as well as fairness of the price and terms and conditions of the entering into the Transaction by means of making investment in the CFP Project under the limitations to information accessibility and limitations to the revealing of certain portions of information on the CFP Project upon the grounds that such signifies confidential sensitive information, the Independent Financial Advisor is of the opinion that such limitations during the preparation of the IFA Report did not produce any significant impacts upon its *modi operandi*. The details of the Independent Financial Advisor's opinion are as follows:

**1) Reasonableness of the Transaction**

The Independent Financial Advisor is of the opinion that, in terms of '**reasonableness**', the act of entering into this Transaction is considered to be '**reasonable**' due to the following reasons: an increase in the Company's competitive capacity; reduction of raw material (feedstock) cost; providing value-added; as well as increasing business opportunities within Petrochemical industry. In addition, the CFP Project operation will also benefit the Kingdom of Thailand and the country's overall economy by enhancing Thailand's domestic long-term energy security, providing support to Phase 4 of the state-owned petrochemical project; and creating the opportunity for Thailand to become the region's energy hub among ASEAN Economic Community (AEC); etc.

However, entering into the Transaction also has its own disadvantages and poses risks, all of which the Shareholders should additionally take into account in light of their decision-making process. Such disadvantages may include the interest burden, and the increase in the debt-to-equity ratio as a result of borrowing, the risk of demand and supply, the risk of oil price fluctuation, the risk of Project operation, etc. The Shareholders may consult with Part 2 (the Second Part) of this Report concerning additional details of strength and weaknesses, as well as the risks, of the investment in the CFP Project

**2) Reasonableness of the Transacted Price(s) and the Terms and Conditions of the Transaction**

The Independent Financial Advisor is of the opinion that, in terms of '**reasonableness**', the act of entering into this Transaction is considered to be '**reasonable**', concerning both transacted prices and the terms and conditions. Investing in CFP Project, it will obtain positive net present value to both the Company and its shareholders where the internal rate of returns of CFP Project and Shareholders' equity are higher than WACC and Cost of Equity, respectively. The details are as below:

	<b>IRR / NPV</b>	<b>WACC / Cost of Equity</b>
Project IRR from CFP Project	11.89% - 12.30% per year	8.55% per year
Equity IRR from CFP Project	14.62% - 15.15% per year	10.78% per year
Net Present Value of CFP Project (US\$ million)	779.89 - 1,882.10	-
Net Present Value of Shareholders' Equity from CFP Project (US\$ million)	579.17 - 1,294.72	-

This financial forecast of the CFP Project, it is to be noted, covers merely a 20-year period. In addition, the Project's terminal value has been forecasted utilizing the scrap value calculation method, thereby not taking into account the Company's future operations under the CFP Project afterwards, the manner of which, therefore, is considered to be somewhat cautious, as, in reality, the Company may be able to operate the CFP Project longer than the aforementioned forecast period, given the reference of the Company's own operational units, which last for 40-50 years. The Shareholders may consult with Part 3 (the Third Part) of this Report concerning additional details of reasonableness in terms of prices, and the terms and conditions, of the investment in the CFP Project.

Therefore, it is recommended that the Shareholders **approve** the entering into the aforementioned Transaction.

In this regard, the decision to cast a vote approving the entering into transaction shall be subjected to the shareholders' discretion. The shareholders are advised to study the information and consider thereasons, advantages, disadvantages, risk factors, limitations and opinions on the factors relating to the entering into transaction attached hereto, and shall exercise the care before casting a vote to ensure that they are able to consider and approve the entering into transaction in an appropriate manner.

Maybank Kim Eng Securities (Thailand) PCL, as the Independent Financial Advisor of the Company has performed the study and analysis with care in accordance with the professional standard and has provided the opinion based on the fair analysis of information by taking into consideration the benefits of all shareholders.

The opinion of the IFA is based on the information which has been received from the Company as well as interviews with the Company's management, publicly available information and other relevant documents. The IFA assumes that all information received is truthful and correct. Therefore, if the said information is incorrect and/or is not truthful and/or has been significantly changed in the future, it will affect the opinion of the IFA. Therefore, the IFA is unable to certify or warrant the future impact that may arise to the Company and the shareholders.

In addition, the opinion of the IFA is only to provide comments to the shareholders, and providing this opinion does not warrant the accomplishment of the transaction and any impact from the transaction to the Company. This English report of the IFA's opinion has been prepared solely for the convenience of foreign shareholders of the Company and should not be relied upon as the definitive and official document. The Thai language version of the IFA's opinion is the definitive and official document and shall prevail in all aspects in the event of any inconsistency with this English Translation.

Yours Sincerely,

*[Montree Sormpaisarn]*

Mr. Montree Sormpaisarn  
Chief Executive Officer  
Maybank Kim Eng Securities (Thailand) PCL,  
the Independent Financial Advisor

*[Thaveesith Santatikul]*

Mr. Thaveesith Santatikul  
Operation Controller  
Maybank Kim Eng Securities (Thailand) PCL,  
the Independent Financial Advisor

**Attachment 1 Summary of Thai Oil Public Company Limited**

**1. Basic Information**

Company Name	:	Thai Oil Public Company Limited
Registration Date	:	9 August 2004
Registered Number	:	010754700711
Address	:	555/1 Energy Complex A Bldg. 11 Fl. Vibhavadi Rangsit Rd. ChatuChak, Chatuchak, Bangkok 10900
Registered Capital	:	THB 20,400,278,730 Divided into ordinary shares 2,040,027,873 shares Par value of THB 10.00 per share
Issued and paid-up share capital	:	THB 20,400,278,730 Divided into ordinary shares 2,040,027,873 shares Par value of THB 10.00 per share
Type of Business	:	Oil refining and distribution - Export

**2. Nature of Business**

Thaioil is Thailand's largest refinery and supplier of petroleum products. Founded in 1961, Thaioil operate one of the most efficient refineries in Asia Pacific with the current capacity of 275,000 barrels per day.

Thaioil operates under the Operational Excellence principle, operating as an integrated group of businesses in oil refinery, petrochemicals and lube base oil with supporting businesses, e.g. power generation, solvents, logistics and renewable energy generation, LAB : an intermediate in the production of surfactants, marine and pipeline transportation and storage services of crude, petroleum and petrochemical products, business in the area of International Head Quarter and Treasury Center, as well as recruitment services for Thaioil and Subsidiaries. Thaioil leads the Thai refinery industry through a well-planned and integrated production process, yielding optimum efficiency. Thaioil's product quality are high, rated in the top quartile of refineries in Asia Pacific at lower production costs, giving Thaioil a recognized competitive advantage.

At present, the Company engages in other businesses through holding shares in the following companies:

The Opinion of the Independent Financial Advisor regarding Acquisition of Assets

<b>Company Name</b>	<b>Business</b>	<b>Shareholding (%)</b>
<b>Lube Base Oil Business</b>		
Thai Lube Base Public Company Limited	Lube base oil manufacturer and distributor	100
<b>Petrochemical Business</b>		
Thai Paraxylene Company Limited	Upstream petrochemical manufacturer and distributor	100
Labix Company Limited	LAB (an intermediate in the production of surfactants such as detergents) manufacturer and distributor	75 (Shareholding through Thai Paraxylene Co., Ltd.)
Thaioil Solvent Company Limited	Investment in solvent and petrochemical manufacturing business	100
TOP Solvent Company Limited	Solvent and petrochemical product distributor	100 (Shareholding through Thaioil Solvent Co., Ltd.)
Sak Chaisidhi Company Limited	Hydrocarbon solvent manufacturer and distributor	80.52 (Shareholding through TOP Solvent Co., Ltd.)
TOP Solvent (Vietnam) Limited Liability	Solvent and petrochemical product distributor in Vietnam	100 (Shareholding through TOP Solvent Co., Ltd.)
<b>Power Generation Business</b>		
Thaioil Power Company Limited	Power and steam generator and distributor	73.99
Global Power Synergy Public Company Limited	Operate power generation business, including invest and develop future projects in power business	8.9 (and Shareholding through Thaioil Power Co., Ltd. 20.80)
TOP SPP Company Limited	Power and steam generator and distributor	100
<b>Transportation Business</b>		
Thaioil Marine Company Limited	Provide marine transportation of petroleum and petrochemical products	100
Thaioil Marine International Private Limited	Investment in marine transportation of crude oil and petrochemical products	100 (Shareholding through Thaioil Marine Co., Ltd.)
TOP-NYK MarineOne Private Limited	Marine transportation of crude oil and petrochemical products	50 (Shareholding through Thaioil Marine International Pte. Ltd.)
TOP Maritime Service Company Limited	Marine transportation services for crew and supplies in the Gulf of Thailand	55 (Shareholding through Thaioil Marine Co., Ltd.)
T.I.M. Ship Management Company Limited	Ship management and international standard fleet development services as well as crew development consultation (technical	33.3 (Shareholding through Thaioil Marine Co., Ltd.)

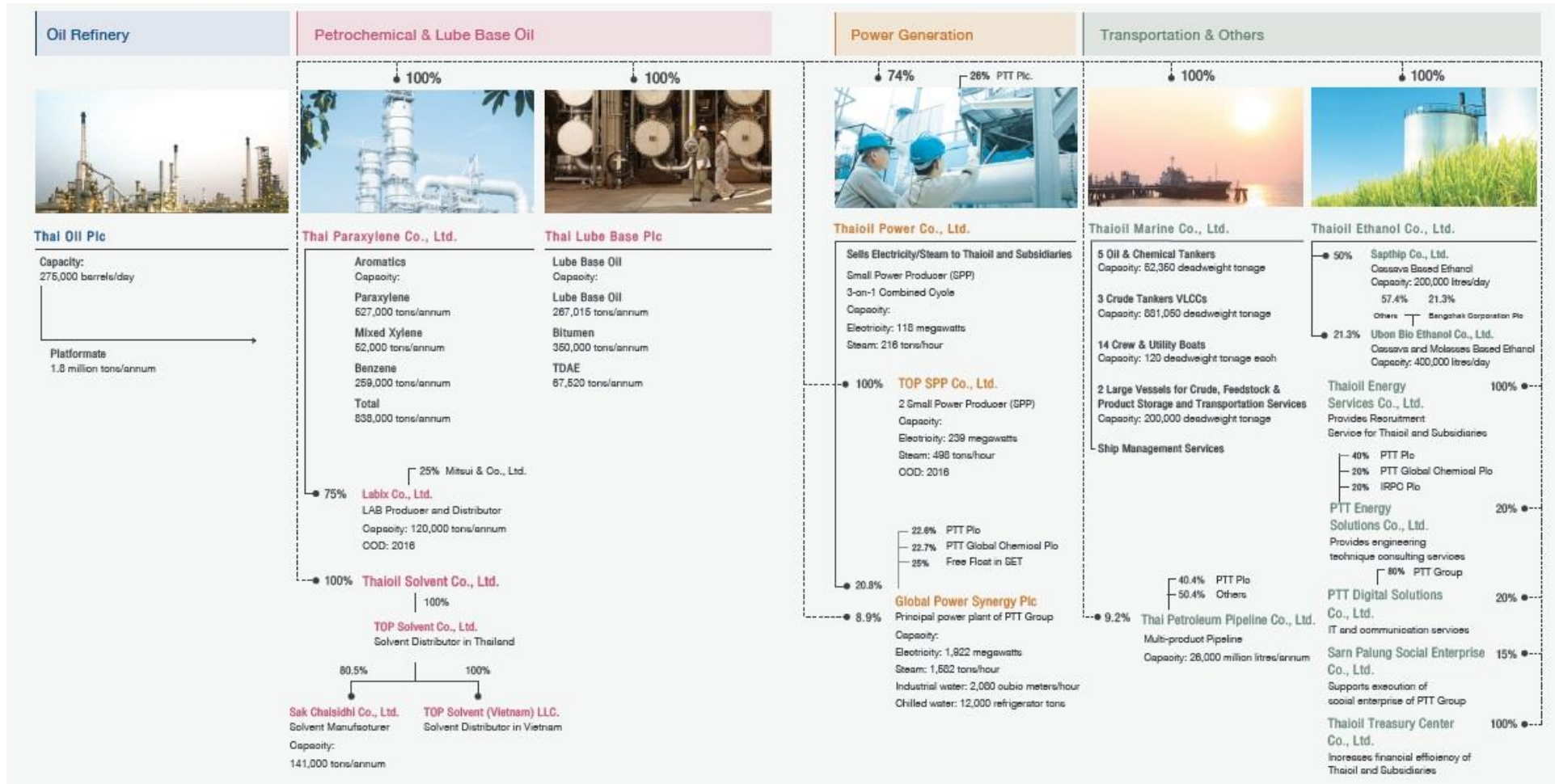
The Opinion of the Independent Financial Advisor regarding Acquisition of Assets

Company Name	Business	Shareholding (%)
	operation and marine transportation quality)	
TOP-NTL Private Limited	Trustee Management	50 (Shareholding through Thairoil Marine Co., Ltd.)
TOP Nautical Star Company Limited	Large vessels provider for storage and transportation of crude oil, feedstock, and petroleum products	35 (Shareholding through Thairoil Marine Co., Ltd.) 30 (Shareholding through TOP-NTL Pte. Ltd.)
Thai Petroleum Pipeline Company Limited	Pipeline transportation of petroleum products	9.19
<b>Other Business</b>		
Thairoil Energy Services Company Limited	Recruiting management service	100
Thairoil Ethanol Company Limited	Investment in ethanol business and alternative energy	100
Sapthip Company Limited	Cassava-based ethanol manufacturer and distributor	50 (Shareholding through Thairoil Ethanol Co., Ltd.)
Ubon Bio Ethanol Company Limited	Cassava-based and molasses-based ethanol manufacturer and distributor	21.28 (Shareholding through Thairoil Ethanol Co., Ltd.)
PTT Digital Solutions Company Limited	IT and communication services	20
PTT Energy Solutions Company Limited	Engineering technique consultation and services	20
Sarn Palung Social Enterprise Company Limited	Support execution of social enterprise of PTT group	15
Thairoil Treasury Center Company Limited	Conduct the business in the area of International Head Quarter (IHQ) and Treasury Center (TC) in order to increase financial efficiency of Thairoil and Subsidiaries	100



The Opinion of the Independent Financial Advisor regarding Acquisition of Assets

3. Shareholding structure of the Company



**4. The first 10 shareholders as of 2 March 2018**

No.	Shareholder Name	No. of Share (Shares)	% Share
1.	PTT Public Company Limited	1,001,647,483	49.10
2.	Thai NVDR Co.,Ltd.	387,811,984	19.01
3.	State Street Europe Limited	77,229,274	3.79
4.	The Bank of Newyork (Nominee) Limited	37,009,554	1.81
5.	Chase Nominee Limited	26,876,949	1.32
6.	SE Asia (Type B) Nominees Llc	23,385,260	1.15
7.	HSBC (Singapore) Nominees Pte Ltd.	17,491,100	0.86
8.	Social Security Office	14,911,500	0.73
9.	South East Asia UK (Type A) Nominees Limited	14,330,374	0.70
10.	GIC Private Limited	14,127,400	0.69
11.	Others	425,206,995	20.84
<b>Total</b>		<b>2,040,027,873</b>	<b>100.00</b>

**5. List of Board of Directors as of 13 July 2018**

No.	Director Name	Position
1.	Mr. Thosaporn Sirisumphand	Chairman of the Board and Independent Director
2.	Miss Chularat Suteethorn	Chairman of the Audit Committee Nomination and Remuneration Committee and Independent Director
3.	Mr. Pasu Decharin	Audit Committee and Independent Director
4.	ACM Suttipong Inseepong	Chairman of the Nomination and Remuneration Committee and Independent Director
5.	Mrs. Nitima Thepvanangkul	Nomination and Remuneration Committee and Risk Management Committee
6.	Mr. Noppadol Pinsupa	Director and Risk Management Committee
7.	POL. GEN. Aek Angsanant	Chairman of the Corporate Governance Committee and Independent Director
8.	Mr. Yongyut Jantarotai	Director and Corporate Governance Committee
9.	Mr. Kanit Si	Director and Corporate Governance Committee
10.	Mr. Chen Namchaisiri	Independent Director and Audit Committee
11.	Mrs. Sriwan Eamrungraj	Director and Risk Management Committee
12.	Mr. Auttapol Rerkpiboon	Director
13.	Mr. Suchalee Sumamal	Director
14.	Me. Atikom Terbsiri	Chief Executive Officer and President Secretary of the Board Director and Risk Management Committee

**6. Financial Summary and Operating Results Analysis**

Statement of Financial Position

Unit: Millions of THB	Audited Consolidated Financial Statements and Reviewed			
	Consolidated Financial Statements as of			
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
<b>Assets</b>				
<i>Current Assets</i>				
Cash and Cash Equivalents	35,764	31,121	15,623	33,879
Current Investments	17,365	29,654	52,318	47,920
Trade Accounts Receivable	14,177	19,536	22,328	23,260
Other Receivables	2,409	934	1,171	1,071
Short-Term Loans to Related Parties	90	90	90	45
Inventories	18,883	33,189	32,841	30,953
Prepaid Corporate Income Tax	671	99	60	63
Refundable Value Added Tax	983	942	751	478
Other Current Assets	148	166	1,029	1,224
<b>Total Current Assets</b>	<b>90,490</b>	<b>115,731</b>	<b>126,211</b>	<b>138,893</b>
<i>Non-Current Assets</i>				
Investments Held as Available-for-Sale	136	245	3,103	3,846
Investment in Subsidiaries	12,986	13,361	13,826	14,116
Investment in Joint Ventures	455	505	542	564
Other Long-Term Investments	779	779	780	780
Investment Properties	88	94	103	103
Property , Plant and Equipment	83,258	82,312	78,612	77,881
Intangible Assets	1,906	3,106	3,191	3,125
Deferred Tax Assets	579	441	508	527
Other Non-Current Assets	1,489	1,157	1,232	1,205
<b>Total Non-Current Assets</b>	<b>101,676</b>	<b>102,000</b>	<b>101,897</b>	<b>102,147</b>
<b>Total Assets</b>	<b>192,166</b>	<b>217,731</b>	<b>228,108</b>	<b>241,040</b>
<b>Liabilities and Shareholders' Equity</b>				
<i>Current Liabilities</i>				
Short-Term Borrowings	413	867	969	1,308
Trade Accounts Payable	12,053	19,887	18,963	18,631
Other Payables	2,958	3,565	3,476	2,498
Long-Term Borrowings-Current Portion	1,374	2,206	1,592	1,836
Debentures-Current Portion	-	4,932	-	3,000

Unit: Millions of THB	Audited Consolidated Financial Statements and Reviewed			
	Consolidated Financial Statements as of			
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
Excise Duty Payable	1,032	1,450	4,785	5,150
Income Tax Payable	362	1,239	3,563	4,760
<b>Total Current Liabilities</b>	<b>18,192</b>	<b>34,146</b>	<b>33,348</b>	<b>37,183</b>
<i>Non-Current Liabilities</i>				
Long-Term Borrowings	9,621	9,374	8,068	15,995
Debentures	64,098	58,921	55,839	51,425
Deferred Tax Liabilities	-	10	9	9
Other Non-Current Liabilities	3,246	3,683	3,696	3,720
<b>Total Non-Current Liabilities</b>	<b>76,965</b>	<b>71,988</b>	<b>67,612</b>	<b>71,149</b>
<b>Total Liabilities</b>	<b>95,157</b>	<b>106,134</b>	<b>100,960</b>	<b>108,332</b>
<i>Shareholders' Equity</i>				
Share Capital				
Authorized Share Capital	20,400	20,400	20,400	20,400
Issued and Paid Share Capital	20,400	20,400	20,400	20,400
Share Premium on Ordinary Shares	2,456	2,456	2,456	2,456
Appropriated Retained Earnings				
Legal reserve	2,040	2,040	2,040	2,040
Other reserves	245	245	245	245
Unappropriated Retained Earnings	67,131	81,622	96,975	102,583
Other Surplus (Deficit)	203	203	203	203
Other Components of Equity	(103)	(109)	(96)	(117)
<b>Equity attributable to owners of the Company</b>	<b>92,372</b>	<b>106,857</b>	<b>122,223</b>	<b>127,810</b>
Non-Controlling Interests	4,637	4,740	4,925	4,898
<b>Total Shareholders' Equity</b>	<b>97,009</b>	<b>111,597</b>	<b>127,148</b>	<b>132,708</b>
<b>Total Liabilities and Shareholders' Equity</b>	<b>192,166</b>	<b>217,731</b>	<b>228,108</b>	<b>241,040</b>

Statement of Comprehensive Income

Unit: Millions of THB	For the Year Ended			3-Month Reviewed Ended
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
<b>Revenue</b>				
Revenue from Sale and Rendering of Services	293,569	274,739	337,388	91,617
Net Derivative Gain on Hedging	1,489	-	-	102
Net Foreign Exchange Gain	-	446	3,182	1,470
Dividend Revenue	48	247	158	3
Other Revenue	1,498	1,118	1,190	378
<b>Total Revenue</b>	<b>296,604</b>	<b>276,550</b>	<b>341,918</b>	<b>93,570</b>
<b>Expenses</b>				
Cost of Sale and Rendering of Services	(273,819)	(247,261)	(305,386)	(85,628)
Selling Expenses	(452)	(451)	(493)	(118)
Administrative Expenses	(2,755)	(2,182)	(2,970)	(470)
Net Derivative Loss on Hedging	-	(243)	(133)	-
Net Foreign Exchange Loss	(2,754)	-	-	-
<b>Total Expenses</b>	<b>(279,780)</b>	<b>(250,137)</b>	<b>(308,982)</b>	<b>(86,216)</b>
Share of Profit of Joint Ventures and Associates	712	930	1,197	333
<b>Profit Before Finance Costs and Income Tax Expense</b>	<b>17,536</b>	<b>27,343</b>	<b>34,133</b>	<b>7,687</b>
<b>Finance Costs</b>	<b>(3,435)</b>	<b>(3,461)</b>	<b>(3,285)</b>	<b>(750)</b>
<b>Profit Before Income Tax Expense</b>	<b>14,101</b>	<b>23,882</b>	<b>30,848</b>	<b>6,937</b>
Income Tax Expense	(1,597)	(2,295)	(5,529)	(1,209)
<b>Profit (Loss) for the Year</b>	<b>12,504</b>	<b>21,587</b>	<b>25,319</b>	<b>5,728</b>
<b>Other Comprehensive Income</b>				
Losses on Remeasurements of Defined Benefit Plans	(220)	-	(323)	-
Net Change in Fair Value of Available-for-Sale Investments	(2)	11	147	43
Exchange Differences on Translating Foreign Operations	73	(21)	(121)	(65)
Share of Other Comprehensive Income	4	5	(16)	(0)

Unit: Millions of THB	For the Year Ended			3-Month Reviewed Ended
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
(Loss) of Associate				
<b>Other Comprehensive Income (Loss) for the Year, Net of Income Tax</b>	<b>(145)</b>	<b>(5)</b>	<b>(313)</b>	<b>(22)</b>
<b>Total Comprehensive Income for the Year</b>	<b>12,359</b>	<b>21,582</b>	<b>25,006</b>	<b>5,706</b>
<b>Total Income Attributable to:</b>				
Owners of the Company	12,181	21,222	24,856	5,586
Non-Controlling Interests	323	365	463	120
<b>Profit (Loss) for the Year</b>	<b>12,504</b>	<b>21,587</b>	<b>25,319</b>	<b>5,706</b>
<b>Total Comprehensive Income Attributable to:</b>				
Owners of the Company	12,035	21,216	24,546	5,586
Non-Controlling Interests	324	366	460	120
<b>Total Comprehensive Income for the Year</b>	<b>12,359</b>	<b>21,582</b>	<b>25,006</b>	<b>5,706</b>
<b>Basic Earnings per Share (THB)</b>	<b>5.97</b>	<b>10.40</b>	<b>12.18</b>	<b>2.75</b>

Statement of Cash Flows

Unit: Millions of THB	For the Year Ended			3-Month Reviewed Ended
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
<b>Cash Flows from Operating Activities</b>				
<b>Profit (Loss) for the Year</b>	12,504	21,587	25,319	5,728
<i>Adjustments to Reconcile Profit (Loss) to Cash Receipts (Payments)</i>				
Reversal of Allowance for Decline in Value of Inventories Adjusted to net Realizable Value	(1,546)	(1,052)	(93)	116
Depreciation and Amortization	6,766	7,761	7,642	1,738
Finance Costs	3,435	3,461	3,285	750

The Opinion of the Independent Financial Advisor regarding Acquisition of Assets

Unit: Millions of THB	For the Year Ended			3-Month Reviewed Ended
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
Unrealized Gain on Foreign Exchange	3,369	(97)	(2,335)	(2,040)
Share of Profit of Joint Ventures and Associates	(712)	(930)	(1,197)	(333)
Dividend Revenue	(48)	(247)	(158)	(3)
Reversal of Impairment Loss on Property, Plant and Equipment	-	(1)	546	-
Bad Debt	-	28	-	-
Loss on Change in Shareholding through Associated	5	-	-	-
Loss on Disposal of Investment	10	-	33	(4)
Loss on Disposal of Land, Building and Equipment	99	53	21	2
Reversal of loss on impairment of property, plant and equipment and investment property	-	-	-	-
Realization of Deferred Land Lease and Other Revenue	(26)	(26)	(24)	(6)
Income Tax Expense	1,597	2,295	5,529	1,209
	<b>25,453</b>	<b>32,832</b>	<b>38,568</b>	<b>7,157</b>
<i>Change in Operating Assets and Liabilities</i>				
Trade Accounts Receivable	1,960	(5,371)	(2,792)	(934)
Other Receivables	(749)	971	(1,389)	(207)
Value Add Tax Receivable	534	40	190	274
Inventories	11,197	(13,237)	441	1,772
Other Non-Current Assets	(263)	146	(157)	12
Trade Accounts Payable	(5,748)	7,847	(928)	(325)
Other Payables	(421)	93	672	(467)
Excise duty payable	149	418	3,335	365
Other Non-Current Liabilities	119	141	(382)	25
Income Tax Received (Paid)	(523)	(698)	(3,141)	(36)
<b>Net Cash from Operating Activities</b>	<b>31,708</b>	<b>23,182</b>	<b>34,417</b>	<b>7,636</b>
<i>Cash Flow from Investing Activities</i>				

The Opinion of the Independent Financial Advisor regarding Acquisition of Assets

Unit: Millions of THB	For the Year Ended			3-Month Reviewed Ended
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
Dividend Received	453	754	740	45
Purchase of Current Investments	(369)	(12,057)	(23,423)	-
Proceeds from Sales of Current Investments	13,250	-	-	4,352
Purchase of Investments Held as Available-for-Sale	-	(28)	(3,016)	(680)
Proceeds from Sales of Available for Sale	16	-	151	-
Cash Inflows on Sale of Investments in Associates	-	-	51	-
Cash Inflows (Outflows) on Repayment of Short-Term Borrowings	-	-	-	45
Cash Inflows on Long-Term Loans to Savings Co-Operative of Employees	45	1	22	6
Purchase of Other Current Investments	-	-	0	-
Purchase of Land, Building and Equipment	(10,867)	(6,393)	(3,679)	(968)
Proceeds from Sale of Land, Building and Equipment	36	1	2	128
Sale of Investments Held as Available-for-Sale	-	-	-	-
Purchase of Intangible Assets	(39)	(626)	(921)	(14)
Exchange Differences on Translating Foreign Operations	5	(4)	(19)	(18)
<b>Net Cash from (used in) Investing Activities</b>	<b>2,530</b>	<b>(18,352)</b>	<b>(30,092)</b>	<b>2,896</b>
<b><i>Cash Flow from Financing Activities</i></b>				
Finance Costs Paid	(3,389)	(3,443)	(3,364)	(1,377)
Dividends Paid	(3,194)	(6,994)	(9,455)	-
Proceeds from Short-Term Borrowings	461	1,324	3,571	1,710
Repayment of Short-Term Borrowings	(545)	(870)	(3,470)	(1,370)
Proceeds from Short-Term Borrowings to Related Parties	-	800	-	-



The Opinion of the Independent Financial Advisor regarding Acquisition of Assets

Unit: Millions of THB	For the Year Ended			3-Month Reviewed Ended
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
Repayment of Short-Term Borrowings to Related Parties	-	(800)	-	-
Proceeds from Long-Term Borrowings	4,510	1,967	110	8,636
Repayment of Long-Term Borrowings	(993)	(1,381)	(1,686)	(315)
Redemption of Debentures	(11,590)	-	(4,932)	-
<b>Net Cash from (used in) Investing Activities</b>	<b>(14,740)</b>	<b>(9,397)</b>	<b>(19,226)</b>	<b>7,284</b>
<b>Net Increase (Decrease) in Cash and Cash Equivalents</b>	<b>19,498</b>	<b>(4,567)</b>	<b>(14,901)</b>	<b>17,816</b>
Effect of Exchange Rate Change on Cash and Cash Equivalents	29	(76)	(596)	440
Cash and Cash Equivalents at the Beginning of the Period	16,237	35,764	31,121	15,623
Cash and Cash Equivalents at the End of the Period	<b>35,764</b>	<b>31,121</b>	<b>15,623</b>	<b>33,879</b>
<b>Non-Cash Items</b>				
Payable for Purchase of Land, Building and Equipment	565	231	392	397
Payable for Purchase of Intangible Assets	-	779	202	202
Payable on Purchase of Securities (Private Funds)	-	304	50	36

Financial Ratios

Financial Ratios	Unit	For the Year Ended			3-Month Reviewed Ended
		31 December 2015	31 December 2016	31 December 2017	31 March 2018
<b>Liquidity Ratios</b>					
Current Ratio	Times	5.0	3.4	3.8	3.7
Quick Ratio	Times	3.7	2.4	2.7	2.8
Cash Ratio	Times	1.2	0.9	1.0	0.9
Accounts Receivable Turnover	Times	19.4	16.3	16.1	16.1
Collection Period	Day	18.6	22.1	22.3	22.4
Inventory Turnover	Times	11.5	9.5	9.2	10.7
Days Sales of Inventory	Day	31.2	37.9	38.9	33.5
Accounts Payable Turnover	Times	18.3	15.5	15.7	18.2
Accounts Payable Period	Day	19.6	23.3	22.9	19.8
Cash Cycle	Day	30.1	36.7	38.4	36.2
<b>Profitability Ratios</b>					
Gross Profit Margin Ratio	%	9.0%	12.8%	11.7%	8.4%
Net Profit Margin Ratio	%	4.2%	7.8%	7.4%	6.1%
Return on Equity	%	13.9%	21.3%	21.7%	7.9%
<b>Efficiency Ratios</b>					
Return on Assets	%	6.5%	10.5%	11.4%	9.8%
Return on Fixed-Assets	%	22.8%	34.4%	40.1%	37.3%
Total Asset Turnover	Times	1.5	1.3	1.5	1.6
<b>Financial Policy Ratios</b>					
Debt to Equity Ratio	Times	1.0	1.0	0.8	0.8
Net Debt to Equity Ratio	Times	0.2	0.1	0.0	(0.1)
Interest Coverage Ratio	Times	7.4	9.4	11.2	9.8

Remark:

- (1) Company's annual dividends is THB 2.7 per share for the year 2015, THB 4.5 per share for the year 2016 and the interim dividends is THB 1.5 per share for the year 2017.

## 7. Financial Position and Operating Results

### 7.1 Analysis of Operating Results in the Consolidated Financial Statements for the Year 2017 and for the Three-Month Period Ended 31 March 2018

Consolidated Operating Results for the Year 2017

Unit: Millions of THB	For the Year Ended			3-Month Reviewed Ended	
	31 December 2015	31 December 2016	31 December 2017	31 March 2017	31 March 2018
Sales Revenues	293,569	274,739	337,388	87,596	91,617
Hedging Gain/(Loss)	1,489	(243)	(133)	(86)	(102)
<b>EBITDA</b>	<b>25,492</b>	<b>32,675</b>	<b>36,925</b>	<b>9,548</b>	<b>7,359</b>
Finance Costs	(3,435)	(3,461)	(3,285)	(846)	(750)
Foreign Exchange Gain/(Loss)	(2,754)	446	3,182	1,323	1,470
Income Tax Expense	(1,597)	(2,295)	(5,529)	(1,461)	(1,209)
<b>Net Profit<sup>(1)</sup></b>	<b>12,181</b>	<b>21,222</b>	<b>24,856</b>	<b>7,075</b>	<b>5,608</b>
Basic Earnings per Share (THB)	5.97	10.40	12.18	3.47	2.75
Net Profit Excluding Stock Gain/(Loss) and Inventory Write-Down to NRV <sup>(2)</sup>	17,789	14,043	21,441	7,324	5,336

Remark:

- (1) Including dividends received of THB 158 million for the year 2017, THB 247 million for the year 2016 and THB 48 million for the year 2015 from Thai Petroleum Pipeline Co., Ltd.
- (2) Excluding pre-tax stock gain/(loss) and pre-tax write-down to NRV on petroleum inventory /(a reversal of write-down to NRV on petroleum inventory) which are included in cost of sale of goods and rendering of services in the financial statements.

For the year 2017, comparing with the year 2016, Thairoil and Subsidiaries had sales revenue of THB 337,388 million, increased by THB 62,649 million due to increases in average product selling prices tracking crude oil price and higher integrated intake. Thairoil and Subsidiaries posted GIM excluding stock gain/ (loss) of 9.1 US\$/bbl, improved by 1.6 US\$/bbl, thanks to stronger petroleum product spreads, especially gasoil and fuel oil, and lower crude premium.

Besides, aromatics market was supported by recovery of benzene market which was resulted from tight supply after shutdowns of major benzene producers in the U.S. since late 2016. However, paraxylene market was pressured by new supply from India. For LAB market, its spread over feedstock remained weak due to sluggish Indian demand. Lube base oil market improved as a result of supply shrinkage from scheduled maintenances of lube base oil plants in the region.

Bitumen market also improved since regional supply decrease after many refineries in Thailand and Singapore had maintenance shutdowns in the first half of 2017. In addition, some producers increased fuel oil production instead of bitumen because of higher margin following a rise in fuel oil price.

Therefore, Thairoil and Subsidiaries reported EBITDA of THB 36,925 million, increased by THB 4,250 million. According to a 3.15 Baht/US\$ appreciation in Thai Baht from the end of 2016, Thairoil and Subsidiaries had net foreign exchange gain of

THB 3,182 million, increased by THB 2,736 million. However, TM recorded a loss on assets impairment of THB 547 million due to a change in marine transportation business and a sluggish in exploration and production industry which caused TM to earn lower chartering rate and some vessels to be unutilized. However, the commercial startups of LABIX and TOP SPP operations since 2016 continuously provided contributions to Thaioil and Subsidiaries throughout the year 2017. Meanwhile, Ethanol business improved thanks to a significant increase in gross margin following higher selling price and lower feedstock cost.

In 2017, Thaioil and Subsidiaries achieved benefits from profitability improvement strategy of THB 5,505 million which was exceed the target. The strategy consists of 4 main types of activities: (1) supply and marketing management, (2) hydrocarbon management (3) Transcendence project and (4) cost savings via the Orchestra project.

Thaioil and Subsidiaries, however, recorded income tax expense increased by THB 3,234 million to THB 5,529 million due to a rise in profit before tax and a fully-utilized of loss carry forward and BOI tax privileges from emission reduction and energy efficiency projects. Thus, Thaioil and Subsidiaries earned net profit of THB 24,856 million or THB 12.18 per share in 2017, superior than 2016 by THB 3,634 million.

Comparing Q1/18 with Q1/17, Thaioil and Subsidiaries had higher sales revenue by THB 4,021 million due to increases in average product selling prices and total product sales volume following higher integrated intake. However, Thaioil and Subsidiaries recorded lower GIM excluding stock gain/ (loss) by 1.2 US\$/bbl which was pressured by weakened gross refining margin due to considerably stronger crude premium, softened spreads of gasoline and fuel oil over Dubai, and reduced aromatics spreads over ULG95. Therefore, Thaioil and Subsidiaries recognized EBITDA decreased by THB 2,189 million. Besides, Thaioil and Subsidiaries reported net foreign exchange gain increased by THB 147 million in Q4/17 while they recorded finance cost reduced by THB 96 million. Offsetting with depreciation and income tax expense, Thaioil and Subsidiaries booked net profit decreased by THB 1,467 million.

## 7.2 Financial Position

Unit: Millions of THB	Audited Consolidated Financial Statements and Reviewed Consolidated			
	Financial Statements as of			
	31 December 2015	31 December 2016	31 December 2017	31 March 2018
<b>Assets</b>				
Cash and Cash Equivalents and Current Investment	53,129	60,775	67,941	81,799
Other Current Assets	37,361	54,956	58,270	57,094
Non-Current Assets	101,676	102,000	101,897	102,147
<b>Total Assets</b>	<b>192,166</b>	<b>217,731</b>	<b>228,108</b>	<b>241,040</b>
<b>Liabilities</b>				
Current Liabilities	16,818	27,008	31,756	32,346
Long-Term Borrowings and Debentures (Including Current Portion)	75,093	75,434	65,499	72,256
Other Non-Current Liabilities	3,246	3,692	3,705	3,729
<b>Total Liabilities</b>	<b>95,157</b>	<b>106,134</b>	<b>100,960</b>	<b>108,332</b>
<b>Equity</b>				
Equity Attributable to Owners of the Company	92,372	106,857	122,223	127,810
Non-Controlling Interests	4,637	4,740	4,925	4,898
<b>Total Equity</b>	<b>97,009</b>	<b>115,597</b>	<b>127,148</b>	<b>132,708</b>
Total Liabilities and Equity	192,166	217,731	228,108	241,040

### Total Assets

Thaioil and Subsidiaries had total assets of THB 192,166 million for the year 2015, THB 228,108 million for the year 2016 and THB 241,040 million for the year 2017, grown by THB 10,377 million or 4.8% from 31 December 2016 due to cash and cash equivalents from operating activities in 2017.

As of 31 March 2018, Thaioil and Subsidiaries had total assets of THB 241,040 million, grown by THB 12,932 million or 5.7% from 31 December 2017 due to cash and cash equivalents from operating activities in first quarter of 2018

### Total Liabilities

Thaioil and Subsidiaries had total liabilities of THB 95,157 million for the year 2015, THB 106,134 million for the year 2016 and THB 100,960 million for the year 2017, decreased by THB 5,174 million or 4.9% from 31 December 2016 due to

Thaioil refinery repaid its due THB-denominated debentures and US\$-denominated debentures went down owing to appreciation in Thai Baht from the end of 2016.

As of 31 March 2018, Thaioil and Subsidiaries had total liabilities of THB 108,332 million, increased by THB 7,372 million or 7.3% from 31 December 2017 due to an increase in long-term borrowings and debentures

#### Total Equity

Thaioil and Subsidiaries had total equity of THB 97,009 million for the year 2015, THB 115,597 million for the year 2016 and THB 127,148 million for the year 2017, increased by THB 15,551 million or 13.9% from 31 December 2016. This resulted from total comprehensive income for the year 2017, deducted by dividends paid from Thaioil and Subsidiaries.

As of 31 March 2018, Thaioil and Subsidiaries had total equity of THB 132,708 million, increased by THB 5,560 million or 4.4% from 31 December 2017. This resulted from total comprehensive income for Q1/18, deducted by dividends paid for non-controlling interests of Thaioil Power Co., Ltd.

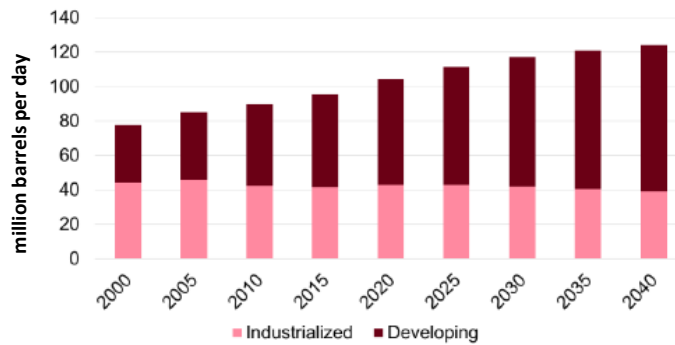
**Attachment 2 Industry Overview for Clean Fuel Project (“CFP”)**

**1. Global Crude Demand**

Global crude liquids demand will continue to grow an average of 1.6 Mb/d to 2025 before slowing to an average of 0.7 Mb/d to 2040. The demand forecast is driven by continuous economic growth, particularly in Asia. Demand continues to grow despite PIRA’s outlook for electric vehicle penetration and continued substitution in the power generation sector.

Demand in major industrialized countries is expected to slow, driven by engine optimization and electricity substitution in transport. On the other hand, demand for all products in developing countries is expected to grow, except for fuel oil, which has long been in decline according to the requirements of the International Maritime Organization (IMO) regarding the control of sulfur in bunker fuel (“IMO requirements”) which will be adopted in 2020, even bunker fuel use of fuel oil will decline.

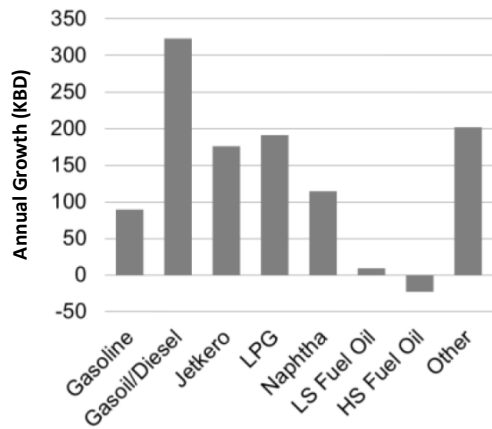
**Crude Oil Demand by Country Type**



Source: S&P Global Platts Study for CFP Project (April 2018)

Global demand for gasoline grew rapidly over the last five years (0.5 Mb/d per year), but it will slow to around 0.1 Mb/d annually and will eventually peak around 2030. Demand for middle distillate transportation fuels (diesel, jet, marine gasoil) will continue to expand strongly with a surge in 2020 due to bunker fuel specification changes. On average, middle distillates demand will grow 0.44 Mb/d per year over the next decade, slowing to 0.19 Mb/d per year post-2030. Liquefied petroleum gas will be driven by petrochemicals growth, which is expected to continue to grow according to global economic growth and industrial sectors.

**Demand Growth by Product and Region (2017-2040)**

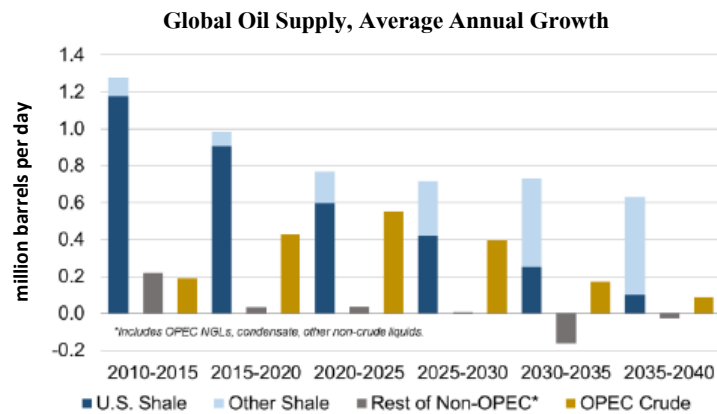


Source: S&P Global Platts Study for CFP Project (April 2018)

**2. Global Crude Supply**

The primary driver behind the long-term production is still expected to be US shale. US shale liquids are expected to grow over 6.0 Mb/d by 2025. However, US shale growth will not be sufficient to meet long-term oil demand. By 2025, US shale production is only expected to grow 0.48 Mb/d year-over-year and will continue to post smaller gains throughout the forecast period as steep shale decline curves become more difficult to offset.

Slowing US shale growth will necessitate production growth from other, primarily supported by OPEC and non-US shale production. OPEC production is expected to continue to grow in order to maintain its market share in the global market, including growth from 2020 onwards.

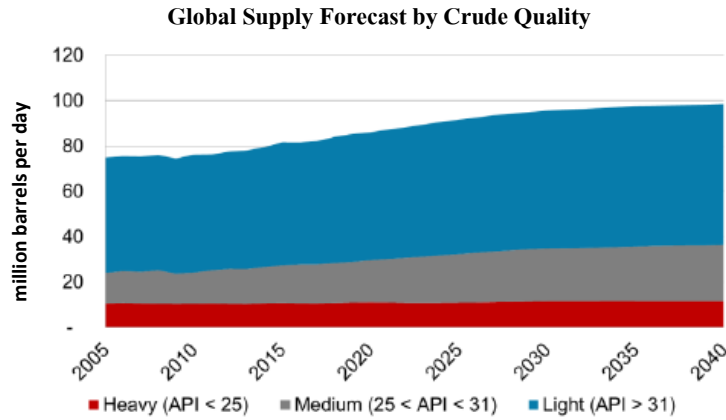


Source: S&P Global Platts Study for CFP Project (April 2018)

Crude oil can be classified according to the specific gravity of crude oil (API) into 3 groups; Light Crude Oil Medium Crude Oil, and Heavy Crude Oil. Light Crude Oil usually has low sulfur. It is anticipated that production will continue to increase in the market. (Also, Medium Crude Oil continues to grow every year in order to meet the demand of crude oil in the world



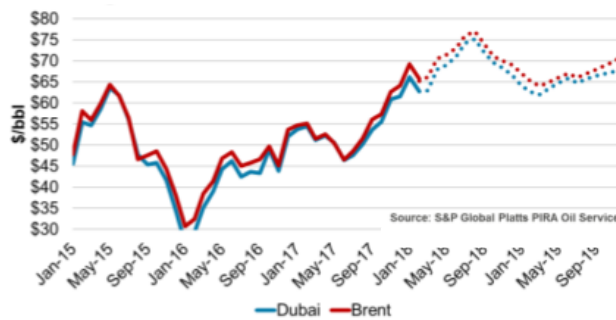
market.. For the Heavy Crude Oil, Heavy crude supply will continue to grow, but growth continues to slow with declines in Mexico, slowing investment in South America, and pipeline constraints out of West Canada. The mild growth is driven primarily by Canada and the Middle East that, together, offset persistent declines in heavy crude supply elsewhere in the world.



### 3. Global Crude Price

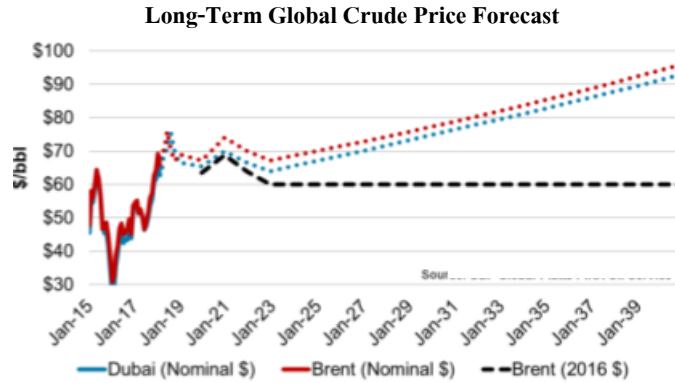
Global oil prices have been volatile over the last four years since oil prices collapse from over \$100/bbl in 2014 to under \$30/bbl, in 2016. The collapse was fueled by rampant supply growth from the US where producers discovered how to economically produce from the US' extensive shale crude reserves and exacerbated by slow economic growth globally. Prices recovered from their \$30/bbl-low in 2016, following OPEC's decision to cut oil production in order to draw down global inventories, balance the market, and buoy prices. Prices continued to increase through 2017 as inventories fell and the market rebalanced, as planned, and were further supported by an extensive of the OPEC production cut at the end of 2017. OPEC is expected to resume production to levels prior to the cut, which will help to correct the undersupply in the market that began in mid-2017. The second half of 2018 and the first half of 2019 are expected to trend near \$60/bbl.

#### Short-Term Global Crude Price Forecast



Source: S&P Global Platts Study for CFP Project (April 2018)

In the long-term overview, while global crude prices are expected to remain volatile in the short, long-term oil prices are expected to gradually increase with the rate of inflation, which PIRA models at ~2%. In real 2016 dollars, prices are expected to remain at the \$60/bbl equilibrium price, which is sufficient to incentivize production growth without destroying demand



Source: S&P Global Platts Study for CFP Project (April 2018)

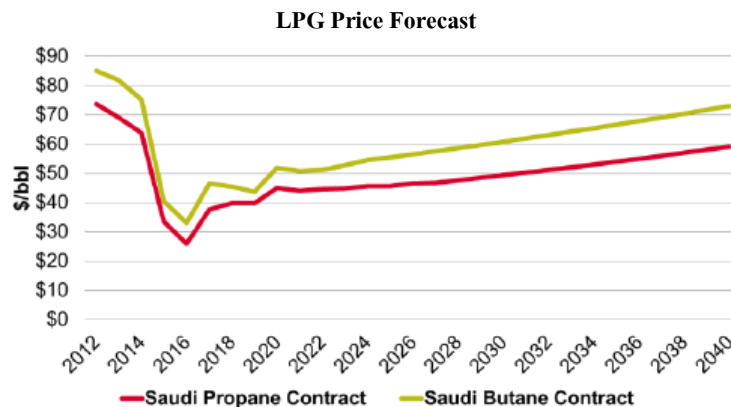
#### 4. Global Petroleum Price

Petroleum comprises many type of products such as LPG, naphtha , Gas oil, Gasoline Jet/Kero, fuel oil etc. The drivers of the price of petroleum are global demand and global supply. In addition, global economic, government policy technology green energy and electrical vehicle will also affect the petroleum price as well.

Forecasting prices for such products in the future. Details are as follows.

##### 4.1. LPG

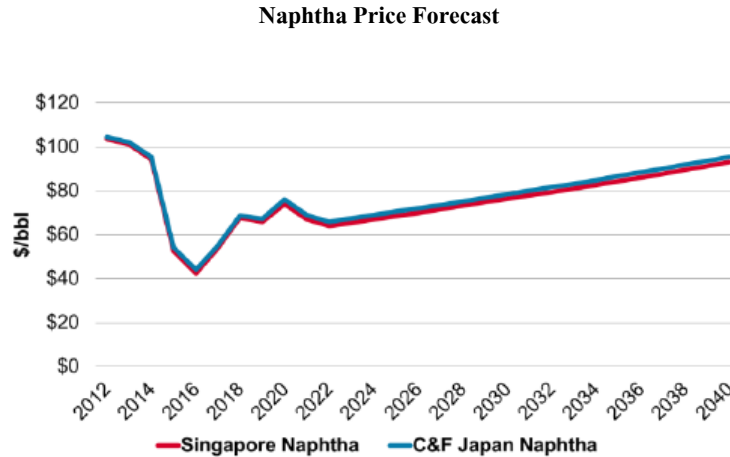
LPG prices are expected to continue to increase with the price of crude and supported by petrochemical demand. From 2018 to 2020, LPG price is expected to average \$45.52/bbl and continues to increase to \$60.83/bbl in 2030.



Source: S&P Global Platts Study for CFP Project (April 2018)

#### 4.2. Naphtha

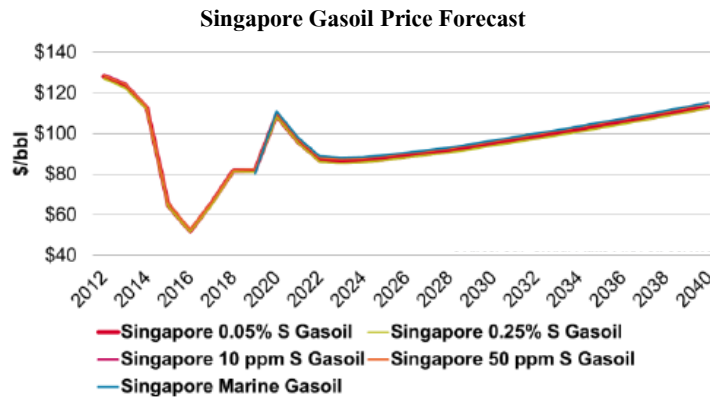
Naphtha used to produce gasoline. Prices of naphtha are determined by the demand for gasoline and the growth of the petrochemical industry as it is a raw material for the petrochemical industry. Naphtha price is expected to be \$67-74/bbl and continue to increase to \$76.40/bbl in 2030.



Source: S&P Global Platts Study for CFP Project (April 2018)

#### 4.3. Gasoil

The main reason that global demand for gasoil increased during this period is the transportation sectors which accounts for ~76% of global demand for gasoil, Therefore, gasoil prices are expected to continue to increase with the price of crude. Persistent global economic growth will drive continued demand for gasoil, especially in 2019-2022 supported by the IMO specifications in 2020.



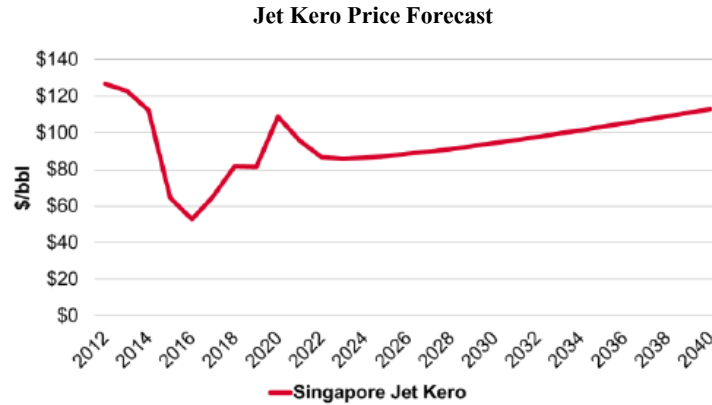
Source: S&P Global Platts Study for CFP Project (April 2018)

#### 4.4. Gasoline

Global gasoline demand is expected to increase by economic growth and world population. Global demand for gasoline grew rapidly over the last five years (~500 Mb/d per year), but it will slow to around 100 Mb/d annually and will eventually peak around 2030 which will affect the gasoline price as well.

#### 4.5. Jet/Kero

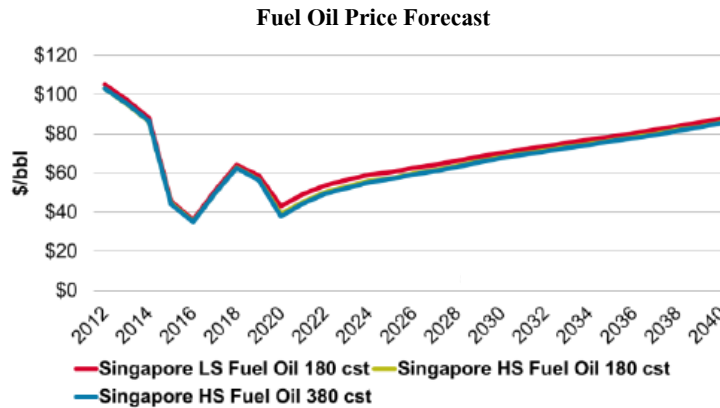
Jet fuel prices are expected to continue to increase with the price of crude. Persistent global economic growth will drive continued demand for jet fuel. Nowsday, renewable energy for jet fuel is limited. Factors that may affect the price in the future include future energy, aviation technology, and performance of the aircraft engines, government policy and the increase in air travel. Jet price is expected to average \$95/bbl in 2030.



Source: S&P Global Platts Study for CFP Project (April 2018)

#### 4.6. Fuel Oil

Fuel oil prices are expected to tumble following the IMO spec changes, particularly high sulfur fuel oil. It is expected to fall from \$63/bbl in 2018 to \$38/bbl in 2020 and recovering to \$68/bbl by 2030.



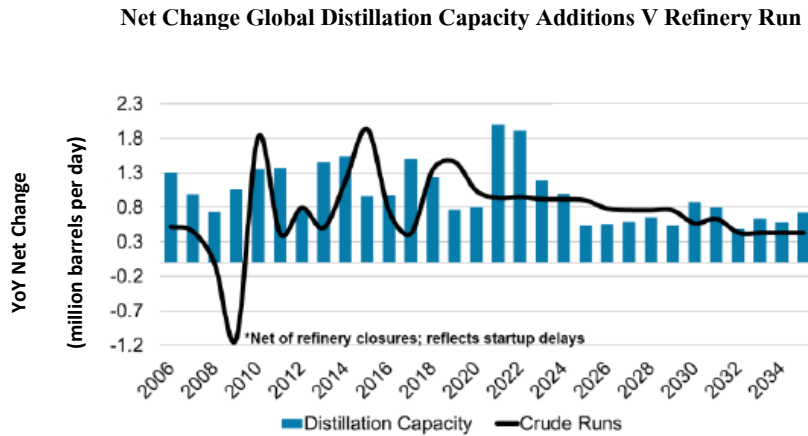
Source: S&P Global Platts Study for CFP Project (April 2018)

### 5. Global Refinery Market

The overall state of the global refinery market in 2017 is characterized by high refinery utilization and refinery runs and higher margins. Growth in global distillation capacity continues to grow at historical levels, but investment in new conversion capacity lags, despite the growing demand for conversion in the run-up and aftermath of the IMO bunker spec changes.

### 5.1. Global Distillation Capacity

Global refinery distillation capacity additions will grow along with demand for petroleum products. During 2010-2016, incremental annual capacity additions averaged roughly 1.2 Mb/d. Additions are expected to continue at this level through about 2025, before declining to 0.6 Mb/d per year for the remainder of the outlook period. However, it is difficult to estimate capacity additions ten years in the future, we expected to be consistent with additions seen historically, but has greater upside probability than downside. Additions slow down over the long term as demand growth will be slower and natural gas liquids (NGLs) will capture a greater share of demand.



Source: S&P Global Platts Study for CFP Project (April 2018)

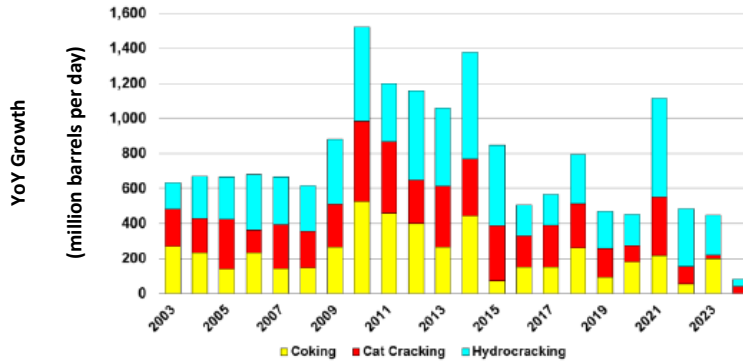
### 5.2. Conversion Capacity

Refiners generally have incentives to upgrade their refineries by adding conversion units to produce greater amounts of clean, higher-value products, such as gasoline and diesel, and lesser amounts of fuel oil. All else being equal, refiners with conversion capacity achieve much better margins than simple refineries without conversion.

Globally, refinery conversion additions rose substantially in the 2010-2014 period in response to strong refining margins in 2005-2008. These additions came online during a period of constrained demand growth and exacerbated the weakness in refining margins.

However, even with weaker margins, refiners still see incentives to add conversion capacity, so conversion additions are continuing focusing on petroleum products with high demand in the market. In addition to the IMO specifications, which will be adopted in 2020, as a result, the refinery will increase the conversion capacity to increase the quality of oil production.

**Global Refinery Conversion Capacity Growth**



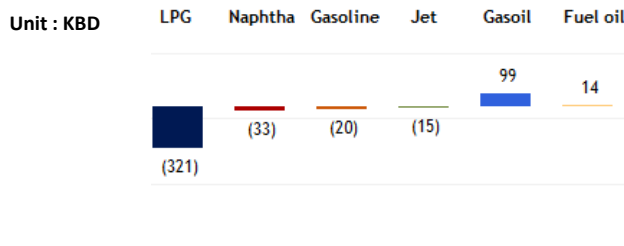
Source: S&P Global Platts Study for CFP Project (April 2018)

**6. Outlook for Thailand Demand for Crude Oil and Petroleum Products**

Currently, Thailand demand for petroleum products has been increasing continuously due to the growth of transportation sectors in Thailand from many reasons such as Thailand Government Policy, number of tourists which has increased in every year, the increasing of domestic and international fleets etc.

From a product-specific standpoint in Thailand, There are net short in crude and many products especially LPG naphtha Gasoline and Jet/Kero. On the other hand, Thailand is net long in Gasoil and Fuel oil that the excessive supply can be exported to CLMV countries to generate revenues.

**Average Net Long/(Short) by Product 2020-2040**



Source: S&P Global Platts Study for CFP Project (April 2018)

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## สิ่งที่ส่งมาด้วย 4 - หนังสือมอบฉันทะ แบบ ข

### เอกสารประกอบการมอบฉันทะ

#### กรณีผู้มอบฉันทะเป็นบุคคลธรรมดา

ในวันประชุม โปรดแสดงเอกสาร ณ จุดตรวจสอบเอกสาร ดังนี้

- ✓ หนังสือมอบฉันทะ ซึ่งลงนามโดยผู้มอบฉันทะ และผู้รับมอบฉันทะ  
(โปรดลงนามหน้า 2 (หนังสือมอบฉันทะ) และ หน้า 3 (ใบประจำต่อแบบหนังสือมอบฉันทะ)  
กรณีใช้หนังสือมอบฉันทะแบบ ข)
- ✓ สำเนาบัตรประจำตัวประชาชน หรือใบขับขี่ หรือบัตรประจำตัวข้าราชการ หรือหนังสือเดินทาง (กรณีเป็นชาวต่างชาติ) ของผู้มอบฉันทะ ที่ยังไม่หมดอายุ  
พร้อมลงนามรับรองสำเนาถูกต้องโดยผู้มอบฉันทะ
- ✓ สำเนาบัตรประจำตัวประชาชน หรือใบขับขี่ หรือบัตรประจำตัวข้าราชการ หรือหนังสือเดินทาง (กรณีเป็นชาวต่างชาติ) ของผู้รับมอบฉันทะ ที่ยังไม่หมดอายุ  
พร้อมลงนามรับรองสำเนาถูกต้องโดยผู้รับมอบฉันทะ และให้นำเอกสารฉบับจริงมาแสดง  
ในการลงทะเบียนด้วย
- ✓ สำหรับท่านที่ประสงค์จะส่งหนังสือมอบฉันทะ กรุณารวบรวมเอกสารที่ต้องการจัดส่งใส่  
ในซองธุรกิจตอบรับที่แนบมาพร้อมกันนี้และส่งกลับมาที่บริษัทฯ

### Attachment 4 - Proxy Form B

#### Required Documents for Proxy Granting

#### (For Natural-person Grantor)

In the meeting day, kindly present the following documents at the Documentation-  
Check Counter

- ✓ Proxy form signed by the grantor and the proxy (kindly sign on **page 2 (Proxy) and page 3 (Supplemental Proxy)** for Proxy Form B)
- ✓ **Certified true copy** of valid identification card or driving license or government official identification card or passport (in case of foreigners) of the grantor
- ✓ **Certified true copy** of valid identification card or driving license or government official identification card or passport (in case of foreigners) of the proxy. **The original document is required to be presented** for the registration.
- ✓ For those who wish to submit the Proxy Form, please insert all documents into the business P.O. Box envelopes attached hereto and return to the Company.







หนังสือมอบฉันทะ (แบบ ข)  
Proxy (Form B)

สิ่งที่ส่งมาด้วย 4 / Attachment 4

อากรแสตมป์ 20 บาท  
Duty Stamp 20 B

เลขทะเบียนผู้ถือหุ้น \_\_\_\_\_  
Shareholders' Registration No.

เขียนที่ \_\_\_\_\_  
Written at

วันที่ \_\_\_\_\_ เดือน \_\_\_\_\_ พ.ศ. \_\_\_\_\_  
Date Month Year

1 ข้าพเจ้า \_\_\_\_\_

I / We

อยู่บ้านเลขที่ \_\_\_\_\_ สัญชาติ \_\_\_\_\_  
Address Nationality

2 เป็นผู้ถือหุ้นของ บริษัท ไทยออยล์ จำกัด (มหาชน) (“บริษัท”)

Being a Shareholder of Thai Oil Public Company Limited (“the Company”)

โดยถือหุ้นจำนวนทั้งสิ้นรวม \_\_\_\_\_ หุ้น และออกเสียงลงคะแนนได้เท่ากับ \_\_\_\_\_ เสียง ดังนี้  
Holding the total amount of shares and have the rights to vote equal to votes as follows:  
 หุ้นสามัญ \_\_\_\_\_ หุ้น ออกเสียงลงคะแนนได้เท่ากับ \_\_\_\_\_ เสียง  
Ordinary share shares have the rights to vote equal to votes  
 หุ้นบุริมสิทธิ \_\_\_\_\_ หุ้น ออกเสียงลงคะแนนได้เท่ากับ \_\_\_\_\_ เสียง  
Preferred share shares have the rights to vote equal to votes

3 ขอมอบฉันทะให้ (ท่านสามารถมอบฉันทะให้กรรมการอิสระของบริษัทฯ เป็นตัวแทนเข้าประชุมฯ ตามรายละเอียดในหนังสือเชิญประชุมฯ ตามสิ่งที่ส่งมาด้วย 6)

Hereby appoint (You may grant proxy to the Company's Independent Directors as listed in Attachment 6 to attend the meeting)

- (1) นาย / นาง / นางสาว \_\_\_\_\_ อายุ \_\_\_\_\_ ปี  
Mr. / Mrs. / Ms. Age Years,  
อยู่บ้านเลขที่ \_\_\_\_\_ ถนน \_\_\_\_\_ ตำบล/แขวง \_\_\_\_\_  
residing at Road Sub - District  
อำเภอ/เขต \_\_\_\_\_ จังหวัด \_\_\_\_\_ รหัสไปรษณีย์ \_\_\_\_\_ หรือ  
District Province Postal Code or
- (2) นาย / นาง / นางสาว \_\_\_\_\_ อายุ \_\_\_\_\_ ปี  
Mr. / Mrs. / Ms. Age Years,  
อยู่บ้านเลขที่ \_\_\_\_\_ ถนน \_\_\_\_\_ ตำบล/แขวง \_\_\_\_\_  
residing at Road Sub - District  
อำเภอ/เขต \_\_\_\_\_ จังหวัด \_\_\_\_\_ รหัสไปรษณีย์ \_\_\_\_\_ หรือ  
District Province Postal Code or
- (3) นาย / นาง / นางสาว \_\_\_\_\_ อายุ \_\_\_\_\_ ปี  
Mr. / Mrs. / Ms. Age Years,  
อยู่บ้านเลขที่ \_\_\_\_\_ ถนน \_\_\_\_\_ ตำบล/แขวง \_\_\_\_\_  
residing at Road Sub - District  
อำเภอ/เขต \_\_\_\_\_ จังหวัด \_\_\_\_\_ รหัสไปรษณีย์ \_\_\_\_\_ หรือ  
District Province Postal Code

คนหนึ่งคนใดเพียงผู้เดียวเป็นผู้แทนของข้าพเจ้า เพื่อเข้าร่วมประชุมและออกเสียงลงคะแนนในการประชุมวิสามัญผู้ถือหุ้น ครั้งที่ 1/2561 บริษัท ไทยออยล์ จำกัด (มหาชน) ในวันจันทร์ที่ 27 สิงหาคม 2561 เวลา 14.00 น. ณ ห้องภิรัชฮอลล์ 1 - 3 ศูนย์นิทรรศการและการประชุมไบเทค เลขที่ 88 ถนนบางนา - ตราด (กม. 1) บางนา กรุงเทพฯ 10260 หรือที่จะพึงเลื่อนไปในวัน เวลา และสถานที่อื่นด้วย

Anyone of above as my/our proxy to attend and vote on my/our behalf at the meeting of the Extraordinary General Meeting of Shareholders (EGM) No. 1/2018 of Thai Oil Public Company Limited on Monday, August 27, 2018, 14.00 hrs. at Bhiraj Hall 1 - 3, Bangkok International Trade and Exhibition Centre (BITEC), 88 Bangna-Trad Road (Km. 1), Bangna, Bangkok 10260 or such other date, time and place as the meeting may be adjourned.

4 ข้าพเจ้าขอมอบฉันทะให้ผู้รับมอบฉันทะออกเสียงลงคะแนนแทนข้าพเจ้าในการประชุมครั้งนี้ ดังนี้

In this Meeting, I/we grant my/our proxy to vote on my/our behalf as follows:

ระเบียบวาระที่ 1 พิจารณามอบฉันทะลงทุนโครงการพลังงานสะอาด (Clean Fuel Project หรือ CFP) ซึ่งเข้าข่ายเป็นรายการได้มาซึ่งสินทรัพย์ของบริษัทฯ

Agenda Item 1 To consider and approve the investment in the Clean Fuel Project (CFP) which constitutes an asset acquisition transaction of the Company

- (ก) ให้ผู้รับมอบฉันทะมีสิทธิพิจารณาและลงมติแทนข้าพเจ้าได้ทุกประการตามที่เห็นสมควร  
(a) To grant my/our proxy to consider and vote on my/our behalf as appropriate in all respects.
- (ข) ให้ผู้รับมอบฉันทะออกเสียงลงคะแนนตามความประสงค์ของข้าพเจ้า ดังนี้  
(b) To grant my/our proxy to vote at my/our desire as follows:
- เห็นด้วย  ไม่เห็นด้วย  งดออกเสียง  
Approve Disapprove Abstain

ระเบียบวาระที่ 2 เรื่องอื่นๆ (ถ้ามี)

Agenda Item 2 Other matters (if any)

- (ก) ให้ผู้รับมอบฉันทะมีสิทธิพิจารณาและลงมติแทนข้าพเจ้าได้ทุกประการตามที่เห็นสมควร  
(a) To grant my/our proxy to consider and vote on my/our behalf as appropriate in all respects.
- (ข) ให้ผู้รับมอบฉันทะออกเสียงลงคะแนนตามความประสงค์ของข้าพเจ้า ดังนี้  
(b) To grant my/our proxy to vote at my/our desire as follows:
- เห็นด้วย  ไม่เห็นด้วย  งดออกเสียง  
Approve Disapprove Abstain

5 การลงคะแนนเสียงของผู้รับมอบฉันทะในวาระใดที่ไม่เป็นไปตามที่ระบุไว้ในหนังสือมอบฉันทะนี้ให้ถือว่าการลงคะแนนเสียงนั้นไม่ถูกต้องและไม่ใช่เป็นการลงคะแนนเสียงของข้าพเจ้าในฐานะผู้ถือหุ้น

Voting of proxy in any agenda that is not as specified in this proxy shall be considered as invalid and not signify my voting as a shareholder.

6 ในกรณีที่ข้าพเจ้าไม่ได้ระบุความประสงค์ในการออกเสียงลงคะแนนในวาระใดไว้ หรือระบุไว้ไม่ชัดเจน หรือในกรณีที่ที่ประชุมมีการพิจารณาหรือลงมติในเรื่องใดนอกเหนือจากเรื่องที่ระบุไว้ข้างต้น รวมถึงกรณีที่มีการแก้ไขเปลี่ยนแปลงหรือเพิ่มเติมข้อเท็จจริงประการใดให้ผู้รับมอบฉันทะมีสิทธิพิจารณาและลงมติแทนข้าพเจ้าได้ทุกประการตามที่เห็นสมควร

In case I/we have not specified my/our voting intention in any agenda or not clearly specified or in case the Meeting considers or passes any resolution other than those specified above, including the case of any amendment or addition of any fact, the proxy shall have the rights to consider and vote on my/our behalf as he/she may deem appropriate in all respects.

กิจการใดที่ผู้รับมอบฉันทะได้กระทำไปในการประชุม ให้เสมือนถือว่าข้าพเจ้าได้กระทำเองทุกประการ

Any actions performed by the proxy in this Meeting shall be deemed to be the actions performed by myself/ourselves.

ลงนาม/Signed \_\_\_\_\_ ผู้มอบฉันทะ/Grantor  
( )  
ลงนาม/Signed \_\_\_\_\_ ผู้รับมอบฉันทะ/Proxy  
( )  
ลงนาม/Signed \_\_\_\_\_ ผู้รับมอบฉันทะ/Proxy  
( )  
ลงนาม/Signed \_\_\_\_\_ ผู้รับมอบฉันทะ/Proxy  
( )

หมายเหตุ : ตามประกาศกรมพัฒนาธุรกิจการค้า เรื่อง กำหนดแบบหนังสือมอบฉันทะ (ฉบับที่ 5) พ.ศ. 2550

Remarks: According to the notification of Department of Business Development, Ministry of Commerce regarding Proxy Form (Issue 5) 2007

1. ผู้ถือหุ้นที่มอบฉันทะจะต้องมอบฉันทะให้ผู้รับมอบฉันทะเพียงรายเดียวเป็นผู้เข้าประชุมและออกเสียงลงคะแนน ไม่สามารถแบ่งแยกจำนวนหุ้นให้ผู้รับมอบฉันทะหลายคนเพื่อแยกการลงคะแนนเสียงได้

A shareholder shall appoint only one proxy to attend and vote at the Meeting. A shareholder shall not appoint more than one proxy, each with the voting rights in respect of a certain portion of shares.

2. ในกรณีที่มิวาระที่จะพิจารณาในการประชุมมากกว่าวาระที่ระบุไว้ข้างต้น ผู้มอบอำนาจสามารถระบุเพิ่มเติมได้ในใบประจำต่อตามแนบด้านล่างของหนังสือมอบอำนาจ แบบ ข ฉบับนี้

In case there are additional agenda, the proxy can state other agenda by using the Supplemental Proxy Form B as attached.

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**ใบประจำต่อแบบหนังสือมอบอำนาจ แบบ ข / Supplemental Proxy Form B**

การมอบอำนาจในฐานะเป็นผู้ถือหุ้นของบริษัท ไทยออยล์ จำกัด (มหาชน) (“บริษัท”)

The proxy as a shareholder of **Thai Oil Public Company Limited (“The Company”)**

ในการประชุมวิสามัญผู้ถือหุ้น ครั้งที่ 1/2561 บริษัท ไทยออยล์ จำกัด (มหาชน) ในวันจันทร์ที่ 27 สิงหาคม 2561 เวลา 14.00 น. ณ ห้องภิรัชฮอลล์ 1 - 3 ศูนย์นิทรรศการและการประชุมไบเทค เลขที่ 88 ถนนบางนา - ตราด (กม. 1) บางนา กรุงเทพฯ 10260 หรือที่จะพึงเลื่อนไปในวัน เวลา และสถานที่อื่นด้วย  
**At meeting of the Extraordinary General Meeting of Shareholders (EGM) No. 1/2018 of Thai Oil Public Company Limited on Monday, August 27, 2018, 14.00 hrs. at Bhiraj Hall 1 - 3, Bangkok International Trade and Exhibition Centre (BITEC), 88 Bangna-Trad Road (Km. 1), Bangna, Bangkok 10260 or such other date, time and place as the meeting may be adjourned**

ระเบียบวาระที่ \_\_\_\_\_ เรื่อง \_\_\_\_\_

**Agenda Subject :**

- (ก) ให้ผู้รับมอบอำนาจมีสิทธิพิจารณาและลงมติแทนข้าพเจ้าได้ทุกประการตามที่เห็นสมควร  
(a) To grant my/our proxy to consider and vote on my/our behalf as appropriate in all respects.
- (ข) ให้ผู้รับมอบอำนาจออกเสียงลงคะแนนตามความประสงค์ของข้าพเจ้า ดังนี้  
(b) To grant my/our proxy to vote at my/our desire as follows:
- เห็นด้วย  ไม่เห็นด้วย งดออกเสียง  
Approve Disapprove Abstain

ระเบียบวาระที่ \_\_\_\_\_ เรื่อง \_\_\_\_\_

**Agenda Subject :**

- (ก) ให้ผู้รับมอบอำนาจมีสิทธิพิจารณาและลงมติแทนข้าพเจ้าได้ทุกประการตามที่เห็นสมควร  
(a) To grant my/our proxy to consider and vote on my/our behalf as appropriate in all respects.
- (ข) ให้ผู้รับมอบอำนาจออกเสียงลงคะแนนตามความประสงค์ของข้าพเจ้า ดังนี้  
(b) To grant my/our proxy to vote at my/our desire as follows:
- เห็นด้วย  ไม่เห็นด้วย งดออกเสียง  
Approve Disapprove Abstain

ระเบียบวาระที่ \_\_\_\_\_ เรื่อง \_\_\_\_\_

**Agenda Subject :**

- (ก) ให้ผู้รับมอบอำนาจมีสิทธิพิจารณาและลงมติแทนข้าพเจ้าได้ทุกประการตามที่เห็นสมควร  
(a) To grant my/our proxy to consider and vote on my/our behalf as appropriate in all respects.
- (ข) ให้ผู้รับมอบอำนาจออกเสียงลงคะแนนตามความประสงค์ของข้าพเจ้า ดังนี้  
(b) To grant my/our proxy to vote at my/our desire as follows:
- เห็นด้วย  ไม่เห็นด้วย งดออกเสียง  
Approve Disapprove Abstain

ข้าพเจ้าขอรับรองว่า รายการในใบประจำต่อหนังสือมอบอำนาจถูกต้องบริบูรณ์และเป็นความจริงทุกประการ

I/We certify that the statements in this Supplemental Proxy Form are correct, complete and true in all respects.

ลงนาม/Signed \_\_\_\_\_ ผู้มอบอำนาจ/Grantor  
( )

ลงนาม/Signed \_\_\_\_\_ ผู้รับมอบอำนาจ/Proxy  
( )

ลงนาม/Signed \_\_\_\_\_ ผู้รับมอบอำนาจ/Proxy  
( )

ลงนาม/Signed \_\_\_\_\_ ผู้รับมอบอำนาจ/Proxy  
( )





หนังสือมอบฉันทะ (แบบ ก)  
Proxy (Form A)

สิ่งที่ส่งมาด้วย 4/ Attachment 4

อากรแสตมป์ 20 บาท  
Duty Stamp 20 B

เลขทะเบียนผู้ถือหุ้น \_\_\_\_\_  
Shareholders' Register No.

เขียนที่ \_\_\_\_\_  
Written at  
วันที่ \_\_\_\_\_ เดือน \_\_\_\_\_ พ.ศ. \_\_\_\_\_  
Date Month Year

1 ข้าพเจ้า \_\_\_\_\_  
I / We  
อยู่บ้านเลขที่ \_\_\_\_\_  
Address

สัญชาติ \_\_\_\_\_  
Nationality

2 เป็นผู้ถือหุ้นของบริษัท ไทยออยล์ จำกัด (มหาชน) (“บริษัท”)  
Being a Shareholder of Thai Oil Public Company Limited (“the Company”)

โดยถือหุ้นจำนวนทั้งสิ้นรวม \_\_\_\_\_ หุ้น และออกเสียงลงคะแนนได้เท่ากับ \_\_\_\_\_ เสียง ดังนี้  
holding the total amount of shares and have the rights to vote equal to votes as follows:  
 หุ้นสามัญ \_\_\_\_\_ หุ้น ออกเสียงลงคะแนนได้เท่ากับ \_\_\_\_\_ เสียง  
Ordinary share shares have the rights to vote equal to votes  
 หุ้นบุริมสิทธิ \_\_\_\_\_ หุ้น ออกเสียงลงคะแนนได้เท่ากับ \_\_\_\_\_ เสียง  
Preferred share shares have the rights to vote equal to votes

3 ขอมอบฉันทะให้ (ท่านสามารถมอบฉันทะให้กรรมการอิสระของบริษัทฯ เป็นตัวแทนเข้าประชุมฯ ตามรายละเอียดในหนังสือเชิญประชุมฯ ตามสิ่งที่ส่งมาด้วย 6)

Hereby appoint (You may grant proxy to the Company's Independent Directors as listed in Attachment 6 to attend the meeting)

- (1) นาย / นาง / นางสาว \_\_\_\_\_ อายุ \_\_\_\_\_ ปี  
Mr. / Mrs. / Ms. Age Years,  
อยู่บ้านเลขที่ \_\_\_\_\_ ถนน \_\_\_\_\_ ตำบล/แขวง \_\_\_\_\_  
residing at Road Sub - District  
อำเภอ/เขต \_\_\_\_\_ จังหวัด \_\_\_\_\_ รหัสไปรษณีย์ \_\_\_\_\_ หรือ  
District Province Postal Code or  
(2) นาย / นาง / นางสาว \_\_\_\_\_ อายุ \_\_\_\_\_ ปี  
Mr. / Mrs. / Ms. Age Years,  
อยู่บ้านเลขที่ \_\_\_\_\_ ถนน \_\_\_\_\_ ตำบล/แขวง \_\_\_\_\_  
residing at Road Sub - District  
อำเภอ/เขต \_\_\_\_\_ จังหวัด \_\_\_\_\_ รหัสไปรษณีย์ \_\_\_\_\_ หรือ  
District Province Postal Code or  
(3) นาย / นาง / นางสาว \_\_\_\_\_ อายุ \_\_\_\_\_ ปี  
Mr. / Mrs. / Ms. Age Years,  
อยู่บ้านเลขที่ \_\_\_\_\_ ถนน \_\_\_\_\_ ตำบล/แขวง \_\_\_\_\_  
residing at Road Sub - District  
อำเภอ/เขต \_\_\_\_\_ จังหวัด \_\_\_\_\_ รหัสไปรษณีย์ \_\_\_\_\_ หรือ  
District Province Postal Code

คนหนึ่งคนใดเพียงผู้เดียวเป็นผู้แทนของข้าพเจ้า เพื่อเข้าร่วมประชุมและออกเสียงลงคะแนนในการประชุมวิสามัญผู้ถือหุ้น ครั้งที่ 1/2561 บริษัท ไทยออยล์ จำกัด (มหาชน) ในวันจันทร์ที่ 27 สิงหาคม 2561 เวลา 14.00 น. ณ ห้องภิรัชฮอลล์ 1 - 3 ศูนย์นิทรรศการและการประชุมไบเทค เลขที่ 88 ถนนบางนา - ตราด (กม. 1) บางนา กรุงเทพฯ 10260 หรือที่จะพึงเลื่อนไปในวัน เวลา และสถานที่อื่นด้วย

Anyone of above as my/our proxy to attend and vote on my/our behalf at the meeting of the Extraordinary General Meeting of Shareholders (EGM) No. 1/2018 of Thai Oil Public Company Limited on Monday, August 27, 2018, 14.00 hrs. at Bhiraj Hall 1 - 3, Bangkok International Trade and Exhibition Centre (BITEC), 88 Bangna-Trad Road (Km. 1), Bangna, Bangkok 10260 or such other date, time and place as the meeting may be adjourned.

กิจการใดที่ผู้รับมอบฉันทะได้กระทำไปในการประชุมนั้น ให้ถือเสมือนว่าข้าพเจ้าได้กระทำเองทุกประการ

Any acts performed by the proxy in this meeting shall be deemed to be the actions performed by myself/ourselves.

ลงนาม / Signed \_\_\_\_\_ ผู้มอบฉันทะ / Grantor  
( \_\_\_\_\_ )  
ลงนาม / Signed \_\_\_\_\_ ผู้รับมอบฉันทะ / Proxy  
( \_\_\_\_\_ )  
ลงนาม / Signed \_\_\_\_\_ ผู้รับมอบฉันทะ / Proxy  
( \_\_\_\_\_ )  
ลงนาม / Signed \_\_\_\_\_ ผู้รับมอบฉันทะ / Proxy  
( \_\_\_\_\_ )

หมายเหตุ: ผู้ถือหุ้นที่มอบฉันทะ จะต้องมอบฉันทะให้ผู้รับมอบฉันทะเพียงรายเดียวเป็นผู้เข้าประชุม และออกเสียงลงคะแนน ไม่สามารถแบ่งแยกจำนวนหุ้นให้ผู้รับมอบฉันทะหลายคนเพื่อแยกการลงคะแนนเสียงได้

Remarks: A shareholder shall appoint only one proxy to attend and vote at the Meeting. A shareholder shall not appoint more than one proxy, each with the voting rights in respect of a certain portion of shares.





หนังสือมอบฉันทะ (แบบ ค) (สำหรับผู้ถือหุ้นต่างประเทศที่แต่งตั้งคัสโตเดียนในประเทศไทยเท่านั้น)

Proxy (Form C) (For foreign shareholders who have custodians in Thailand Only)

เลขทะเบียนผู้ถือหุ้น \_\_\_\_\_

Shareholders' Registration No.

เขียนที่ \_\_\_\_\_

Written at  
วันที่ \_\_\_\_\_ เดือน \_\_\_\_\_ พ.ศ. \_\_\_\_\_  
Date Month Year

(1) ข้าพเจ้า \_\_\_\_\_

I/We

สำนักงานตั้งอยู่เลขที่ \_\_\_\_\_

Office Address

ถนน \_\_\_\_\_ ตำบล/แขวง \_\_\_\_\_ อำเภอ/เขต \_\_\_\_\_

Road Sub - District District

จังหวัด \_\_\_\_\_ รหัสไปรษณีย์ \_\_\_\_\_

Province Postal Code

ในฐานะผู้ประกอบธุรกิจเป็นผู้รับฝากและดูแลหุ้น (Custodian) ให้กับ (ผู้ถือหุ้น) \_\_\_\_\_

As a custodian for (Shareholders' name)

ซึ่งเป็นผู้ถือหุ้นของ บริษัท ไทยออยล์ จำกัด (มหาชน) (“บริษัท”)

being a shareholder of Thai Oil Public Company Limited (“the Company”)

โดยถือหุ้นจำนวนทั้งสิ้นรวม _____	หุ้น	และออกเสียงลงคะแนนได้เท่ากับ _____	เสียง ดังนี้
holding the total amount of	shares	and have the rights to vote equal to	votes as follows:
<input type="checkbox"/> หุ้นสามัญ _____	หุ้น	ออกเสียงลงคะแนนได้เท่ากับ _____	เสียง
ordinary share	shares	have the rights to vote equal to	votes
<input type="checkbox"/> หุ้นบุริมสิทธิ _____	หุ้น	ออกเสียงลงคะแนนได้เท่ากับ _____	เสียง
preferred share	shares	have the rights to vote equal to	votes

(2) ขอมอบฉันทะให้ (ท่านสามารถมอบฉันทะให้กรรมการอิสระของบริษัทฯ เป็นตัวแทนเข้าประชุมฯ ตามรายละเอียดในหนังสือเชิญประชุมฯ ตามสิ่งที่ส่งมาด้วย 6)

Hereby appoint (You may grant proxy to the Company's Independent Directors as listed in Attachment 6 to attend the meeting)

- (1) นาย / นาง / นางสาว \_\_\_\_\_ อายุ \_\_\_\_\_ ปี  
Mr. / Mrs. / Ms. Age Years,  
อยู่บ้านเลขที่ \_\_\_\_\_ ถนน \_\_\_\_\_ ตำบล/แขวง \_\_\_\_\_  
residing at Road Sub - District  
อำเภอ/เขต \_\_\_\_\_ จังหวัด \_\_\_\_\_ รหัสไปรษณีย์ \_\_\_\_\_ หรือ  
District Province Postal Code or
- (2) นาย / นาง / นางสาว \_\_\_\_\_ อายุ \_\_\_\_\_ ปี  
Mr. / Mrs. / Ms. Age Years,  
อยู่บ้านเลขที่ \_\_\_\_\_ ถนน \_\_\_\_\_ ตำบล/แขวง \_\_\_\_\_  
residing at Road Sub - District  
อำเภอ/เขต \_\_\_\_\_ จังหวัด \_\_\_\_\_ รหัสไปรษณีย์ \_\_\_\_\_ หรือ  
District Province Postal Code or
- (3) นาย / นาง / นางสาว \_\_\_\_\_ อายุ \_\_\_\_\_ ปี  
Mr. / Mrs. / Ms. Age Years,  
อยู่บ้านเลขที่ \_\_\_\_\_ ถนน \_\_\_\_\_ ตำบล/แขวง \_\_\_\_\_  
residing at Road Sub - District  
อำเภอ/เขต \_\_\_\_\_ จังหวัด \_\_\_\_\_ รหัสไปรษณีย์ \_\_\_\_\_  
District Province Postal Code

คนหนึ่งคนใดเพียงผู้เดียวเป็นผู้แทนของข้าพเจ้า เพื่อเข้าร่วมประชุมและออกเสียงลงคะแนนในการประชุมวิสามัญผู้ถือหุ้น ครั้งที่ 1/2561 บริษัท ไทยออยล์ จำกัด (มหาชน) ในวันจันทร์ที่ 27 สิงหาคม 2561 เวลา 14.00 น. ณ ห้องภิรัชฮอลล์ 1 - 3 ศูนย์นิทรรศการและการประชุมไบเทค เลขที่ 88 ถนนบางนา - ตราด (กม. 1) บางนา กรุงเทพฯ 10260 หรือที่จะพึงเลื่อนไปในวัน เวลา และสถานที่อื่นด้วย

Anyone of above as my/our proxy to attend and vote on my/our behalf at the meeting of the Extraordinary General Meeting of Shareholders (EGM) No. 1/2018 of Thai Oil Public Company Limited on Monday, August 27, 2018, 14.00 hrs. at Bhiraj Hall 1 - 3, Bangkok International Trade and Exhibition Centre (BITEC), 88 Bangna-Trad Road (Km. 1), Bangna, Bangkok 10260 or such other date, time and place as the meeting may be adjourned.



(3) ข้าพเจ้าขอมอบฉันทะให้ผู้รับมอบฉันทะในการเข้าร่วมประชุมและออกเสียงลงคะแนนในครั้งนี้ ดังนี้

I/we have granted to my/our proxy to attend this Meeting and vote therein will be as follows:

มอบฉันทะเท่ากับจำนวนหุ้นทั้งสิ้นที่ข้าพเจ้าถือและมีสิทธิออกเสียงลงคะแนน ได้ตามข้อ (1)

Grant proxy equal to all of the number of shares held by me/us and has the right to vote in accordance with Clause (1)

มอบฉันทะ บางส่วน คือ  หุ้นสามัญ \_\_\_\_\_ หุ้น และมีสิทธิออกเสียงลงคะแนน ได้ \_\_\_\_\_ เสียง

Grant Partial of  Ordinary share \_\_\_\_\_ shares and have the right to vote \_\_\_\_\_ votes

หุ้นบุริมสิทธิ \_\_\_\_\_ หุ้น และมีสิทธิออกเสียงลงคะแนน ได้ \_\_\_\_\_ เสียง

Preferred share \_\_\_\_\_ shares and have the right to vote \_\_\_\_\_ votes

รวมสิทธิออกเสียงลงคะแนนทั้งหมด \_\_\_\_\_ เสียง

Totaling \_\_\_\_\_ votes

(4) ข้าพเจ้าขอมอบฉันทะให้ผู้รับมอบฉันทะออกเสียงลงคะแนนแทนข้าพเจ้าในการประชุมครั้งนี้ ดังนี้

In this Meeting, I/we grant my/our proxy to vote on my/our behalf as follows:

**ระเบียบวาระที่ 1** พิจารณานุมัติการลงทุนโครงการพลังงานสะอาด (Clean Fuel Project หรือ CFP) ซึ่งเข้าข่ายเป็นรายการได้มาซึ่ง  
สินทรัพย์ของบริษัทฯ

**Agenda Item 1** To consider and approve the investment in the Clean Fuel Project (CFP) which constitutes an asset acquisition  
transaction of the Company

(ก) ให้ผู้รับมอบฉันทะมีสิทธิพิจารณาและลงมติแทนข้าพเจ้าได้ทุกประการตามที่เห็นสมควร

(a) To grant my/our proxy to consider and vote on my/our behalf as appropriate in all respects.

(ข) ให้ผู้รับมอบฉันทะออกเสียงลงคะแนนตามความประสงค์ของข้าพเจ้า ดังนี้

(b) To grant my/our proxy to vote at my/our desire as follows:

เห็นด้วย.....เสียง  ไม่เห็นด้วย.....เสียง  งดออกเสียง.....เสียง

Approve.....Vote Disapprove.....Vote Abstain.....Vote

**ระเบียบวาระที่ 2** เรื่องอื่นๆ (ถ้ามี)

**Agenda Item 2** Other matters (if any)

(ก) ให้ผู้รับมอบฉันทะมีสิทธิพิจารณาและลงมติแทนข้าพเจ้าได้ทุกประการตามที่เห็นสมควร

(a) To grant my/our proxy to consider and vote on my/our behalf as appropriate in all respects.

(ข) ให้ผู้รับมอบฉันทะออกเสียงลงคะแนนตามความประสงค์ของข้าพเจ้า ดังนี้

(b) To grant my/our proxy to vote at my/our desire as follows:

เห็นด้วย.....เสียง  ไม่เห็นด้วย.....เสียง  งดออกเสียง.....เสียง

Approve.....Vote Disapprove.....Vote Abstain.....Vote

(5) การลงคะแนนเสียงของผู้รับมอบฉันทะในวาระใดที่ไม่เป็นไปตามที่ระบุไว้ในหนังสือมอบฉันทะนี้ให้ถือว่าการลงคะแนนเสียงนั้นไม่ถูกต้องและไม่ใช้เป็นการลงคะแนนเสียงของข้าพเจ้าในฐานะผู้ถือหุ้น  
Voting of proxy in any agenda that is not as specified in this proxy shall be considered as invalid and not signify my voting as a shareholder.

(6) ในกรณีที่ข้าพเจ้าไม่ได้ระบุความประสงค์ในการออกเสียงลงคะแนนในวาระใดไว้ หรือระบุไว้ไม่ชัดเจน หรือในกรณีที่ที่ประชุมมีการพิจารณาหรือลงมติในเรื่องใดนอกเหนือจากเรื่องที่ระบุไว้ข้างต้น รวมถึงกรณีที่มีการแก้ไขเปลี่ยนแปลงหรือเพิ่มเติมข้อเท็จจริงประการใด ให้ผู้รับมอบฉันทะมีสิทธิพิจารณาและลงมติแทนข้าพเจ้าได้ทุกประการตามที่เห็นสมควร

In case I/we have not specified my/our voting intention in any agenda or not clearly specified or in case the Meeting considers or passes any resolutions other than those specified above, including the case of any amendment or addition of any fact, the proxy shall have the rights to consider and vote on my/our behalf as he/she may deem appropriate in all respects.

ลงนาม/Signed \_\_\_\_\_ ผู้มอบฉันทะ/Grantor

( )

ลงนาม/Signed \_\_\_\_\_ ผู้รับมอบฉันทะ/Proxy

( )

ลงนาม/Signed \_\_\_\_\_ ผู้รับมอบฉันทะ/Proxy

( )

ลงนาม/Signed \_\_\_\_\_ ผู้รับมอบฉันทะ/Proxy

( )

**หมายเหตุ :** ตามประกาศกรมพัฒนาธุรกิจการค้า เรื่อง กำหนดแบบหนังสือมอบฉันทะ (ฉบับที่ 5) พ.ศ. 2560

**Remarks: According to the notification of Department of Business Development, Ministry of Commerce regarding Proxy Form (Issue 5) 2007**

1. หนังสือมอบฉันทะแบบ ค นี้ ใช้เฉพาะกรณีที่ผู้ถือหุ้นที่ปรากฏชื่อในทะเบียนเป็นผู้ลงทุนต่างประเทศ และแต่งตั้งคัสโตเดียน (Custodian) ในประเทศไทยเป็นผู้ฝากและดูแลหุ้นเท่านั้น

Only foreign shareholders as registered in the registration book who have custodian in Thailand can use the Proxy Form C

2. หลักฐานที่ต้องแนบพร้อมทั้งหนังสือมอบฉันทะ แบบ ค คือ

Evidences to be enclosed with the proxy form C are:

- (1) หนังสือมอบอำนาจจากผู้ถือหุ้นให้คัสโตเดียน (Custodian) เป็นผู้ดำเนินการลงนามในหนังสือมอบฉันทะแทน  
Power of Attorney from shareholder authorizes a custodian to sign the Proxy form on behalf of the shareholder.
- (2) หนังสือยืนยันว่าผู้ลงนามในหนังสือมอบฉันทะแทนได้รับอนุญาตประกอบธุรกิจคัสโตเดียน (Custodian)  
Letter of certification to certify that the signer in the proxy Form have a permission to act as a Custodian.

3. ผู้ถือหุ้นที่มอบฉันทะจะต้องมอบฉันทะให้ผู้รับมอบฉันทะเพียงรายเดียวเป็นผู้เข้าประชุมและออกเสียงลงคะแนน ไม่สามารถแบ่งแยกจำนวนหุ้นให้ผู้รับมอบฉันทะหลายคนเพื่อแยกการลงคะแนนเสียงได้  
A shareholder shall appoint only one proxy to attend and vote at the Meeting. A shareholder shall not appoint more than one proxy, each with the voting rights in respect of a certain portion of shares.

4. ในกรณีที่มิวาระที่จะพิจารณาในการประชุมมากกว่าวาระที่ระบุไว้ข้างต้น ผู้มอบฉันทะสามารถระบุเพิ่มเติมได้ในใบประจำต่อตามแนบล่างของหนังสือมอบฉันทะ แบบ ค ฉบับนี้

In case there are additional agenda, the proxy can state other agenda by using the Supplemental Proxy Form C as attached.

ใบประจำต่อแบบหนังสือมอบฉันทะ แบบ ค  
(สำหรับผู้ถือหุ้นต่างประเทศที่แต่งตั้งคัสโตเดียนในประเทศไทยเท่านั้น)

Supplemental Proxy Form C

(For foreign shareholders who have custodians in Thailand Only)

การมอบฉันทะในฐานะเป็นผู้ถือหุ้นของบริษัท ไทยออยล์ จำกัด (มหาชน) (“บริษัท”)

The proxy as a shareholder of Thai Oil Public Company Limited (“The Company”)

ในการประชุมวิสามัญผู้ถือหุ้น ครั้งที่ 1/2561 บริษัท ไทยออยล์ จำกัด (มหาชน) ในวันจันทร์ที่ 27 สิงหาคม 2561 เวลา 14.00 น. ณ ห้องภิรัช ฮอลล์ 1 - 3 ศูนย์นิทรรศการและการประชุมไบเทค เลขที่ 88 ถนนบางนา - ตราด (กม. 1) บางนา กรุงเทพฯ 10260 หรือที่จะพึงเลื่อนไปในวัน เวลา และสถานที่อื่นด้วย  
At meeting of the Extraordinary General Meeting of Shareholders (EGM) No. 1/2018 of Thai Oil Public Company Limited on Monday, August 27, 2018, 02.00 p.m. at Bhiraj Hall 1 - 3, Bangkok International Trade and Exhibition Centre (BITEC), 88 Bangna-Trad Road (Km. 1), Bangna, Bangkok 10260 or such other date, time and place as the meeting may be adjourned.

ระเบียบวาระที่ \_\_\_\_\_ เรื่อง \_\_\_\_\_  
Agenda Subject :

- (ก) ให้ผู้รับมอบฉันทะมีสิทธิพิจารณาและลงมติแทนข้าพเจ้าได้ทุกประการตามที่เห็นสมควร  
(a) To grant my/our proxy to consider and vote on my/our behalf as appropriate in all respects.
- (ข) ให้ผู้รับมอบฉันทะออกเสียงลงคะแนนตามความประสงค์ของข้าพเจ้า ดังนี้  
(b) To grant my/our proxy to vote at my/our desire as follows:
- |   |   |   |
|---|---|---|
| <input type="checkbox"/> เห็นด้วย.....เสียง<br>Approve.....Vote | <input type="checkbox"/> ไม่เห็นด้วย.....เสียง<br>Disapprove.....Vote | <input type="checkbox"/> งดออกเสียง.....เสียง<br>Abstain.....Vote |
|---|---|---|

ระเบียบวาระที่ \_\_\_\_\_ เรื่อง \_\_\_\_\_  
Agenda Subject :

- (ก) ให้ผู้รับมอบฉันทะมีสิทธิพิจารณาและลงมติแทนข้าพเจ้าได้ทุกประการตามที่เห็นสมควร  
(a) To grant my/our proxy to consider and vote on my/our behalf as appropriate in all respects.
- (ข) ให้ผู้รับมอบฉันทะออกเสียงลงคะแนนตามความประสงค์ของข้าพเจ้า ดังนี้  
(b) To grant my/our proxy to vote at my/our desire as follows:
- |   |   |   |
|---|---|---|
| <input type="checkbox"/> เห็นด้วย.....เสียง<br>Approve.....Vote | <input type="checkbox"/> ไม่เห็นด้วย.....เสียง<br>Disapprove.....Vote | <input type="checkbox"/> งดออกเสียง.....เสียง<br>Abstain.....Vote |
|---|---|---|

ข้าพเจ้าขอรับรองว่า รายการในใบประจำต่อหนังสือมอบฉันทะถูกต้องบริบูรณ์และเป็นความจริงทุกประการ  
I/We certify that the statements in this Supplemental Proxy Form are correct, complete and true in all respects

ลงนาม/Signed _____	ผู้มอบฉันทะ/Grantor
( )	( )
ลงนาม/Signed _____	ผู้รับมอบฉันทะ/Proxy
( )	( )
ลงนาม/Signed _____	ผู้รับมอบฉันทะ/Proxy
( )	( )
ลงนาม/Signed _____	ผู้รับมอบฉันทะ/Proxy
( )	( )