

2015 ANNUAL REPORT



# LEAP

TOWARDS A SUSTAINABLE

# FUTURE

MEMBER OF  
**Dow Jones**  
**Sustainability Indices**  
In Collaboration with RobecoSAM





# 30 YEARS OF PASSION & PRIDE

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AS A LEADING EXPLORATION AND  
PRODUCTION COMPANY IN ASIA

THREE DECADES OF BUILDING KNOWLEDGE AND EXPERIENCE  
IN ORDER TO PROGRESS WITH A PASSION TO EXPLORE FOR

# A SUSTAINABLE FUTURE

1985-1995

A DECADE OF LEARNING  
AND BUILDING KNOWLEDGE

1995-2005

A DECADE OF ENHANCING  
AND DEVELOPING COMPETENCIES

2005-2015

A DECADE OF MAKING ADVANCEMENT  
AND PROGRESS TOWARDS  
A SUSTAINABLE FUTURE





# L LEARN

1985

**PTTEP, Thailand's first E&P company,** was established on June 20. The company then entered into a jointventure for the S1 Project

1993

Become an operator of its first onshore project, **the PTTEP 1 Project**, which served as a training ground for PTTEP staff

1998

PTTEP was transferred the operatorship of **the Bongkot Project, the largest natural gas field in the Gulf of thailand**, which served as a training ground for PTTEP staff after a decade of learning and training under international E&P partners

**2009:** Production began at **the Arthit Project, the first project of PTTEP operated** from exploration to deveopment and production



# E ENHANCE

Operated a **Heat Recovery Steam Generator** at the S1 Project, for reusing excess heat from gas turbine generators into the production process

**Autonomous Underwater Vehicle (AUV)** innovation



**PTTEP DeepLift technique** was registered and granted for the innovation to increase the oil production efficiency



MEMBER OF

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Sustainability Indices**

In Collaboration with RobecoSAM

**PTTEP became a member of the Dow Jones Sustainability World Index (DJSI World)** of the Oil and Gas Industry in 2014. The DJSI is a family of indices which serves as a global benchmarking tool for ranking Company's sustainability performance across the world



# A ADVANCE

2002

Engaged in a petroleum exploration and production project in Oman, making PTTEP's first step into the **Middle East**

2005

Entered its investment for the first time in Algeria, **North Africa**

2008

Became an operator in **Australia**

2014

Began producing natural gas from the Zawtika Project in **Myanmar**, in which PTTEP operated from the exploration phase to production

Became an operator at the Mariana Oil Sands Project in **Canada**

Stepped forwards with a project in Brazil, **South America**





# P PROGRESS

**Achieve a 20% reduction**  
in green house gas emissions by 2020

**Explore unconventional energy sources**  
to continue providing energy security

**Develop innovation and technology**  
to increase production capacity and its  
exploration success rate

**Create shared value**  
with stakeholders to make a leap  
together towards a sustainable future

**Strive to become a leading**  
Asian E&P company by 2020





FROM THE FIRST STEP...  
TO A SECURE

# LEAP

TOWARDS A SUSTAINABLE

# FUTURE

With commitment and passion, we are ready to take a leap towards a sustainable future, supported by outstanding social and environmental performances that underpin our license to operate and license to grow.







# BUSINESS

PTTEP anticipates and manages current and future economic, environmental and social opportunities and risks by focusing on a diversified portfolio of projects, innovation and technological competence, which will emerge as a leader and are more likely to create a competitive advantage and long-term stakeholder value for a sustainable business growth.





## SOCIETY

PTTEP believes that the cultivation of intellectual assets within the community is the true path towards sustainability. Therefore, we strive to give back and return benefits to society as a whole. By equipping the people with the knowledge and means with which to improve their lives and livelihood, the quality of living can be improved sustainably.







# ENVIRONMENT

PTTEP aims to become a 'sustainable energy company'; therefore, we strive for a sustainable environment together with the encouragement of, and cooperation with, public and private participation. Through the earnest efforts of all parties, we create an awareness of natural conservation to help conserving the environment and protecting ecosystems.





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## Abbreviations

## Financial Highlights

PTTEP has prepared the mitigation plans in light of the highly volatile oil prices by adjusting the investment plan and continuously reducing operating costs according to SAVE to be SAFE Program. Additionally, the Company stresses a strong capital structure and maintains liquidity in able to cope with volatile of oil prices and economic conditions while business opportunities can also be seized.

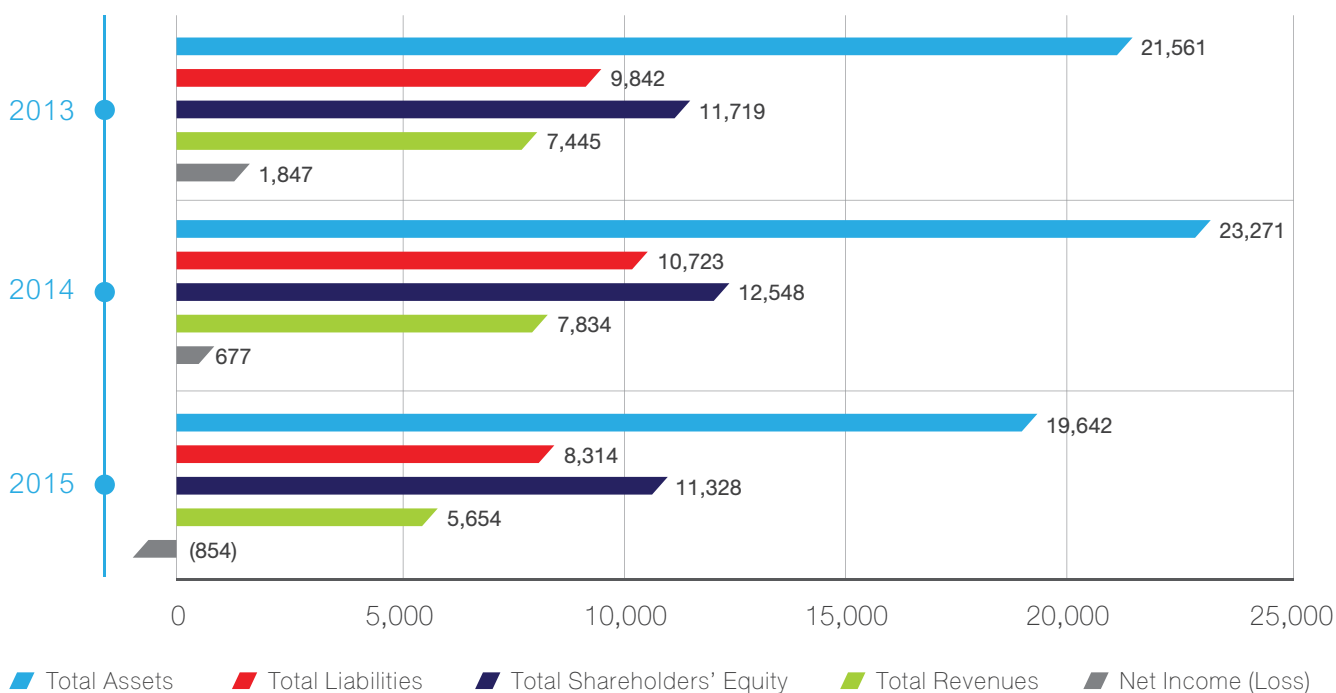
(Million USD)	2013	2014	2015
Net cash from operating activities*	3,675	4,326	2,864
Net cash used in investing activities	(2,906)	(3,002)	(1,872)
Net cash used in financing activities	(704)	255	(1,662)
Cash and cash equivalent at the beginning of the period	2,292	2,351	3,930
Cash and cash equivalent at the end of the period	2,357	3,930	3,260**

\* Including effect of exchange rate changes

\*\* Including short term investment

## Financial Highlights

(Million USD)



Dividend per Share	6.00	4.50	3.00*
Dividend Yield (%)**	3.60	4.02	5.24

2013

2014













2015

\* The total dividend of 2015 will be 3.00 Baht per share including the interim dividend at the rate of 1.00 Baht per share and the second half-year operations dividend at the rate of 2.00 Baht per share. Payment of the interim dividend and the second half-year operations dividend will be proposed in the 2016 General Shareholder's Meeting on March 28, 2016 for acknowledgement and approval, respectively

\*\* Calculated from PTTEP's closing share price on period end



## Financial Ratios

	2013	2014	2015
EBITDA to revenue from sale (%)	 71	 71	 71
Debt to equity	 0.34	 0.34	 0.27
Return on equity (%)	 16	 6	 (7)
Return on assets (%)	 9	 3	 (4)

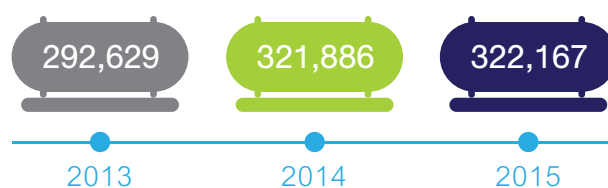
## Petroleum Proved Reserves

(MMBOE)



## Petroleum Sales Volumes

(BOED)

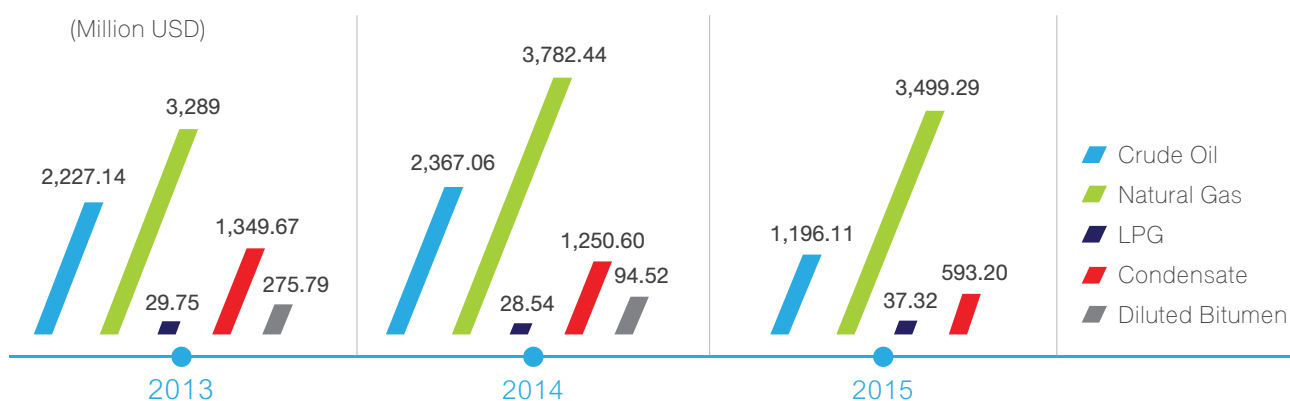


## Products

	2013	2014	2015
Crude Oil (MMBBL)	21.51	24.69	23.63
Natural Gas (MMSCF)	427,634.09	484,444.96	505,840.79
(or equivalent to MMBOE)	(69.20)	(78.31)	(81.05)
LPG (Metric Tons)	97,677.42	93,504.68	96,529.19
(or equivalent to MMBOE)	(0.81)	(0.77)	(0.80)
Condensate (MMBBL)	13.13	13.18	12.11
Diluted Bitumen (MMBBL)	3.74	0.92	-

## Petroleum Sales Value

(Million USD)



## Message from Chairman and CEO



A handwritten signature in black ink, appearing to read 'Mr. Prajya Phinyawat'.

(Mr. Prajya Phinyawat)  
Chairman



A handwritten signature in black ink, appearing to read 'Somporn Vongvuthipornchai'.

(Mr. Somporn Vongvuthipornchai)  
President and Chief Executive Officer

## Dear Shareholders,

2015 witnessed a continued decline in global crude oil prices following the start of their downturns in 2014. Prices have fallen below USD 40 per barrel, the lowest level in 11 years, as market oversupply concerns grew, primarily driven by high production levels from both OPEC and the United States and uncertain demand outlook as the global economy, especially in China, began to slow down. The Thai economy was no exception, having grown modestly at 2.8 percent in 2015 whilst the Thai Baht depreciated substantially against the US Dollar over the past 12 months. The aforementioned events made a sizeable impact to PTTEP's financial performance in the form of asset impairment loss and in deferred taxes that arise from the currency differences between the Company's tax filing currency (Thai Baht) and its functional currency (US Dollar), both of which were in accordance with the accounting standards. As a result, PTTEP reported a net loss of USD 854 Million in 2015. In greater context, many oil and gas companies worldwide also recorded asset impairment losses under the low oil price environment.

Despite the challenge of volatile oil prices, PTTEP landed on several noteworthy achievements throughout the year. The annual sales volume growth target of 3 percent was met following a successful start-up of the Algeria 433a & 416b Project with total crude oil production capacity of around 20,000 barrels per day and first sales completed in the fourth quarter of 2015. Cost reduction initiatives, through the SAVE to be SAFE program, have paid off tremendously with 2015 operating and capital expenditures lowered by 25 percent and 32 percent respectively, or a combined savings of USD 1,420 million, compared to the original investment plan. Outcomes of the cost reduction were also reflected through the unit cost in 2015, which is lowered by more than 11 percent compared to that of 2014. The Company continued to use oil price hedging to alleviate the impact of price volatility, resulting in a gain of USD 120 million in 2015. PTTEP reported a profit from our normal operations and an operating cash flow of more than USD 2,800 million in 2015. With approximately USD 3,200 million cash available at the year end, PTTEP remains financially strong in face of volatile oil prices and is prepared to engage in justifiable and value-accretive investment opportunities.

Apart from maintaining strong operations and financial position, PTTEP has demonstrated our dedication and excellence in sustainable development and was listed for the second consecutive year on the Dow Jones Sustainability World Index (DJSI World) of the Oil and Gas Industry. The Company was also declared by the Stock Exchange of

Thailand as one of the listed companies under the Thailand Sustainability Investment of 2015, for our outstanding performances in Environmental, Social, and Governance (ESG) areas along with good business performance. Furthermore, PTTEP received an Advanced Level from the United Nations Global Compact (UNGC), which is the highest level of commitment to the Global Compact presently recognized only 4 of all Thai companies that joined the UNGC.

PTTEP's Board of Directors, management, and employees have given their utmost commitment and dedication to overcome the challenges of changing industry environment to deliver the Company's business performance as planned. In recognition of exemplary performance, the Board of Directors was presented with the Board of the Year Award 2015 and the Hall of Fame recognition, with PTTEP as the only organization to achieve as such for two consecutive years, by the Thai Institute of Directors Association in collaboration with leading financial institutions. These awards represent the dedication of the Board of Directors who performed their fiduciary duties with good corporate governance principles whilst protected the interest of and created long-term value for shareholders.

Heading into 2016, global crude oil prices are expected to remain at low levels from continued concerns of oversupply, with the World Bank lowering the global economy growth in 2016 from 3.3 percent to 2.9 percent on the slowdown in China. Thai Baht is also expected to depreciate further. In response to these challenges, PTTEP will continue to focus on cost reductions and review the short-term and long-term investment strategy with an aim for sustainable growth. The priority is placed on maintaining oil and gas production levels, especially at the domestic and Myanmar operations to ensure energy supply security to Thailand. With expectedly increasing domestic LNG demand, PTTEP will also explore to create synergic value through close cooperation with PTT along the LNG value chain from production to transport and marketing. In addition, PTTEP values strategic partnership created with the existing partners and would look to replicate this partnership model with companies experienced in new business areas such as Shale Oil/Gas.

PTTEP's Board of Directors, management and employees would like to express our sincerest gratitude for everyone's faithful support. All of us at PTTEP remain fully committed to fulfill our roles and responsibilities during the crude oil price downturn and deliver the best possible performance.



# Policy and Business Operations Overview

## Vision, Mission, Objective and Strategy

PTTEP Group is one of the leading E&P companies in Thailand, exploring for sustainable sources of petroleum supplies for the country and other countries in which the Company operates or invests in, and generating return that would satisfy the shareholders and stakeholders. In the midst

of external complexities, low oil price environment, rapidly changing environment, depleting petroleum resources, and geographical complexity, a more advanced technology with a greater capability is required, and so is the need to maintain environmental and social equilibrium. The Company's mission and vision have then been reviewed and identified.

### Mission

PTTEP operates globally to provide reliable energy supply and sustainable value to all stakeholders.

### Vision

Leading Asian E&P company driven by technology and green practices

### Goal and Objective

PTTEP Group continuously and consistently monitors domestic and global economies for conducting energy trend and situation analysis in order to develop effective strategy and execution plan. The Company's objective is to create the balance between production (Big), reserves (Long), and financial (Strong), according to the following goals:

#### BIG PRODUCTION



##### Production

PTTEP Group's operating plan is to maintain and increase the production of our current domestic and overseas projects. The Company also has a clear and focused strategic plan to support our future growth. The Company has set a production target to achieve 600,000 BOED by 2025 for the sustainability and stability as our growth aspiration.

#### LONG RESERVES AND RESOURCES LIFE



##### Reserves

PTTEP Group plans to maintain the proved reserves to production ratio (R/P Ratio or 1P/Production) of no less than 7 years by 2025.

#### STRONG COMPETITIVE PERFORMANCE



##### Return on Investment

PTTEP Group plans to have a Return on Capital Employed (ROCE) and cost at a level better than the industry's average, while maintaining the Company's credit rating at par with that of the country.

Strategy: To attain the above, PTTEP Group has formulated our strategic directions as follows:

- 1) Current Assets Management: Current assets are grouped into three phases and managed with the aim of increasing production capacity and reserves.
  - 1.1) Producing Assets: PTTEP Group focuses on maintaining the production level of our current domestic and overseas assets, including those operated by the Company and by our joint venture partners. Under low oil price environment, PTTEP Group enhances our operational efficiency and reliability, as well as increasing petroleum reserves through technological advancement. In addition, the Company also focuses on cost reduction of all major projects and work plans to ensure their economic return under the ongoing low oil price environment. The uneconomic projects or work plans meanwhile are reconsidered through various approaches such as cost reduction, postponement or cancellation.
  - 1.2) Development Assets: These projects are for increasing of proved reserves and replacing existing producing assets that are declining. The Company remains focused on managing these projects to ensure that they are executed as planned, schedule and budget, and able to generate revenues and positive economic value under the current oil price environment.
  - 1.3) Exploration Assets: These projects are essential for PTTEP Group's sustainable growth as they will help to increase reserves and production for the future. The Company focuses on management of the exploration portfolio, implementation of higher technology and staff learning for higher exploration success rate.
- 2) Investment for Sustainable Growth: Growth continues to be driven through portfolio rationalization by focusing on value creation from new exploration acreage and merger and acquisition (M&A) of near producing stage especially in the areas that are considered to be the Company's future growth platform. Divestment

and Farm-down investment of current assets are also considered in order to reduce risk and exposure as well as to align with the Company's strategic direction. PTTEP Group's growth and investment will be in the context of balancing stakeholders' benefit, being socially responsible and environmental-friendly, while adhering to the good corporate governance principles.

- 3) Organizational Capability Development: To increase the value, reduce lifting, finding and development costs, and therefore increase our return on investment, PTTEP Group has enhanced our organizational capabilities and developed new capability enablers in the following areas:

3.1) Funding and Financial Risk Management:

Funding is managed to be in line with the growth investment plan, aiming to maintain PTTEP Group's credit rating at the same level as the country's, by maintaining financial ratios, debt-to-shareholders' equity ratio, and debt-to-reserves ratio at appropriate levels. Financial risks such as currency risk, interest rates, and liquidity are meanwhile closely monitored. PTTEP Group constantly improves financial and accounting management capabilities, trying to be at the level of World Class Finance by, for example, setting up of the newly established Treasury Center and the In-House Financial Academy. PTTEP Group has also significantly increased the cost efficiency by the SAVE to be SAFE initiative for short- and long-term cost reduction.

- 3.2) Acceleration of Knowledge Base, Technology and Development Capability: PTTEP Group's Capability and Technology Development Roadmap, now being progressively implemented, is designed and aligned with the business objective to support our growth strategy. The Company's Research and Development Technology Center is also established to serve this objective as well as to be as the center of the organization's knowledge.

## Policy and Business Operations Overview

3.3) Systems & Process Development: PTTEP Group's operational management systems, procedure and corporate structure are designed to support the Company's business to expand overseas, such as Global Operating Model Organization and standardized Management Systems, in order to support future growth.

3.4) Human Resources Management and Organizational Capability Development: To be able to compete internationally, PTTEP Group not only needs to have sufficient qualified personnel, but also must continuously advance staff capabilities, enhance leadership skills and retain these capable employees by continuing to improve employee engagement level. The Company's corporate values and cultures are being constantly cultivated meanwhile, along with the Sustainable Development to pave the way for a sustainable future as well as to gain acceptance and earn social license to operate from the public, Governance, Risk, Control&Compliance (GRC) for operational efficiency and effectiveness, and Safety, Security, Health and Environment (SSHE).

### Procedure to Set the Company's Vision and Mission

PTTEP Board of Directors (Board) reviews and approves the vision and mission of the Company annually, being accompanied generally by the executive management and for this year taking into account especially the current low oil price through a systematic planning process. The process is started by updating the current business environment, including the E&P industry trend, together with its implication and impact on the Company with regards to relevant opportunities and risks. The role of the Company as a national oil company to provide a reliable energy supply for Thailand's energy sustainability is also reviewed and considered. In addition, the Company's investment portfolios are reviewed and assessed on returns and risks, in order to identify the vision, mission, and short- and long- term strategic directions. These allow the Company to achieve sustainable growth and still be able

to cope with business changes. The executive management will then develop the Company's work plan, budget, and Key Performance Indicators (KPI) based on the given strategic direction and policy, which will be presented to the Board for approval prior to the implementation.

After the Board approves the vision, mission, and corporate strategy, the management will cascade down the approved strategic direction and corporate target in order to promote a better understanding among all of the Company's employees regarding corporate vision, mission, and strategy. In principle, this will lead to the sub work plan development and implementation which align with the corporate target, work plan and core values to achieve the Company's goals at the end.

### Strategy Adjustment under

#### Low Oil Price Environment

The crude oil price in the world market has continuously decreased since 2014 to USD 40-60 per barrel and continued to fluctuate within the range throughout 2015.

Given this outlook, PTTEP has adjusted and developed the following new strategies and initiatives in order to balance between business growth and sustainable performance in the long run.

- For producing assets, cost reduction initiatives are applied, while maintaining the production level.
- For development assets, the Company has re-evaluated the "Final Investment Decision" for projects which have high development costs.
- For exploration assets, the Company will invest in low risk areas.
- For M&A for growth, the Company will mainly invest in producing or near-producing projects which could increase the reserves and revenues of the Company in the short term.
- For the corporate expenses, the Company has reduced consulting, and travelling as well as information technology expenses.



PTTEP has analyzed the impact of oil price at different price ranges to be more confident in making investment decision of new development projects which are currently six of them, namely Contract 4 (Ubon Field), Mozambique Rovuma Offshore Area 1, Algeria Hassi Bir Rekaiz, PTTEP Australasia (Cash/Maple Field), Mariana Oil Sands and Myanmar M3. In addition, the Company is paying more attention to M&As, searching for the opportunity that could create value and provide energy stability. This is in order to maintain a strong domestic production base and expand investment opportunities in the Southeast Asia. The Company also considers investment opportunity in other countries according to our growth strategy, for example, the United States.

To align with growth objectives of the Company, PTTEP focuses on development of exploration and production technologies in order to strengthen the capabilities and expertise required for future growth in the following areas/objectives:

- 1) Unconventional Resources
- 2) Enhance More Production
- 3) Exploration Success
- 4) Develop Deep Water
- 5) Green Practices

## PTTEP Sustainability Management

### Sustainability Management Overview

Sustainability Management in PTTEP is an integration of business, environmental, and social risks and opportunities into our business decisions to make PTTEP the company of choice for investors, shareholders, business partners, host governments, communities, and employees. The Company is continuously developing the three pillars of sustainability to reflect current global concerns in terms of business, environmental and social aspects into targets, strategies and implementation driven by efficient business processes; sufficient funds; good Governance Risk Control & Compliance, productive human capital management; innovation and technology; to enhance production, reduce cost and build



# Policy and Business Operations Overview

human capability to achieve work efficiency. All of these are to create value for both the Company and all of our stakeholders.

In order to measure and benchmark our sustainability performances with our peers, PTTEP's goal is to maintain the status as a listed company in the Dow Jones Sustainability Index (DJSI) World Oil and Gas Industry since the DJSI is a set of indices that is the most internationally accepted measurement for sustainability performances. The Company has successfully achieved DJSI World Oil and Gas Industry membership for two consecutive years, 2014 and 2015 respectively.

## PTTEP Materiality Assessment and 2015 Material Issues

PTTEP's materiality assessment engages with both internal and external stakeholders by using the Global Reporting Initiative (GRI G4) Sustainability Reporting Guideline: Oil and Gas Sector Supplement (OGSS) framework; SASB Materiality Map™; DJSI to identify and prioritize the Company's material sustainability issues, (relative importance of specific economic, environmental and social issues) which include a structured review of current and future business risks and opportunities. The materiality analysis is conducted on a yearly basis as part of the reporting cycle. In 2015, the process was carried out, and the following material sustainability issues have been identified; some of which have been included in the Company's 2015 KPI.

### Material Economic Issues

- Sustainable Business Governance
- Supply Chain Risk Management
- Risk Management

### Material Social Issues

- Human capital development
- Talent attraction and retention
- Labor rights
- Occupational health and safety
- Process safety and asset integrity
- Security and emergency management

- Social impacts on communities
- Community development

### Material Environmental Issues

- Spills
- Operational Eco-efficiency
- Water Management
- Biodiversity
- Energy Efficiency
- Climate Change

PTTEP's materiality assessment for 2015 includes a structured review of current aspects which reflect significant economic, environmental and social impacts for the Company, as well as significant aspects to both our internal and external stakeholders. The materiality assessment is conducted by using the process of identifying material issues by addressing the full scope of sustainability issues from the perspective of PTTEP's business operations and stakeholders, defining reporting boundaries for each material aspects, prioritizing issues by level of significance using agreed criteria, validating material issues through our SD governance system (SD Working Team and approved by SD Council), and finally continuous developing and reviewing of issues using principles of 'Stakeholder Inclusiveness' and 'Sustainability Context' to ensure continuous improvement of information disclosed. The details of PTTEP materiality assessment process can be found on our website: <http://www.pttep.com/en/Sustainable%20Development/Disclosure/Approach%20to%20Reporting.aspx>

## Contribution in Sustainable Development

PTTEP's mission is to operate globally to provide reliable energy supply and sustainable value to all stakeholders, with a vision to become a leading Asian E&P company driven by technology and green practices.

The Company provides society with a cleaner and reliable source of energy through the supply of natural gas which is predominantly reflected in our reserve and production portfolio by 70%. The natural gas supplied by PTTEP is used for power

generation, resulting in lower greenhouse gas emission than the traditional coal-fired power plant while providing greater energy security than crude oil import. In 2015, PTTEP supplied natural gas at approximately 222,057 barrels of oil equivalent per day (BOED), or a total of 81,050,000 barrels of oil equivalent per year, or 32 percent of Thailand's total natural gas demand during the year. Natural gas sale generated THB 118,486 million for the Company in 2015.

## **A Benefits to Society and Environment**

PTTEP's environmental and social initiatives are laid out in our sustainable development roadmap. In 2015, key environmental initiatives include flare gas recovery and utilization, heat recovery steam generator, and methane (CH<sub>4</sub>) emissions reduction at the S1 Project, Flash Gas Recovery Unit (FGRU) at the Greater Bongkot South Field, logistics fleet management, partial startup operation of sea water cooling water pump at the Arthit Project, and the Company reforestation campaign. These 2015 greenhouse gas emissions initiatives reduced approximately 227,000 tonnes of carbon dioxide equivalent (CO<sub>2</sub>e) per year while reducing THB 640,000,000 in operating cost. Meanwhile, these projects which include flare gas recovery and utilization from the Clean Development Mechanism (CDM) project at Sao Tien A Petroleum Location, S1 Project, methane emissions reductions from the S1 Project, and the Greater Bongkot South's flash gas recovery unit, generated revenue of approximately THB 680,000,000. (exclusive of revenue from anticipated carbon credit sales). In addition, the Sao Tien A Petroleum in S1 Project has been registered as Clean Development Mechanism (CDM) and received Certified Emission Reduction (CERs) or carbon credit from the United Nations Framework Convention on Climate Change (UNFCCC) for the reduction of greenhouse gas. If this carbon credit is sold in Thailand Voluntary Emission Reduction (T-VER) Program, it can generate revenue of THB 3,400,000.

PTTEP's reforestation project, on the other hand, which was initiated in 2013 with objectives to mitigate global warming and maximize values for all stakeholders both inside and outside of the organization, has selected areas for reforestation by

taking into account communities located nearby. This creates benefits for the community such as creating jobs in the area to stimulate the local economy by hiring local people to work for the project as tree growers and maintainers. This project has managed to enhance economic value in the local communities surrounding the reforestation area by generating an income of THB 124,590,000 for approximately 306 directly-employed local villagers. The project will also help offset approximately 331,800 tonnes of carbon dioxide equivalent (CO<sub>2</sub>e) by 2022. In addition, our petroleum exploration and production operation is conducted according to local regulations, including our operating procedure which is in line with various international standards to prevent impacts on communities, i.e., the International Finance Corporation (IFC). PTTEP believes that these efforts will provide the Company with a social license to operate which helps to prevent operation disruption from community protest which, in turns, can potentially lead up to impacts on the society and higher operating cost for the Company.



## **Development and Significant Changes in 2015**

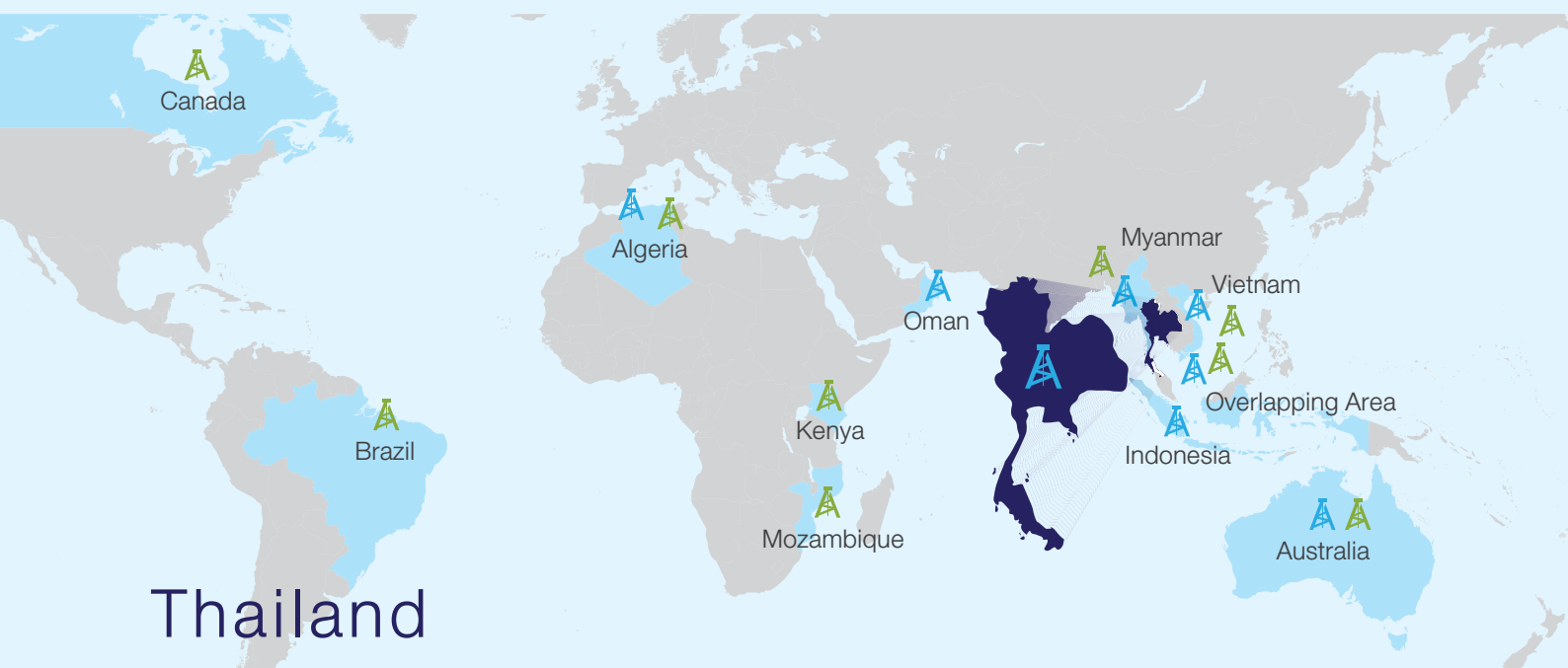
Details are disclosed in the "Management Discussion and Analysis of Results for 2015" section (page 176).

# Policy and Business Operations Overview

## E&P Projects and Shareholding Structure of PTTEP

### Business Overview

PTTEP's core business is exploration and production of petroleum in Thailand and foreign countries. As of December 31, 2015, PTTEP Group had 38<sup>1</sup> petroleum exploration and production projects in 11 countries. 14 projects were under the exploration phase and 24 projects were under the commercial production phase.



## Thailand

- **Bongkot Project**  
Participation Interest 44.4445%  
Operator PTTEP
- **S1 Project**  
Participation Interest 100%  
Operator PTTEP
- **PTTEP 1 Project**  
Participation Interest 100%  
Operator PTTEP
- **B6/27 Project**  
Participation Interest 60%<sup>2</sup>  
Operator PTTEP
- **Arthit Project**  
Participation Interest 80%  
Operator PTTEP
- **L22/43 Project**  
Participation Interest 100%  
Operator PTTEP
- **L53/43 & L54/43 Project**  
Participation Interest 100%  
Operator PTTEP
- **E5 Project**  
Participation Interest 20%  
Operator ExxonMobil
- **Contract 3 Project**  
Participation Interest 5%  
Operator Chevron
- **Contract 4 Project**  
Participation Interest 60%  
Operator Chevron
- **G4/43 Project**  
Operator 21.375%  
Operator Chevron
- **Sinphuhorm Project**  
Participation Interest 55%  
Operator PTTEP
- **B8/32 & 9A Project**  
Participation Interest 25%  
Operator Chevron
- **G4/48 Project**  
Participation Interest 5%  
Operator Chevron

<sup>1</sup> Excluding Indonesia Semai II, Indonesia Malunda, Indonesia South Mandar, Mozambique Rovuma Onshore and L28/48 projects which PTTEP has submitted relinquishment documents to the respective governments of each project and been waiting for the official approval.

<sup>2</sup> Another joint venture of B6/27 Project had terminated its 40% participating interests which was effective on January 1, 2015 based on Joint Operating Agreement. The termination is under the process of approval from the Department of Mineral Fuels.



## Myanmar

- **Myanmar M3 Project**  
Participation Interest 80%  
Operator PTTEP
- **Myanmar M11 Project**  
Participation Interest 100%  
Operator PTTEP
- **Zawtika Project**  
Participation Interest 80%  
Operator PTTEP
- **Yadana Project**  
Participation Interest 25.5%  
Operator TOTAL

- **Yetagun Project**  
Participation Interest 19.31784%  
Operator Petronas

- **Myanmar PSC G & EP 2 Project**  
Participation Interest 70%  
Operator PTTEP

- **Myanmar MD-7 and MD-8 Project**  
Participation Interest 100%  
Operator PTTEP

- **Myanmar MOGE 3 Project**  
Participation Interest 75%  
Operator PTTEP

## Vietnam

- **Vietnam 9-2 Project**  
Participation Interest 25%  
Operator HV JOC

- **Vietnam 16-1 Project**  
Participation Interest 28.5%  
Operator HL JOC

- **Vietnam B & 48/95 Project**  
Participation Interest 8.5%  
Operator Petrovietnam

- **Vietnam 52/97 Project**  
Participation Interest 7%  
Operator Petrovietnam

## Canada

- **Mariana Oil Sands Project**  
Participation Interest 100%  
Operator PTTEP

## Kenya

- **Kenya L11A, L11B & L12 Project<sup>3</sup>**  
Participation Interest 10%  
Operator Anadarko

## Indonesia

- **Natuna Sea A Project**  
Participation Interest 11.5%  
Operator Premier Oil

## Brazil

- **Barreirinhas AP1 Project**  
Participation Interest 25%  
Operator BG Brasil
- **Brazil BM-ES-23 Project**  
Participation Interest 20%  
Operator Petrobras

## Mozambique

- **Mozambique Rovuma Offshore Area 1 Project**  
Participation Interest 8.5%  
Operator Anadarko

## Australia

- **PTTEP Australasia Project**  
Participation Interest 20 - 100%<sup>4</sup>  
Operator PTTEP

## Algeria

- **Algeria Hassi Bir Rekaiz Project**  
Participation Interest 24.5%  
Operator PTTEP
- **Algeria 433a & 416b Project**  
Participation Interest 35%  
Operator GBRS

## Oman

- **Oman 44 Project**  
Participation Interest 100%  
Operator PTTEP

## Overlapping Area

- **G9/43 Project**  
Participation Interest 100%  
Operator PTTEP
- **MTJDA Project**  
Participation Interest 50%  
Operator CPOC

● Production phase

● Exploration phase

<sup>3</sup> All concessionaires agreed to relinquish blocks L5 and L7 in the project resulting in the change of project name to be Kenya L11A, L11B & L12 Project.

<sup>4</sup> PTTEP Australasia Project holds many petroleum blocks which have various participation interests from 20 - 100%.

## Policy and Business Operations Overview

### Structuring Policy of PTTEP Group

PTTEP has continuously expanded our E&P business both domestically and overseas. Due to the continuous expansion, establishing subsidiaries and/or associated companies in various regions is necessary for the investment purpose, the efficiency and competitive advantages comparable to other international oil companies as well as the operational flexibility by taking into account of various factors, such as, laws and regulations, financial structure, tax regimes, business and investment conditions, and risk management.

PTTEP's policy is to manage our subsidiaries as "One Company" with the view that they must strictly follow the Company's business direction and strategy. Subsidiaries' operations are mainly managed by the Company's executives and employees, while adopting PTTEP's management and internal control systems. In managing our associated companies, PTTEP nominates representatives to serve as a shareholder and/or a member of the Board of Directors, at least to a proportion corresponding to the Company's shareholding interest held in each associated company, in order to be able to effectively define the overall business strategy and policy of these companies. To manage both the subsidiaries and associated companies, the Company adheres to the Good Corporate Governance and Business Ethics of PTTEP Group to ensure effectiveness, transparency, fairness, and achievement of our business goals.

With respect to the directors of the Company's subsidiaries and/or associated companies, PTTEP assigns the executives responsible for the project under such subsidiary and associated company as directors of these entities to ensure that they are managed in line with the Company's business direction and strategy. The Company may also appoint a local director, if required by the laws and regulations or investment conditions of the specific countries. To provide operational flexibility for the subsidiaries and associated

companies, PTTEP delegates sufficient authority to directors of those companies as specified by the Corporate DAS (Delegation of Authority and Signatures) similarly to the practice of other leading E&P companies. The subsidiaries and associated companies meanwhile are obligated to report their performance to the Company on a quarterly basis in order to ensure their performance and effectiveness.

### Relationship with the Major Shareholder

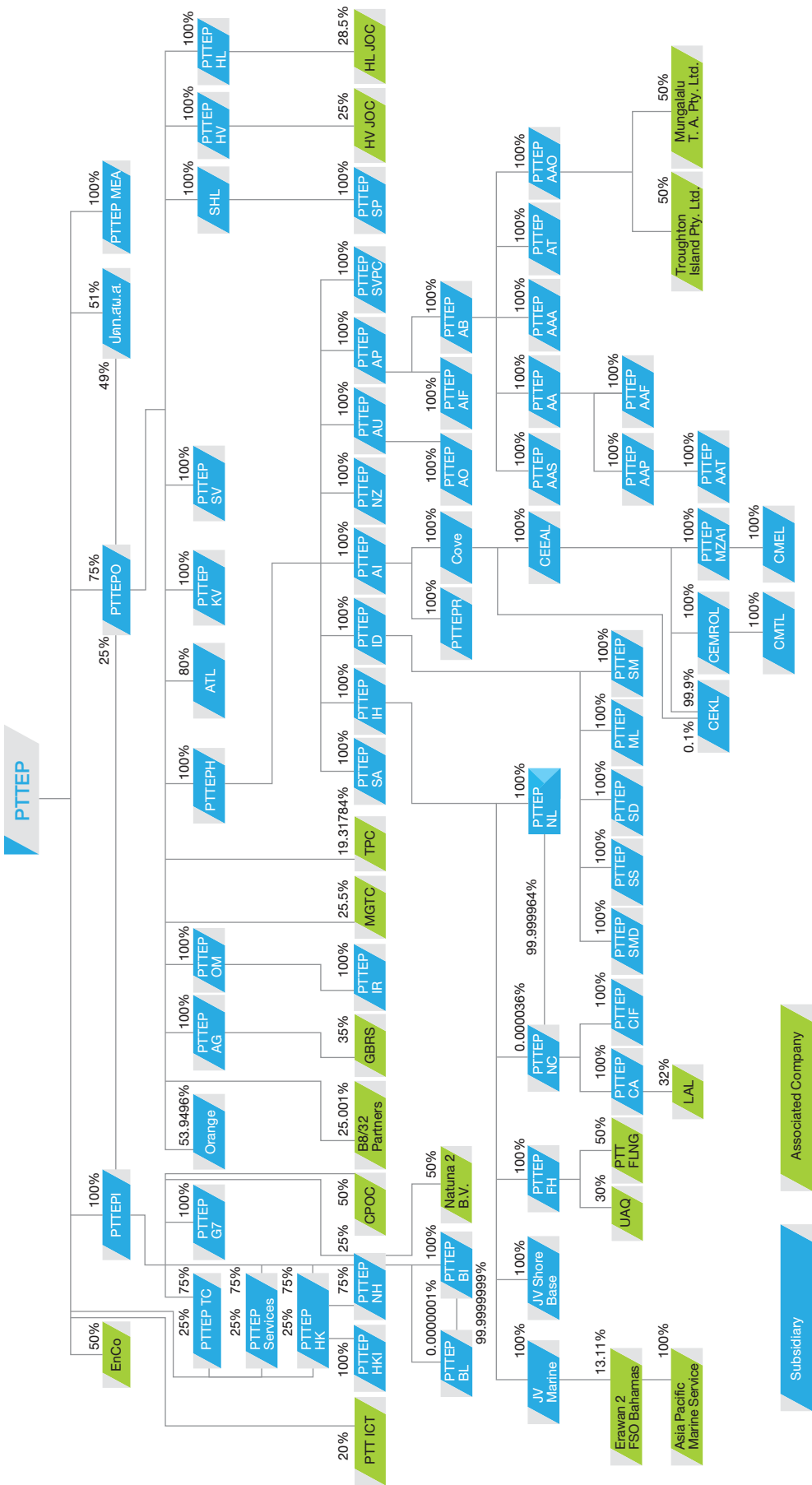
PTTEP's major shareholder is PTT Public Company Limited (PTT), a state-owned company which engages in fully integrated petroleum and petrochemical businesses by strategically investing directly and indirectly through its group of companies both in the upstream and downstream businesses.

Currently, PTT holds 65.29% of PTTEP's registered and paid-up capitals, effectively making the PTT Group the only full-scale natural gas business operator in Thailand. As the major buyer of PTTEP's petroleum products, PTT, in turn, refines and processes these products, and supplies them as energy and raw materials to be used in the power, petrochemical and transportation sectors as well as other industries and households.

In 2015, PTTEP supplied crude oil, natural gas, LPG, and condensate to PTT. Conditions and price settings of all transactions undertaken between PTTEP and PTT follow normal business operations at the arm's length basis conditions for non-related persons or operations. The details of the other connected transactions between PTTEP and PTT are disclosed in the "Connected Transactions" section (page 171).

## Shareholding Structure of PTTEP Group

As of December 31, 2015, PTTEP invested in 80 legal entities, comprising 63 subsidiaries and 17 associated companies. The PTTEP Group shareholding structure is illustrated as follows:



## Nature of Business Operation



### Revenue Structure

PTTEP and our subsidiary's revenues are mainly from sales of petroleum products of which its price is marked to the world fuel price in US Dollar. Thus, PTTEP and our subsidiaries' revenue structure of 2013 - 2015 are presented here in US Dollar in order to reflect the Company's revenue structure.

The petroleum exploration and production projects in the production phase of PTTEP and our subsidiaries as of December 31, 2015 comprised 24 projects: the Bongkot, Contract 4, S1, Yadana, Yetagun, Contract 3, B8/32 & 9A, PTTEP 1, E5, B6/27, Sinphuhorm, G4/43, Oman 44, Arthit, Vietnam 9-2, PTTEP Australasia, G4/48, MTJDA, Vietnam 16-1, L53/43 & L54/43, Natuna Sea A, Zawtika, L22/43 and Algeria 433a & 416b projects. In addition, PTTEP and our subsidiaries recorded revenues proportionately from gas pipeline transportation which are Moattama Gas Transportation Company (MGTC), Taninthayi Pipeline Company (TPC) and Andaman Transportation Limited (ATL).



## Revenue Structure of PTTEP and Our Subsidiaries during 2013 – 2015

Product	Operated by	% of interest	2013		2014 (Restated)		2015	
			Revenue (Million USD)	%	Revenue (Million USD)	%	Revenue (Million USD)	%
Sales								
Crude	PTTEP	-	342.39	4.60	263.67	3.36	141.37	2.50
	PTTEPI	100	62.25	0.84	65.49	0.83	40.18	0.71
	PTTEPS	100	875.35	11.75	676.00	8.61	367.76	6.49
	Orange	53.9496	203.07	2.73	182.64	2.32	87.69	1.55
	B8/32 Partners	25.0009	78.17	1.05	76.20	0.97	35.04	0.62
	PTTEP HV	100	57.17	0.77	50.42	0.64	22.34	0.39
	PTTEP AP	100	110.22	1.48	677.11	8.62	334.62	5.91
	PTTEP HL	100	498.25	6.69	339.73	4.32	162.18	2.86
	Natuna 2	50	0.27	0.00	3.04	0.04	2.05	0.04
	PTTEP AG	100	-	-	-	-	2.88	0.05
Natural Gas	PTTEP	-	2,288.95	30.72	2,209.84	28.13	1,899.45	33.54
	PTTEPI	100	859.40	11.53	1,019.95	12.98	1,218.06	21.51
	PTTEPS	100	53.05	0.71	59.33	0.76	45.42	0.80
	Orange	53.9496	42.22	0.57	34.82	0.44	28.66	0.51
	B8/32 Partners	25.0009	18.11	0.24	14.48	0.18	11.02	0.19
	PTTEP HV	100	1.52	0.02	1.77	0.02	1.54	0.03
	PTTEP OM	100	13.13	0.18	14.29	0.18	16.71	0.30
	PTTEP HL	100	5.16	0.07	6.05	0.08	2.52	0.04
	Natuna 2	50	7.46	0.10	105.21	1.34	64.64	1.14
	PTTEP SP	100	-	-	192.68	2.45	211.27	3.73
LPG	PTTEP	-	7.44	0.10	7.14	0.09	9.33	0.16
	PTTEPS	100	22.31	0.30	21.41	0.27	27.99	0.49
Condensate	PTTEP	-	1,113.06	14.94	997.90	12.70	480.31	8.48
	PTTEPI	100	136.97	1.84	92.92	1.18	48.08	0.85
	PTTEPS	100	2.17	0.03	2.23	0.03	1.32	0.02
	PTTEP OM	100	98.01	1.32	71.11	0.91	22.53	0.40
	PTTEP SP	100	-	-	66.24	0.84	40.96	0.72
Diluted Bitumen	PTTEP CA	100	275.80	3.70	67.52	0.86	-	-
Total Sales			7,171.90	96.25	7,319.19	93.17	5,325.92	94.05

## Nature of Business Operation

Revenue Structure of PTTEP and Our Subsidiaries during 2013 – 2015								
Product	Operated by	% of interest	2013		2014 (Restated)		2015	
			Revenue (Million USD)	%	Revenue (Million USD)	%	Revenue (Million USD)	%
Revenue from Pipeline Transportation								
Gas Pipeline	MGTC	25.50	91.72	1.23	75.05	0.96	53.16	0.94
Transportation	TPC	19.31784	58.95	0.79	41.59	0.53	19.80	0.35
	ATL	80	-	-	21.28	0.27	45.53	0.80
Total Revenue from Pipeline Transportation			150.67	2.02	137.92	1.76	118.49	2.09
Other Income								
Interest Income			33.07	0.44	22.93	0.29	31.92	0.56
Gain On Finacial Derivatives			-	-	197.02	2.51	132.16	2.33
Other Income			89.26	1.20	156.64	1.99	45.20	0.80
Total Other Income			122.33	1.64	376.59	4.79	209.28	3.70
Share of Gain of Associates and Joint ventures			6.16	0.08	21.94	0.28	9.03	0.16
Grand Total			7,451.06	100.00	7,855.64	100.00	5,662.72	100.00

For 2015, total revenues for PTTEP and our subsidiaries was USD 5,663 million (equivalent to THB 193,579 million), a decrease of USD 2,193 million or 28% when compared with the revenues in 2014 which was USD 7,856 million (equivalent to THB 255,027 million). The decrease was primarily due to a decrease in sales revenue from a reduction in the average

selling price to 45.29 USD/BOE (2014 : 63.71 USD/BOE), even though sales volume increased to 322,167 BOED (2014 : 312,569 BOED). The increase in the sales volume was mainly derived from the Zawtika Project, which commenced its gas sales in Myanmar in March 2014 and reached its full production capacity in August 2014.

## Products Features

### Petroleum

Petroleum means crude oil, natural gas, condensate, related products, and other hydrocarbon products which are free in nature.



#### Crude oil

Crude oil means crude mineral oil and bitumen of all kinds, which is liquid in nature and obtained from oil wells and through gas separation equipment, yet to be refined or purified.



#### Bitumen

Bitumen is another form of crude oil. It is sticky, black, opaque, and highly viscous (low API).



#### Natural Gas

Natural gas is hydrocarbon which is gas or vapor at the atmospheric temperature and pressure, commonly having methane as its major constituent.



#### Condensate

Condensate is a low-density liquid hydrocarbon. It is condensed from hydrocarbon gas. Condensation occurs when gas is produced to surface where temperature and pressure are lower than in the reservoir.



#### Liquefied Petroleum Gas (LPG)

Liquefied Petroleum Gas (LPG) is a petroleum product which is obtained from crude oil refinery or natural gas separation processes. It primarily consists of butane and propane.

Crude oil, condensate, LPG, and bitumen are measured in barrel, while natural gas is measured in cubic foot at the standard conditions (1 atmosphere or atm and 60 degree Fahrenheit). All petroleum products can be converted into barrel of oil equivalent (BOE) based on their heat contents. One cubic foot of natural gas has a heating value of approximately 1,000 British thermal units (BTU), whereas 1 barrel of crude oil has a heating value of approximately 6,000,000 BTU.

### Gas Transportation Pipeline

PTTEP Offshore Investment Company Limited (PTTEPO), a wholly-owned subsidiary of PTTEP, has major investments in Other Companies such as 80% holding interests in Andaman Transportation Limited (ATL), 25.5% in Moattama Gas Transportation Company (MGTC), and 19.31784% in Taninthayi Pipeline Company (TPC). The objective of the company is to invest in gas pipeline transportation between the Republic of the Union of Myanmar and Thai borders.

## Nature of Business Operation



### Jetty and Warehouse

Petroleum Development Support Base was established to provide jetty and warehouse services to support offshore exploration and production activities both in Thailand and abroad. The support base mainly accommodates the Company's own offshore operating projects in Thailand such as Bongkot Project, Arthit Project, B6/27 Project, and those of other offshore oil and gas operating companies such as PTT, Chevron Thailand Exploration and Production Limited, Carigali-PTTEPI Operating Company Sdn Bhd (CPOC), MP G11 (Thailand) Limited, KrisEnergy G10 (Thailand) Ltd. The support base can also support affiliated offshore operating projects such as Myanmar M3 Project, Myanmar M11 Project and Zawtika Project, which are located in the Republic of the Union of Myanmar. Currently, PTTEP's support base operates from two branches, namely, Songkhla and Ranong provinces.

### Petroleum Development Support Base (Songkhla Branch)

solely provides marine jetty berthing and warehousing services which are owned and operated by PTTEP International Limited (PTTEPI), a subsidiary of PTTEP. The jetty is operationally ready with 380 meters of wharf which is capable of berthing six supply vessels with a size of more than 500 gross tonnes simultaneously. The jetty is equipped with storage facilities and operated with a high standard of offshore supply base for material handling equipment. In addition, the support base has fully operated under the international management system for Safety, Security, Health and Environment and strictly followed the International Ship and Port Facilities Security Code (ISPS Code) which is awarded by the Marine Safety and Environment Bureau of the Royal Thai Marine Department. The jetty is therefore recognized as one of the country's leading shore base facilities for petroleum exploration and production activities. The 58-rai warehousing service facility is divided into four sections which are storage warehouse, open yard, free zone storage warehouse, and free zone yard for the best storage and maintenance purpose of materials and equipment as well as for the privilege of taxes and custom duties.



### Petroleum Development Support Base (Ranong Branch)

provides marine jetty berthing and warehousing services which are owned and operated by PTTEPI; though the jetty service is operated through Ranong multi-purpose port owned by the Port Authority of Thailand, operating from a 150-meter wharf which is capable of berthing two supply vessels with a size of more than 500 gross tonnes simultaneously. The support base is also fully equipped with storage facilities and standard material handling. The 25-rai warehousing service facility is divided into four sections which are storage warehouse, open yard, free zone storage warehouse, and free zone yard for the best storage and maintenance purpose of materials and equipment as well as for the privilege of taxes and customs duties.

In order to ensure that service performance of both support base branches are met with international standards and top safety level, the audit is continuously conducted by addressing on the Safety, Security, Health and Environment. Both are also operated and equipped with high security systems such as parameter and high mast lights, barb wire fence, CCTV system, and 24-hour security guards.

PTTEP regularly puts awareness and gets involved in the Corporate Social and Responsibility with the social and community in the operating areas. The Company also holds several certificates which are accredited by the International Environment Control Program (ISO 14001 certification), and the Occupational Health Control Program (OHSAS 18001 certification). In addition, the Company has prepared the Emergency Response Plan under the Business Continuity Management system (ISO 22301 certification) to handle unexpected emergency cases and invariably exercised our response plan to ensure that our support base is capable of effectively response to emergency situations as well as using new technologies and methods for continuity of the business.

### PTT ICT Solution Company Limited (PTT ICT)

PTT ICT Solutions Company Limited, an affiliate owned 20% by PTTEP, has signed an agreement with PTTEP to provide the Company with all information technology and communication services according to PTTEP's Board of Director's resolution number 10/2549/254 dated September 29, 2006. The agreement includes infrastructure design and implementation services, consultancy services, procurement services, and outsourcing services to support the Company's needs in information technology and communication based on the PTT Group's ICT Policy Strategy for driving and increasing of synergy within the group. The 4.5-year renewal contract has been in effect since July 1, 2011.

### Energy Complex Company Limited (Energy Complex)

PTT and PTTEP have jointly established energy complex to construct and manage the Energy Complex Investment Project, which is the energy business center of the country, where the Ministry of Energy, subsidiaries and associate companies of PTT Group, and some private energy companies are situated.

### PTTEP Services Limited (PTTEP Services)

The concept that eventually became PTTEP Services was originated from PTTEP's Board Meeting No. 12/2003/216. The stated objective of the services is to supply manpower for both local and overseas subsidiaries belonging to the Company with a larger number of adequately capable staff and those of the caliber primarily required to support the Company's extensive and rapid growth.

To fulfill these requirements, PTTEP Services has recruited and hired staff to serve PTTEP since July 1, 2004. Since it has continuously developed, improved, and implemented compensation and benefits policies and practices as well as staff development program to ensure that standardized welfare benefits, including requisite training, are provided.

## Nature of Business Operation



To enhance the Company's staff competency to enable effective support for our operations, PTTEP Services has managed its training activities to focus on functional training at advice of the line management. PTTEP Services meanwhile has also provided foundation training to support soft skills, computer skills, and other needed skills.

### Permission to Operate, Concession or Business Promote

PTTEP operates petroleum exploration and production in the Kingdom of Thailand and abroad. The Company's investments in foreign countries must comply with all applicable laws and regulations of those invested countries, i.e., Production Sharing Contract, Concession Agreement, and Services Agreement. Inside the Kingdom of Thailand, the Company must comply with the Petroleum Act B.E. 2514 which sets out major details and procedures, for instance, application process, process for awarding petroleum concessions, and period of production. The act also sets out various forms of benefits to the government who is the owner of petroleum resources such as royalty, petroleum income tax, and other benefits. Important points in the petroleum business operation are as follows:

#### Issue of Concession Areas

The Department of Mineral Fuels, a department of the Ministry of Energy, is the responsible agency which delineates exploration blocks and then invites oil companies to submit their applications for concessions. The Petroleum Committee meanwhile is responsible to consider the applications initially screened by its sub-committee. The Energy Minister with the approval by the Cabinet has the power to award and sign the concessions. The government, on the other hand, is the authority to consider the qualifications of each applicant, taking into account the proposed work program, adequacy of the investment funds to be brought in and used in the exploration activities, transfer of technology, employment of Thai nationals, and the utmost benefits offered to the country.

## Role of the Operator

A petroleum concession may be awarded to one concessionaire or a joint venture of two or more co-concessionaires. Since the petroleum exploration and production business is associated with relatively higher risk, it is common for companies to join together in a joint venture in order to diversify the risks. In a joint venture, one company will be designated as the “operator” to conduct the exploration and production operations on behalf of its partner and commonly under the supervision of a management committee composed of representatives from each of the companies. Other Companies which participate in the joint venture are called “non-operators”. The operator sets the cash call on all of the partners to finance the project, while the non-operators through their representation in the management committee participate in technical and financial decisions. Generally, whether an oil company will become a project operator depends largely on its investment conditions, readiness, and business strategy in that particular project.

## Nature of Operations and Investment Decisions

Before an oil company decides to invest in a petroleum exploration in the Kingdom of Thailand or abroad, it has to carefully consider its chance of having a successful exploration as well as other investment risk factors. A thorough study on the information available is conducted to determine whether the area has high petroleum potential and whether the project is commercially feasible. The success ratio of exploration wells in neighboring areas as well as other risk factors in the invested countries must also be taken into account. Assuming that the project is commercially feasible, then the company will apply for a petroleum concession or, if the concession is already awarded, “farm-in” to the existing petroleum concession.

After the oil company is awarded a concession area for exploration of petroleum, an exploration program will be conducted, normally taking 2-3 years. If the petroleum reserves are found, the oil company will compare the amount of investment funds required for the development phase

and the expected sales value of the petroleum based on the commercialized petroleum reserves. If the study indicates that the reserves are worth investing in; generally this means that the petroleum field is considered to have commercial viability, and a further investment onto development phase is therefore justified. The operator shall apply for an approval of petroleum production and simultaneously may start its production activity. The operator is still able to explore the rest of the existing areas if it is within the time frame of exploration period as mentioned in the concession. At this stage, the operator must have a certain degree of confidence about the investment. However, as the investment expenditure required for such development phase is very high; the operator will normally identify buyers of the petroleum in advance, whereas a long-term sales agreement for the petroleum to be produced shall be signed. At the present, Currently, PTT Public Company Limited (“PTT”) is the biggest petroleum buyer in Thailand. The principal elements of the sales agreement for petroleum generally include determination method of the sales price and quantity of the petroleum to be delivered. In this regard, once the commencement period as stated in the contract is reached, the buyer will be responsible for the petroleum produced immediately after the production. Sales of natural gas from domestic areas is made at the well-head, while sale of natural gas from foreign areas is made at the Thai borders. PTT is currently responsible for installation of most of the gas pipelines sufficiently for the production amount specified in the gas sale agreement. Sales of the crude oil is made at the buyer’s refinery, while sales of the condensate is made at the Floating Storage Unit (FSU) near the well-head.

## Description of Laws Relating to the Business

Operation of petroleum business in Thailand is governed by two major enactments, namely, the Petroleum Act, B.E. 2514, and the Petroleum Income Tax Act B.E. 2514 and its amendment. Several major features of these laws are as follows.

- 1) Applicant for a concession must be a limited company or a juristic person which has the same status as a limited company, established under the laws of Thailand or foreign laws.



## Nature of Business Operation

- 2) Concessionaire, co-concessionaire(s), or joint-partner(s) must pay royalty which is normally in cash. The Minister may authorize a payment in kind of petroleum, but with a prior notice of at least not less than 6 months. The royalty can be used as credit against income tax (Thailand I) or deducted as expenses (Thailand III).
- 3) Petroleum income tax may be prescribed at a rate not less than 50%, but not over than 60%, of the net interest from the petroleum business.
- 4) Interest paid cannot be deducted as expenses for income tax purposes.
- 5) Concessionaire has a right to obtain concessions for exploration blocks without any limitations regarding the number

- Thailand I for the petroleum concessions issued by the Ministry of Industry from B.E. 2514 to B.E. 2532 and those onshore petroleum concessions issued before B.E. 2525
- Thailand II for the onshore petroleum concessions issued by the Ministry of Industry from B.E. 2525 to B.E. 2532
- Thailand III for the petroleum concessions issued by the Ministry of Industry from B.E. 2533
- Thailand IV for the petroleum concessions issued by the Ministry of Energy from B.E. 2550

<sup>1</sup> Currently, the Ministry of Energy

<sup>2</sup> Under section 36 of Petroleum Act (No. 4) B.E. 2532, all petroleum concessionaires under Thailand II have applied to be subject to the criteria under Thailand III.

<sup>3</sup> Op. Cit., footnote 1

<sup>4</sup> Petroleum Act B.E. 2514 as amended by No. 6 B.E. 2550 became effective on October 18, 2007.

### Details of the Terms: Thailand I, II, III and IV

Term	THAILAND I	THAILAND II	THAILAND III	THAILAND IV
Royalty Rates	12.5% of income from sales or disposal of petroleum which may be treated as tax credit	12.5% of income from sales or disposal of petroleum which may be treated as tax credit	progressive rate at sliding scale of 5-15%, deemed to be expenses which could be deducted in tax calculation	progressive rate at sliding scale of 5-15%, deemed to be expenses which could be deducted in tax calculation
Petroleum Income Tax	50% of net profit from petroleum business operation	50% of net profit from petroleum business operation	50% of net profit from petroleum business operation	50% of net profit from petroleum business operation
Special Benefits	-	annual benefits and annual production bonus	special remunerator benefit which may be taken as deduction	special remunerator benefit which may be taken as deduction
Exploration Period	8 years with 4 year extension	8 years with 4 year extension	6 years with 3 year extension	6 years with 3 year extension
Production Period	not exceeding 30 years from exploration's expiration date, with extension not exceeding 10 years	not exceeding 30 years from exploration's expiration date, with extension not exceeding 10 years	not exceeding 20 years from exploration's expiration date, with extension not exceeding 10 years	not exceeding 20 years from exploration's expiration date, with extension not exceeding 10 years
Concession Areas	not exceeding 10,000 sq. km. per exploration block, up to 5 exploration blocks	not exceeding 10,000 sq. km. per exploration block, up to 5 exploration blocks	not exceeding 4,000 sq. km. per exploration block, up to 5 exploration blocks	not exceeding 4,000 sq. km. per exploration block, without limitation over number of exploration blocks

## Market and Competition

PTTEP has invested in both domestic and overseas projects, including Indonesia, the Republic of the Union of Myanmar, Vietnam, the Sultanate of Oman, Algeria, Australia, Canada, the Republic of Mozambique, the Republic of Kenya, and Brazil. The target markets are both domestic and overseas, where we have invested in. PTTEP's petroleum products include natural gas, crude oil, condensate, and LPG.

In 2015, total sales by PTTEP and our subsidiaries averaged 322,167 BOED which was approximately the same as the previous year's sales. The total sales ratio of natural gas to liquid was 70%:30% by volume and 66%:34% by revenue, as shown below.

Product	Volume	Value (million USD)
Natural Gas	505,841 MMSCF or 81.05 MMBOE	3,499.29
Condensate	12.11 MMBBL	593.20
Crude Oil	23.63 MMBBL	1,196.11
LPG	96,529 metric tons or 0.80 MMBOE	37.32

### Marketing Characteristics

PTTEP sells our outputs from domestic and regional projects primarily to the Thai market through PTT Plc. (PTT), the major buyer and processor of all products. PTT then turns the processed products to the country's power sector, petrochemical industry sector, transportation sector, industry sector, and household sector.

Marketing of petroleum products varies with their characteristics and field location, which in turn differentiate the market and sales price structures.

#### Natural gas

Due to capital-intensive investment in developing oil and gas exploration business, gas sales agreements (GSAs) must be agreed or signed between the buyer and seller before any major investment is made. GSAs are typically a long-term contract, ranging from 15 to 30 years. Prices, volumes, and points of sale are stipulated for each contract. Currently, the designated transfer points for all domestically sold gas are at the Central Processing Platform (CPP), from which

the buyer will invest in the transmission system to the CPP. However, the delivery point of the gas sold from the Republic of the Union of Myanmar to Thailand is at the Myanmar-Thai border. In this case, the seller is responsible for investment in the transmission pipelines from the CPP to the border area.

Gas prices are usually linked to fuel oil and several key economic indices, to reflect the investment costs and be competitive comparing with fuel oil for the GSA period.

Sales volumes are based on the assessed reserves on the negotiation date. GSAs stipulate obligations between buyer and seller for a committed volume. If the buyer does not take the volume of gas as committed to in the GSA, it must pay for the committed volume whether the gas is taken or not (Take-or-Pay). As a consequence, the buyer is entitled to take delivery of free of charge in subsequent years (Make-up Gas).

On the other hand, should the seller fail to deliver as nominated by the buyer, the buyer is entitled to an agreed discount price of the undelivered volumes as stipulated in each agreement (Shortfall).

## Nature of Business Operation

### Condensate and crude oil

Condensate and crude oil prices are determined by its property and benchmarking with other benchmark crude prices, meaning those predominantly sold in the region, which is the industry's common practice. Contracts are either short-term or long-term, and some are sold in spot markets.

### LPG

LPG produced from S1 Project is sold to PTT under a long-term contract at the price which is announced by Joint Committee on Energy Policy Administration.

Sales of petroleum products from PTTEP's international fields vary from country to country as follows:

- Zawtika, Yadana and Yetagun projects in the Republic of the Union of Myanmar: Approximately 80 percent of the produced natural gas from Zawtika and Yadana projects is primarily sold to Thailand through PTT, while the remaining 20 percent is sold to the Republic of the Union of Myanmar for its domestic power generation. Nearly all of the condensate from Yetagun Project is sold and consumed in the Republic of the Union of Myanmar, with the excess volume sold in the regional spot markets. All the gas output from Yetagun Project is currently sold to PTT for the consumption in Thailand.
- Oman 44 Project in the Sultanate of Oman: The gas output is sold to the government of the Sultanate of Oman, whereas the condensate is sold to PTT for the consumption in Thailand.
- Vietnam 9-2 and Vietnam 16-1 projects in Vietnam: All the oil output produced from Vietnam 9-2 Project is sold to Binh Son Refining and Petrochemical Company Limited (BSR), a refinery in Vietnam, for the consumption in Vietnam. The produced crude from Vietnam 16-1 Project is sold in the regional spot markets by auction, while the produced gas from both projects is sold to Vietnam Oil and Gas Group, a state enterprise, for the consumption in Vietnam.
- Algeria 433a & 416b Project in Algeria: The Bir Seba Field commenced the production with its first

commercial sales of crude oil in December 2015.

The crude oil is sold and marketed by PTT as the marketing agent in the spot markets.

For MTJDA Project in Malaysia-Thailand Joint Development Area, the produced natural gas is sold to PTT for the consumption in Thailand. Starting in April 2015, the gas will also be sold to Malaysia according to the Gas Balancing Agreement between PTT and Petroliaam Nasional Berhad (PETRONAS). The condensate output will be marketed and sold by a co-marketing agent of PTT and PETRONAS Trading Corporation Sdn bhd (PETCO) through auction in the spot markets.

### Competition

Thailand's E&P industry is an oligopoly market since it is a high investment with advance technology characteristic. However, due to high demand especially natural gas and the GSAs are predominantly long-term contract, with take-or-pay clauses to guarantee its market. This is to attract investment in the business.

Regarding the approximate domestic production in 2015, PTTEP's petroleum production accounts for 31% of total production in 2015, making the Company the leader among the domestic producers.

Producers	% Domestic Production Volume
PTTEP	31
Chevron	26
Total	10
MOECO	7
Hess Exploration	4
Others	22

Source: Department of Mineral Fuels, Ministry of Energy

Currently, the shale gas revolution is driving a dramatic restructuring of the global natural gas markets. It is creating opportunities and incentives for moving lower-cost natural

gas into higher-value global markets via LNG exports. At the current low oil price, natural gas customers are seeking to diversify their supply at the lower cost and LNG can compete on price with conventional gas. It is possible that LNG can capture more market share from natural gas.

## Production

### Exploration and Production Stages and Technology

Petroleum exploration and production can generally be divided into four major stages as follows:

- 1) Exploration stage: This is the first step to identify the areas with reservoir potential. The main activities conducted in this stage include:
  - Primary geological and geophysical surveys
  - Seismic acquisition, processing and interpretation
  - Exploration well drilling and testing
- 2) Appraisal/Delineation stage: This stage mainly involves with additional study to increase the certainty of estimating size and properties of the reservoirs. The main activities conducted in this stage include:
  - Detailed study of petroleum geology and additional seismic survey
  - Reservoir formation evaluation and conceptual development design
  - Appraisal/Delineation well drilling and testing
- 3) Development stage: This is the last stage prior to the production. The main activities conducted in this stage include:
  - Field development plan design and optimization
  - Production facilities design, construction, and installation
  - Development well drilling
- 4) Production stage: In this stage, petroleum and associated products are flowed through the pressure controlled equipment (wellhead) and processing facilities including measuring equipment to obtain the production rates of all of the productions. The main activities conducted during this stage include:

- Monitoring of production rate, proportion between produced gas, crude oil or condensate, and water, as well as pressure decline rate
- Forecasting of the future reservoir performance
- Well work-over and facilities maintenance

PTTEP has been well equipped in terms of manpower, technology and equipment to run the business efficiently according to the Company's target.

### Petroleum Reserves

Petroleum reserves can be divided into two categories, namely, Proved Reserves and Unproved Reserves according to the level of certainty.

- 1) Proved Reserves are those quantities of petroleum which, by analysis of geological and engineering data, can be estimated with reasonable certainty to be commercially recoverable, from a given date forward, from known reservoirs and under current economic conditions, operating methods, and government regulations. Practically, Proved Reserves mean the petroleum in reservoirs which can be commercially produced based on supporting data gathered during the well testing process. In some cases, reserves may be classified as Proved Reserves essentially when the results from well logging and/or analyzing of the core samples can prove that the reservoirs and petroleum in the reservoirs are similar or comparable to those of the neighboring areas which have already been commercially produced or with the potential to be produced according to their well testing results. In addition, Proved Reserves must be able to be produced by using the existing production equipment or with the scalability to be produced by that of the future.
- 2) Unproved Reserves are defined based on geoscience and/or engineering data similar to that used in the estimation of Proved Reserves but with technical or other uncertainties which preclude such reserves from being categorized as Proved. Unproved Reserves can be further categorized into Probable Reserves and Possible Reserves as follows:



## Nature of Business Operation

- Probable Reserves are those additional quantities of petroleum obtained from an analysis of geoscience and/or engineering data similar to that used in the estimation of Proved Reserves but with less production possibility.
- Possible Reserves are those additional quantities of petroleum obtained from an analysis of geoscience and/or engineering data similar to that used in the estimation of Probable Reserves but with less production possibility than both Proved Reserves and Probable Reserves.

The Company's Proved Reserves are reviewed annually by our earth scientists and reservoir engineers to ensure the industry's rigorous professional standards. The Proved Reserves are reported on a gross basis which includes the Company's net working interest and related host country's interest. As of December 31, 2015, the total amount of Proved Reserves of PTTEP Group's projects was 180 million stock-tank barrels (MMSTB) of crude oil and condensate, and 3,591 billion standard cubic feet (BSCF) of natural gas or 558 million barrels of oil equivalent (MMBOE). The total amount of Proved Reserves in terms of oil equivalent in consolidation was therefore 738 MMBOE. Details of the Company's Proved Reserves are shown in the following table.

Crude Oil, Condensate and Natural Gas Proved Reserves <sup>(1)</sup> As of December 31, 2015									
	Crude Oil and Condensate <sup>(2)</sup> (MMSTB)			Natural Gas (BSCF)			Barrel of Oil Equivalent (MMBOE)		
	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total
Proved Reserves as of December 31, 2014	113	74	187	2,119	1,695	3,814	461	316	777
Revision of previous estimates	14	9	23	336	53	389	70	17	87
Improved recovery	4	1	5	2	1	3	4	2	6
Extensions and discoveries	4	-	4	(27)	30	3	(1)	5	4
Purchases/Sales of petroleum in place	-	-	-	-	-	-	-	-	-
Production	(27)	(12)	(39)	(409)	(209)	(618)	(94)	(42)	(136)
<b>Proved Reserves as of December 31, 2015</b>	<b>108</b>	<b>72</b>	<b>180</b>	<b>2,021</b>	<b>1,570</b>	<b>3,591</b>	<b>440</b>	<b>298</b>	<b>738</b>

<sup>(1)</sup> The Proved Reserves are reported on a gross basis which includes the Company's net working interest and the related host country's interest.

<sup>(2)</sup> LPG included

### PTTEP Petroleum Production

In 2015, the total production of PTTEP Group was 136 MMBOE, consisting of 39 MMSTB of crude oil and condensate and 618 BSCF or 97 MMBOE of natural gas. This was equivalent to a production rate of approximately 373,888 barrels of oil equivalent per day (BOED) which was approximately 14,628 BOED or 4.07% increase from the previous year. The increase was mainly due to Zawtika Project which, for the first time, had produced at its full capacity for the entire year since the start in 2014.

### Environmental Impact Mitigation and Management

In 2015, an effective and standardized environmental management system of PTTEP was developed and implemented in our operations to minimize waste and ensure that the following potential environmental impacts are mitigated and controlled.

- Water and soil contamination from discharges of drilling fluids and drilled cuttings as per Environmental Impact Assessment (EIA) approval conditions
- Air pollution from hydrocarbon releases and atmospheric emissions from gas flaring, venting, fugitive and fuel combustion during production activities
- Accidental spills of hydrocarbons (oil and condensate) and chemical substances during drilling and production activities

PTTEP conducts environmental impact assessment prior to commencing new exploration and production projects as it is legally required to ensure that the environmental mitigation and monitoring programs are in place in order to minimize environmental impacts arising from operations for both domestic and international projects.

Currently, mitigation and monitoring of the above environmental impacts are controlled and regulated by local government agencies. In Thailand, there are two main agencies, namely, the Department of Mineral Fuels (DMF) of the Ministry of Energy which plays a major role in regulating environmental impacts from exploration and production companies, and the Office of Natural Resources and Environmental Policy and Planning (ONEP) of the Ministry of Natural Resources and Environment which issues directives and approvals for organizations to conduct environmental impact assessments prior to the commencement of exploration drilling and production projects.

In an effort to reduce environmental impacts and endorse environmental sustainability, PTTEP introduced and implemented, with continuous improvement and monitoring, the following initiatives.

- 1) Implementation of a sustainable development philosophy and framework of the way we conduct our business and daily operations in order to satisfy our current corporate vision and mission, and therefore creating sustainable value for all stakeholders

Our sustainable development framework focuses on three dimensions of business, namely, social, environmental, and economic. In line with the PTTEP's Sustainability Policy and Framework, the PTTEP Sustainable Development (SD) Guideline as well as the PTTEP SD Roadmap are developed and implemented to secure the Company's path towards sustainability.

- 2) Implementation of the ISO 14001:2004 Environmental Management System (EMS) Standard by PTTEP's domestic operational projects

According to the ISO 14001 requirements, an environmental management system should be in compliance with the Company's policies and standards, national legislations, and other national and international standards/requirements to prevent environmental pollution and degradation, promote energy conservation, and ensure the improvement of the Company's performance. PTTEP, as a result, has become the first petroleum exploration and production company in Thailand and in the Southeast Asian region to achieve the ISO 14001 Certification from AJA Registrars Limited.

- 3) Development of EIA mitigation and monitoring program to prevent, correct, monitor and reduce impacts to the environment resulting from our operations, both domestically and internationally
- 4) Establishment of short-term and long-term greenhouse gas emissions reduction and offsetting targets PTTEP's 2015 annual reduction and offsetting target for greenhouse gas is at 3.5%, while the Company's long-term figure is set to be 20% by 2020, from 2012. In addition to the above targets, the Company managed to reduce and offset, and achieved 4.7% of GHG emissions in 2015. Our performance regarding Greenhouse Gas Emission Management is shown in the table below. More details of PTTEP's greenhouse gas performance are disclosed in our 2015 Sustainability Report.

## Nature of Business Operation

Greenhouse Gas Emissions (GHGs)	Unit	2012	2013	2014	2015
Direct Total GHGs	Tonnes CO <sub>2</sub> equivalent	4,431,144	4,459,039	4,399,529	4,163,609
Indirect Total GHGs	Tonnes CO <sub>2</sub> equivalent	1,649	1,830	3,520	2,073
Other Relevant Indirect GHG Emission	Tonnes CO <sub>2</sub> equivalent	12,817	12,470	33,622	23,318
GHG Intensity	Tonnes CO <sub>2</sub> equivalent/ Thousand Tonnes Production	337	310	308	291

\* Domestic assets only (Arthit Project, Bongkot Project, S1 Project and PTTEP 1 Project)

- 5) Implementation of the ISO 14064-1:2006 Guidance at the Organization Level for Quantification and Reporting of Greenhouse Gas Emissions and GHG Protocol, as well as the United Nations Framework Convention on Climate Change (UNFCCC)

Climate risk assessment was also conducted to prepare PTTEP for Climate Change Adaptation. Improvements were also made to improve direct measurement to quantify, account, report, and monitor GHG emissions more accurately.

- 6) Development of "Green Practices" Roadmap to achieve environmental sustainability with a long-term implementation plan towards 2020 to ensure that our business operations are environmental-friendly and those environmental impacts from operations are mitigated

The Roadmap includes plans for reduction of ecological footprint, for examples, carbon footprint to reduce greenhouse gas emissions from our operations and other initiatives through Clean Development Mechanism (CDM), water footprint, while increasing biodiversity through environmental initiatives. The Roadmap also includes eco-efficiency projects, energy consumption schemes and reduction plan development, resource efficiency initiatives such as recovery of flare gas for electricity generation and water scarcity study at the operational areas, mitigation of environmental impacts in

the operational areas, waste management, minimization, reuse and recycling, green supply chain initiatives for our supply chain to become more eco-friendly. More details on PTTEP's Green Practices Roadmap as well as the projects and initiatives are disclosed in our 2015 Sustainability Report.

- 7) Since 2008, 100% of the re-injection of produced water, into subsurface reservoirs to ensure no overboard discharging which could affect the environment at Bongkot Project, Arthit Project, S1 Project, and PTTEP 1 Project
- 8) Controlling and monitoring of synthetic drilling fluid on cutting in order to reduce drilling wastes to comply with the standards as suggested in the Environmental Impact Assessment Report and also conducting new technology studies to reduce waste volume and improve waste quality from drilling activity
- 9) Monitoring of discharged wastewater quality from production process as well as of seawater quality, sediment quality, benthos, and demersal fish around the operation platform to ensure limited exposure to environmental hazards

In addition, the annual Environmental Monitoring Reports of the above must be submitted to local regulators such as the Department of Mineral Fuels (DMF) of the Ministry of Energy, and the Office of Natural Resources and Environmental Policy and Planning (ONEP) of the Ministry of Natural Resources and Environment.

- 10) Implementation of the oil spill response plan, oil spill equipment, trainings and exercises are provided to ensure environmentally sound operations from Tier 1 oil spill incidents. PTTEP is also registered as a member in the Oil Industrial Environmental Safety Group Association (IESG) for Tier 2 oil spill response incidents. As for Tier 3 oil spill response, the Company is a registered member of the Oil Spill Response Limited (OSRL), cooperating with PTT Group in the mitigation of environmental impacts. In 2015, the Company's representatives participated in the Crisis Management Exercise (C-MEX-15) to familiarize themselves with the incident command system.
- 11) Provision of appropriate technologies for waste management system (disposal, storage, treatment, and transport) for hazardous and non-hazardous wastes, e.g., mercury contaminated waste, oil contaminated wastes, chemical wastes, and other wastes from production process for environmental impact abatement

PTTEP also complies with the Basel Convention for the transportation and disposal of mercury contaminated wastes as well as mercury wastes, in addition to local legislations and requirements concerning waste management, to ensure that waste generated by our operations was controlled and disposed in compliance with the required legislations or standards.

- 12) Provision of appropriate supports and coordination with other exploration and production companies, government agencies, the Petroleum Institute of Thailand, and other related agencies/associations in order to encourage knowledge sharing and experience aimed at abatement of the environmental impacts and problems and to allow for further continuous improvement for environmental issues in the oil and gas sector
- 13) SSHE performance reporting in PTTEP's Sustainability Report has been assured by a third party since 2012 to 2015 and rated at the highest level of the Global Reporting Initiative (GRI) for four consecutive years.

- 14) PTTEP has achieved a member status from the 2015 Dow Jones Sustainability Index (DJSI) World in Oil and Gas Industry for the second consecutive year (2014 - 2015).

MEMBER OF

**Dow Jones  
Sustainability Indices**

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- 15) PTTEP has been rated by the Carbon Disclosure Project (CDP), a well-known organization which compiles and evaluates information regarding environmental governance, and shortlisted into the Carbon Disclosure Leader Index (CDLI) as one of the top companies in the Southeast Asia plus Hong Kong in disclosure of information of greenhouse gas emission as well as doing the most to combat climate change for two consecutive years since 2014. In 2015, PTTEP was also enlisted in the CDP Climate A List, which consists of 113 companies worldwide to receive this recognition for outstanding climate change leadership, and the first and only company from the Southeast Asia.

## Implementation Results over the Past Three Years

During the past three years (2013 - 2015), PTTEP has strictly complied with both Thai and International legislations, and the other regulations and requirements concerning the area of Safety, Security, Health and Environment (SSHE) in our operations.

- 1) Regularly conduct Environmental Impact Assessment Studies prior to the commencement of all exploration and production development projects as required by local regulations  
In addition, EIA Audit Reports and Environmental Monitoring Reports are also conducted and submitted to local authorities and regulators periodically as required.



## Nature of Business Operation

- 2) Strictly comply with waste management regulations required by the Department of Mineral Fuels and other regulatory bodies
- 3) Submission of SSHE performance reports to the local regulator, specifically, the Department of Mineral Fuels on a monthly and annual basis, and be audited by the regulator regarding SSHE implementation at operating areas
- 4) PTTEP received and maintained the OHSAS 18001:2007 (Occupational Health and Safety Standard) which specifies requirements for a company to feature the occupational health and safety management system that enables the organization to control its occupational health and safety risks and improve its performance. The Company received the certification for the following projects, namely, S1, PTTEP 1, PTTEP Petroleum Development Support Base (PSB), Arthit, and Bongkot (for both North & South fields). The Company also plans to expand coverage of the OHSAS to Sinphuhorm Project and other international projects in 2016.
- 5) PTTEP is constantly improving and developing our Environmental Management System Standard to comply with the revised edition of the international standards ISO 14001 (ISO14001:2004), and be audited and certified from AJA Registrars Limited under accreditation of the United Kingdom Accreditation Service (UKAS). By adopting the ISO 14001, the Company has improved the efficiency of our environmental management system by continuously upgrading the environmental practices in maintaining, developing, and reducing environmental impacts with details as listed below.
  - 1) Greater Bongkot North and South fields of the Bongkot Project - with the scope of "exploration and production of natural gas and condensate"
  - 2) Arthit Project - with the scope of "exploration and production of natural gas and condensate"
  - 3) S1 Project - with the scope of "exploration and production of petroleum"
  - 4) PTTEP 1 Project - with the scope of "exploration and production of petroleum"

- 5) PTTEP Petroleum Development Support Base (Songkhla and Ranong) - with the scope of "provision of logistic services to offshore oil and gas operations"
- 6) PTTEP Core Research Center - with the scope of "building management and maintenance service, core research center and logistic support for storage of core, slab samples and archive of company document"
- 7) Montara Field, Darwin base and Perth office of PTTEP Australasia (Ashmore Cartier) Pty Ltd in Australia - with the scope of "exploration and production"

PTTEP is also improving and developing our Environmental Management System Standard at Sinphuhorm Project and the other international operating units in order to bring these units into compliance with the ISO 14001 standard in the near future.

Regarding the spill incidents in years 2013, 2014, and 2015, the spills accounted for 2.92, 0.09 and 0.90 tonnes per one million ton of the production respectively. The total figures from these spills clearly indicate that the level of spillage in the year 2015 remains within the estimated target which is approximately 2.26 tonnes per one million ton of the production. This is lower than the average spill rate of IOGP in 2014, which was reported to be at an average spill rate of 4.25 tonnes per one million ton of the production. An improvement was resulted from the Company's intensive incident campaign for drilling and transportation activities as, despite an increase in these activities, the incident rate was better than target.

PTTEP is firmly committed to our SSHE policy, focusing on minimizing negative impacts on personnel and properties of both of the Company's as well as our contractors' with numerous indicators such as Lost Time Injury Frequency (LTIF) rate and Total Recordable Injury Rate (TRIR). In 2015, LTIF and TRIR were determined at 0.13 and 1.11 respectively, with a well-defined declining trend. Notably, this declining trend is lower than the average LTIF rate and TRIR of the

ILOGP of year 2014, which meanwhile were held at 0.36 and 1.54 respectively.

To align with PTTEP's sustainable growth, proactive reinforcement of the SSHE Management System is carried out throughout the Company's business life cycle in both domestic and international units. SSHE awareness training has been conducted to all staff in order to encourage the use of identical standard practices throughout.

### Disputes or Lawsuits Regarding the Environment and Solutions

No legal dispute regarding the environment currently exists.



### Safety, Security, Occupational Health and Environment Management

PTTEP emphasizes Safety, Security, Health and Environment in all the areas in which the company operates, first-prioritizing the surrounding communities and social responsibility. The Company has meanwhile been putting in a great effort to become a "Target Zero" incident organization, while trying to achieve our sustainable growth. The SSHE Management System (SSHE MS), on the other hand, ensures that all of the Company's activities are in compliance with all applicable laws and regulations.

PTTEP strictly adheres to the Process Safety Management and continuously improves our Personal Safety Management in order to control, prevent and reduce causes and impacts of serious injuries and incidents. Loss of Primary Containment (LOPC), which is an indicator used to analyze process safety performance, once compared with the 2014 average of the International Association of Oil and Gas Producer (IOGP), turned out that PTTEP LOPC Tier 1 and Tier 2 in 2015 were lower by 79% and 66% respectively.

PTTEP believes that SSHE Culture is very important in developing Safety, Security, Health and Environment Performance. The Company has continuously improved and launched the SSHE Culture campaign for motivation and creation of awareness among the Company's and our contractors' staffs through communication and BBS training, whereas the "Target Zero" and SSHE excellence within and around the organization are dutifully expected.





Due to the technical and operational complication of petroleum exploration and production business, together with high investment cost in project development, consideration of risk factors from both internal and external associated with PTTEP's business is highly important.

### Internal Risk Factors

#### New Investment Risks

Although oil price and world economic market are not favorable, PTTEP still needs to expand our investment to support long term growth together with creating values of existing assets in order to maintain the balance between business growth and sustainable income. Focusing on continuation of Bongkot concession, which will expire in 2023 - 2024, and acquisition or farming in remaining potential areas in Thailand as well as expansion in the Company's growth platform, there are some associated risks, e.g. unclear on decommissioning decree, political changes, profit split in fiscal regime. In this regard, PTTEP has mitigated those risks which may have potentially impacts on our operation and investment growth in various ways, including promoting understanding of petroleum exploration and production (E&P) business to stakeholders, proactively conducting public relations, coordinating, monitoring and providing opinions for appropriate decommissioning in terms of technic, regulatory requirements, economic feasibility as well as studying of environment and social impacts from related activities.

In addition, in considering new investment, PTTEP also concerns about climate change risks which are assessed and analyzed regularly. The Company has a "Low Carbon Footprint Reduction" roadmap, targets and action plans in place to manage impacts of those risks such as potential carbon tax in the countries we operate, including Thailand and Australia, as well as other targeted investment countries, and physical damage to our asset structures from rise in global temperatures.

Investment in new countries or unfamiliar areas contains inherent risks. The Company therefore has instituted risk mitigation guidelines for the assessment of each investment. The guidelines provide consideration in various aspects, ranging from petroleum potential, size and project characteristics, acquisition procedures, additional reserves volume, operator's capability and performance, attractiveness of fiscal regime, geographical conditions, related law and regulations, political stability, international relations, economic and financial stability. All risks are then taken into account, from which prevention measures and options are formulated and integrated into the return-on-investment analysis or into the joint venture agreement.

Investment in new projects, including farm-in and farm-out joint ventures, merger and acquisition as well as withdrawal or divestment of a given project must be intensively screened by the Investment Committee and Management Committee whose responsibilities are to assess and ensure that the project adheres to corporate investment direction and policy and that it is economically and technologically, whether conventional or unconventional resources are involved, feasible, before proposing to the Risk Management Committee for endorsement prior to the final approval from the Board of Directors.

## Exploration Risks

In E&P business, exploration activities are essential to ensure that additional new petroleum reserves are found to replace those which have been turned to production. Therefore, PTTEP has always aimed to add new reserves to support future production targets and the Company's future growth strategy. The objective of exploration is to search for petroleum resources which are sizable for commercial development. The risk in exploration activities is related to finding a source for petroleum and a trap to contain it (Geological Risks) and the uncertainty of finding a petroleum field of commercial size (Resources Uncertainty).

Another major risk associated with petroleum exploration is the investment in exploration activities such as drilling of exploration and appraisal wells, including investment during the phase of geological and geophysical studies before drilling. The criteria for exploration decisions are based on assessment of the chance of success or geological risk assessment, resource estimation, an assessment of the size of petroleum resource, expenditure during exploration period such as geological studies, seismic acquisition and interpretation, and drillings as well as exploration economic evaluation, considering all exploration and development expenditures and government's take according to conditions of the contract.

PTTEP establishes the best practice process, starting from potential petroleum basin evaluation and selection, in-depth subsurface studies of targeted blocks, and above-ground investment risks. The Geosciences and Exploration Group of PTTEP is tasked with formulating the exploration strategy and strategic plan based on the exploration portfolio management, while allocating exploration budgets to high potential blocks for further exploration activities. This process is reviewed and revised annually to reflect and be in line with changing of the environment, outcome of exploration activities, and corporate targets.

Moreover, PTTEP also nominates a special advisory team, consisting of experts, to review and ensure quality and completeness of the investigation and that they are in compliance with the Company's standard and guideline of studies and evaluation before decision making.

## Project Development Risks

Due to the low oil price situation, PTTEP has postponed key development projects such as Mariana Oil Sands Project and Cash/Maple Field in PTTEP Australasia Project. Meanwhile, for new projects in which there are potential of project development delays and cost overruns, the Company has implemented the following risk mitigation measures to enable successful and timely project completion.



## Risk Factors

- 1) Project management: To safeguard against project delays and cost overruns, the Company focuses on related policy formulation, project management organization, project planning and engineering system designs, contract management, procurement, and construction monitoring.
- 2) Personnel and process: To meet the targets set for safety, quality, budgetary, and schedules for project completion, the Company focuses on developing our project team's skill which helps the Company to better prepare for and protect ourselves from the increased competition in the employment market of those with extensive skills and experience. Information and experience sharing of previous projects is also encouraged as part of the project team skills development, while the Company's Project Realization Process (PREP) continues to find new approaches to fine-tune operations so that targets are achieved.
- 3) Commercial contract: To ensure maximum efficiency in order to minimize the risks associated to non-contractual compliance and disputes while working with our contractors, the Company focuses on contract drafting, terms and condition identification and contract administration. The risks can however be controlled by negotiations based on comprehensive competency, knowledge, and concerted efforts from various departments such as construction, engineering, procurement, finance, accounting, and legal. Prudent contract management also lessens the risks and possible damages potentially resulting from delays which could adversely affect a given project as well as the Company's performance at large.

### Production Risks

In order to produce petroleum, PTTEP has to face various potential risks, starting from the bottom of the well at the production process until the point of sales such as well potential, production design flaws, damaged equipment, aging facilities, operation errors, and poor product quality, all of which can directly impact corporate goals, and production and sales targets.

Mitigation of production risks focuses on the areas of process planning and platform design, production control system, and preventive maintenance. In addition, the Asset Reliability & Integrity Management System (ARIMS) which is a part of the Operational Excellence Project has been continuously improved to ensure the highest standards of production integrity and safety. ARIMS has been designed specifically to minimize production losses due to worn-out equipment and improve equipment efficiency through preventive maintenance and inspection, with the goal to attain the zero unplanned shutdown. Work procedures, operation manuals, and extensive training programs have meanwhile been developed and employed to instill greater understanding and efficiency of the Company's operation personnel.

The Company has also set up the Operational Risk Committee (ORC) to analyze and assess production risks in respect to technical issues, contracts, and operational support to projects in order to increase our overall efficiency.

### Commercial Risks

PTTEP sells the majority of our main product which is natural gas to the Thai market. Therefore, the Company's revenue could drop if the domestic demand decreased from the projection. The Company has therefore expanded and invested more internationally, for instance, in oil projects such as Vietnam 9-2 Project, Vietnam 16-1 Project, Oman 44 Project, and PTTEP Australasia Project in order to diversify the risks of depending entirely on Thailand's natural gas demand. PTTEP has entered into long-term gas sales agreements (GSAs) with PTT, which is the Company's major domestic buyer. The terms of GSAs generally lasts 25-30 years. To mitigate market risks which can result in refusals from buyers to purchase contracted volumes of natural gas, GSAs stipulate buyer and seller obligations for committed annual minimum volume. Buyers must pay for the committed volume of gas, whether or not the full amount is taken (Take-or-Pay).

To effectively cope with the dynamics of Thailand energy market, PTTEP closely monitors petroleum demand in coordination with PTT and related government agencies to

collectively outline an optimized supply plan. The Company reviews and adjusts our production as well as project development plans regularly in order to ensure that the development master plan is able to optimize reserves and resources of existing assets to match the country's energy demand. The Company has a project in Mozambique which possesses large natural gas reserves which can be developed as a Liquefied Natural Gas (LNG) project. This project, for example, fits with PTT's plan to import LNG as well as contributes well to the enhancement of energy security of Thailand.

## Organization Capability Risks

The abilities of an organization are a key component towards the efficient realization of the company's targets, inevitably including human resources to support the company's growth and business process efficiency and effectiveness. PTTEP, regarding this in particular, has taken the following actions to enhance our business process and organizational capability.

- 1) Knowledge management, including new technologies and capability of the Company's research and development program, is developed to be in line with the Company's growth strategy. The Capability and Technology Development Roadmap was created as well as research on technology to support business growth in five areas which are focused to increase exploration success, enhance more production, develop green practice, develop deep water, and operate unconventional.
- 2) System, procedures, and organization structure are developed according to PTTEP's growth strategy and business plan, for example, work process improvement towards matrix organization in order to maximize work efficiency, Delegation of Authority and Signatures (DAS) development and proper implementation, enhancement of IT Global Platform and system stability as well as confidentiality control. Development of financial and accounting management capability is aimed for being the World Class Finance level such as setting up Treasury Center, increasing efficiency of managerial accounting data analysis for decision making in M&A, establishment

of Shared Service Center, and In-house Financial Academy training.

- 3) In order to prepare for future overseas investment, Human Resources Development plans for recruiting sufficient local staff in targeted countries, developing staff capability and leadership in response to requirements as well as enhancing employee engagement programs with the target to be Thailand Top Quartile by 2020. In addition, Human Resource process improvement and PTTEP's Values and Culture embedding are also key foundations for development and growth of the Company in the same direction with the PTT Group's.

## Safety, Security, Health and Environmental Risks

As PTTEP and subsidiaries operate in the E&P business, the Company inherently encounters Safety, Security, Health and Environmental (SSHE) risks caused by internal and external factors which may have various degrees of severity.

PTTEP established a clear SSHE policy and constantly improves our SSHE performance to reinforce safety, security and environmental controls and efficiency. The Company has put in place the SSHE Management System (SSHE MS), a reflection of the Company's vision and mission, which is essential for the effective operation of all SSHE and SSHE-related activities.

SSHE MS standards and procedures define minimum requirements to be applied across the organization to ensure that relevant SSHE risks to personal safety and process safety are effectively and consistently managed, aiming to achieve the operational excellence. Management's commitment and employee's engagement are crucial in strengthening SSHE MS, leading up to a strong and sustained SSHE culture within the Company. In addition, the Company always communicates SSHE issues which may affect the Company operations such as natural disaster, epidemics, social and political unrest in an open and transparent manner in order to pave the way for us to be a leading E&P company with safe operations

## Risk Factors

and sustainable development. The Company's SSHE MS is periodically reviewed to ensure performance excellence and maintain our public trust for safety and determination for future sustainability, in addition to building a SSHE culture where all of the members can contribute.

In 2015, PTTEP has been listed in the Climate A List of the Carbon Disclosure Project (CDP), an international non-profit organization in climate change area, making the Company the first and only company from the Southeast Asia among the 113 companies selected, from thousands of annual worldwide applicants, with such recognition.

This is a guarantee that PTTEP has standardized systems in place for both domestic and international projects, further demonstrating our effective changes in environmental management and commitment towards conducting the business with responsibility to the environment, and achieving the objectives of sustainable development in every area where we operate.

Due to our strong commitment to sustainable development, social responsibility and quality of life, long term resources utilization and environment conservation along with response to country's energy demand, in 2015 PTTEP was listed once again for the second consecutive year in the Dow Jones Sustainability Index (DJSI) under the World Index of Oil and Gas Industry. This worldwide recognition reflects the Company's determination to conduct the business and sustain our growth without compromising our social and environmental well-being.

### Financial Risks

Financial risks mainly consist of counterparty risk, and cash and liquidity risk. To manage the counterparty risk, it is a policy that PTTEP Group conducts businesses only with reputable and credit worthy counterparties. The financial stability and creditability of each counterparty must be analyzed and reviewed regularly. Currently the majority of PTTEP Group's products are sold to PTT which is the parent company.

Regarding cash and liquidity risk which may arise from our inability to maintain adequate working capital necessary for the operations, PTTEP Group has a policy to eliminate and minimize the risk by preparing an appropriate and discreet cash flow management and maintaining both committed and uncommitted credit facilities with banks and financial institutions well in advance.

### Shareholding Risks

Although PTT currently holds 65.29% of PTTEP's registered and paid-up capital, the Company is also listed in the Stock Exchange of Thailand and required to comply with related law and regulations especially the disclosure of information and connected transaction, and other rules that safeguard all potential conflicts of interests. In addition, as the majority shareholder of PTT is the Ministry of Finance who is a government agency, the Company is also obliged to follow the rules and regulation of State Enterprise Policy Office. Appointing and removing of directors, and voting in subsidiary company, for example, must be in line with the decision of PTT's Board and its business policy.

PTTEP has constructed various measures which are designed to protect the rights of our minority shareholders. These measures include, as necessitated by the laws, disclosure of business transactions between PTTEP and our parent company and, when the transactions are of significance, requirement of approval from PTTEP's Board or shareholders (as the case may be). The minority shareholders have opportunities to make inquiries and agenda proposals as well as nominate qualified candidates for director elections during the shareholders' meetings where minutes are officially recorded. Meanwhile, communication between the Company and our shareholders is introduced in various venues such as quarterly meeting with the Investor Relations Section, investor site visit, PTTEP Newsletters, and other activities which are intended to provide the shareholders and investors with up-to-date and necessary information for their investment in the Company.

PTTEP and PTT are both listed companies and are governed by a stringent set of rules and regulations as set forth by the Stock Exchange of Thailand. For this and the aforementioned measures to minimize the shareholding risks, PTT's holding of majority of the Company's shares does not result in any material impacts on PTTEP's minor shareholders.

## External Risk Factors

### Political Risk in Investment Countries

Due to PTTEP's foreign investment policy to secure resources to meet the expanding domestic energy market and ensure the sustainable growth of the Company in the long term, the Company continues our growth strategy by expanding our business in countries that are susceptible to geopolitical risks. International expansion can be categorized into four main regions: Southeast Asia, Australasia, Americas, Africa and the Middle East. As a part of the policy, the Company has appointed a geopolitical risk team to monitor all these factors and periodically analyze as well as report on the development of these forms of risk.

In 2015, PTTEP analyzed and evaluated a number of geopolitical risk factors, including political stability, macro-economics, legal and regulatory, and security risks across the range of investment countries and found that the high risk area was in Africa and the Middle East mainly as a result of ISIS terrorism. Comprehensive assessment of the risks would immediately be conducted, and prompt responses from the Company especially when significant incidents happen would immediately be made. The Company, in such cases, has a process of evaluating risks and scenario formulation which assists our management and relevant departments in evaluating risks relating to investments as well as safety and security of the Company's staff stationed overseas.

Analysis is also conducted to formulate geopolitical risk's rating scores which will be used as a part of the assessment process before making investments in new projects. In addition, PTTEP liaises closely with the Ministry of Foreign Affairs and Thai embassies in the invested countries to ensure that the Company's business operations are well-supported by them and align with their respective national energy policy.

### Compliance Risk

Generally, these risks can be resulted from a variety of factors, e.g., complexity of articles of a specific law, continual changes to laws and regulations, incorrect interpretation of a law, or even nuances of the foreign language in which the law is written. The risks can potentially lead to incorrect compliance with a law, resulting in violation of or non-compliance with applicable laws which in effect may lead to pecuniary punishments, e.g., fines, operational difficulties such as potential revocation and suspension of licenses, and possible damages to PTTEP's reputation. To minimize these risks, the Company has established the Compliance Department to be responsible for assuring that all of the business units strictly comply with their relevant laws, thereby building confidence among the Company's Board, management, and employees that we are fully compliant with laws relating to our business operations.

In 2015, there was a significant amendment on the Organic Act on Counter Corruption (No. 3) B.E. 2558 which extended the punishment to legal entity that was related to government official bribery. PTTEP has recognized the importance and impact from the latest amendment of the Act and therefore included anti-corruption risk into the Corporate Risk Profile to closely monitor as well as improve internal control measures to effectively prevent all possible forms of corruption.



## Risk Factors

### Price Risks

PTTEP's product prices vary with the world's oil market which is affected by a number of uncontrollable factors such as the market demand and supply, political and economic stability of various countries, OPEC's production policy, oil reserves of each country, and seasonal climate conditions.

Changes in the oil market have an immediate and direct impact on prices of PTTEP's crude oil and condensate. Prices of natural gas which is the Company's main product, on the other hand, change at a slower rate as the natural gas price formula has a built-in natural hedge mechanism against volatility of oil prices. The Company's prices of natural gas are periodically adjusted, for example, every six or twelve months as stipulated by each of the projects' price formula.

In an effort to minimize price risks, the risk management plans are formulated based on PTTEP's annual analysis and evaluation of the impact of different price levels on the Company's revenue and profits. These plans must be approved by the Risk Management Committee and acknowledged by the Board prior to the implementation.

In 2015 the overall oil market is predominantly driven by bearish factors. The global oversupply is mainly a result of OPEC's embarking on the strategy to protect its market share from Shale Oil. Strong U.S. Dollar and poor global demand in many regions, particularly China, have put an additional pressure on the oil price meanwhile.

PTTEP has implemented an oil price hedging program, approved by the Company's Risk Management Committee, which had helped to significantly protect our 2015 financial performance from the oil price's downward trend.

### Exchange Rate Risks

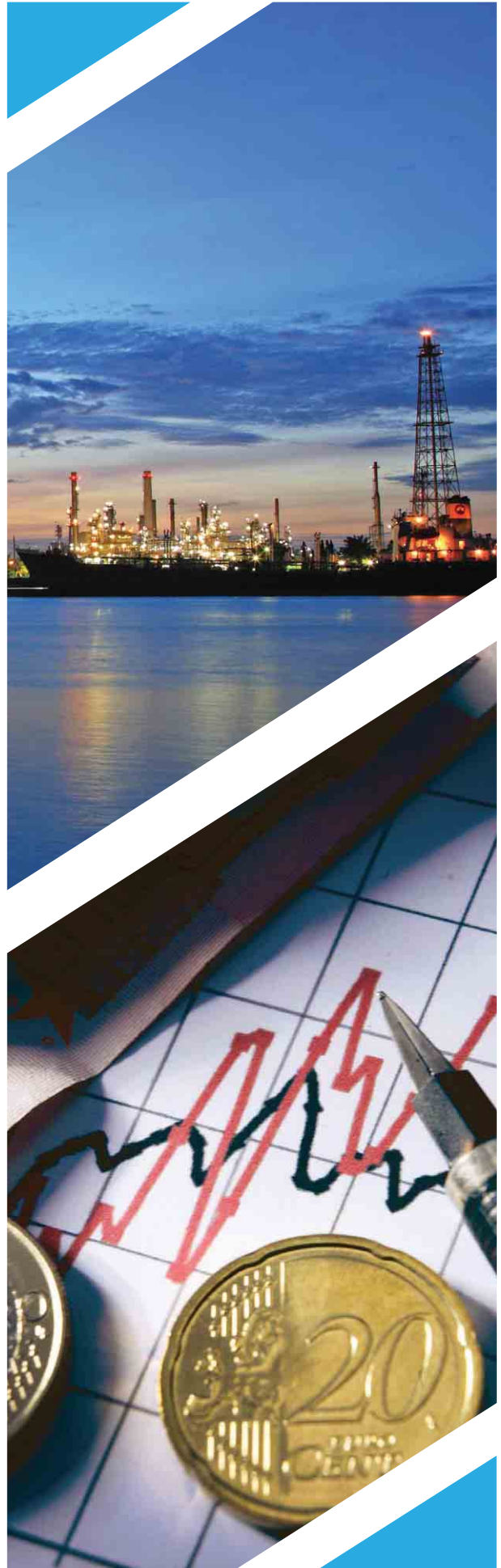
PTTEP Group uses U.S. Dollar (USD) as the functional currency according to the International Financial Reporting Standards (IFRS) since USD is used for trading petroleum products such as crude oil and natural gas which are the Company's major products. PTTEP Group's cash flows however still bear exchange rate risk from Thai Baht (THB) movement against USD as most of the Company's revenue is in THB which is linked to USD. For example, revenue from USD-linked crude oil sold to a customer who is a Thai company must be paid in THB equivalent to USD only, while the Company's main cash outflows such as investments and operating expenditures are mostly in USD. The currency mismatch and discrepancies between payables and receivables' settlement periods as well as USD/THB volatility therefore inevitably impose foreign exchange risks to the Company's cash flows. Under this circumstance, the Company has minimized foreign exchange risk by using available financial derivatives instruments in the market such as forward and option contracts to hedge the exposure relating to the foreign exchange rate as determined in the sales agreements by, for example, matching the Company's USD revenue with USD investments and operating expenditures.

With USD as the functional currency and the foreign exchange rate volatility, PTTEP Group is also exposed to the foreign exchange translation risk arising from the translation of non-USD assets and liabilities at the end of every accounting period. To minimize such translation risk, the Company has consistently put in a great effort to maintain a proper balance between our THB assets and THB liabilities as well as enter cross currency swaps on our THB-denominated obligations in order to reduce the impact from the exchange rate volatility by converting both interest and principal payments to USD.

In addition, PTTEP Group's operating performance is affected by the USD/CAD (Canadian Dollar) volatility as PTTEP Canada Limited (PTTEP CA), a Canadian subsidiary who operates the Mariana Oil Sands Project in Canada, uses CAD as its functional currency while most of its debts are denominated in USD. This consequently causes an unrealized gain or loss from translating PTTEP CA's liabilities from CAD to USD whenever USD/CAD changes. The Company in this case has managed the translation risks in PTTEP CA by entering cross currency swaps to change USD-denominated debts to CAD-denominated debts, securing new loans in CAD, while undertaking several other actions as deemed appropriate correspondingly to nature of the business, the market conditions, and the Company's acceptable cost and risk limits.

### Interest Rate Risks

PTTEP Group is exposed to interest rate risk as the risk affects the future cash flows and fair value of the financial instruments employed. PTTEP Group eliminates and minimizes the risk by maintaining an appropriate debt portfolio optimization (ratio of fixed rate liabilities and floating rate liabilities) and using financial derivatives such as interest rate swap. Interest rate risk management is conducted dynamically, appropriately, and correspondingly to nature of the business, the market conditions, and the Company's acceptable cost and risk limits.



## General and Other Significant Information

### Information of PTTEP

- **Company Name** PTT Exploration and Production Public Company Limited or PTTEP
- **Headquarters Address** 555/1 Energy Complex Building A, 6<sup>th</sup> and 19<sup>th</sup>– 36<sup>th</sup> floor, Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900, Thailand
- **Type of Business** Exploration and production of petroleum and investments in related businesses
- **Registration Number** 0107535000206
- **Telephone** +66-2537-4000
- **Facsimile** +66-2537-4444
- **Website** [www.pttep.com](http://www.pttep.com)
- **E-mail** Independent Directors: [independentdirector@pttep.com](mailto:independentdirector@pttep.com)  
Investor Relations: [ir@pttep.com](mailto:ir@pttep.com)  
Corporate Secretary: [corporatesecretary@pttep.com](mailto:corporatesecretary@pttep.com)
- **Registered Capital** 3,969,985,400 ordinary shares with THB 1 per share (THB 3,969,985,400)
- **Paid-Up Capital** 3,969,985,400 ordinary shares with THB 1 per share (THB 3,969,985,400) as of December 31, 2015

## Subsidiaries' Information

As of December 31, 2015, there were 63 subsidiaries. All of them had the same contact address, telephone and facsimile as those of PTTEP. Details of directors for each subsidiary are disclosed in the "Directors of Subsidiaries and Associated Companies" part (page 168).

No.	Company Name	Abbreviation	Number of Shares Sold	Par Value	Share Type	Shareholders
Petroleum Exploration and Production Business						
1	PTTEP International Limited	PTTEPI	2,000,000,000	THB 10	Ordinary Share	PTTEP 100%
2	PTTEP Siam Limited	PTTEPS	1,000,000	THB 100	Ordinary Share	PTTEP 51% PTTEPO 49%
3	Orange Energy Limited	Orange	1,000,000	THB 100	Ordinary Share	PTTEPO 53.95% MOECO B.V. 36.05% KrisEnergy 10%
4	PTTEP G7 Limited	PTTEP G7	6,413,741	THB 100	Ordinary Share	PTTEPI 100%
5	JV Marine Limited	JV Marine	50,000	USD 1	Ordinary Share	PTTEP IH 100%
6	PTTEP Algeria Company Limited	PTTEP AG	50,000	USD 1	Ordinary Share	PTTEPO 100%
7	JV Shore Base Limited	JV Shore Base	50,000	USD 1	Ordinary Share	PTTEP IH 100%
8	PTTEP Africa Investment Limited	PTTEP AI	50,000	USD 1	Ordinary Share	PTTEPH 100%
9	PTTEP Holding Company Limited	PTTEPH	50,000	USD 1	Ordinary Share	PTTEPO 100%
10	PTTEP Hoang-Long Company Limited	PTTEP HL	50,000	USD 1	Ordinary Share	PTTEPO 100%
11	PTTEP Hoan-Vu Company Limited	PTTEP HV	50,000	USD 1	Ordinary Share	PTTEPO 100%
12	PTTEP Indonesia Company Limited	PTTEP ID	50,000	USD 1	Ordinary Share	PTTEPH 100%
13	PTTEP International Holding Company Limited	PTTEP IH	50,000	USD 1	Ordinary Share	PTTEPH 100%
14	PTTEP Iran Company Limited	PTTEP IR	50,000	USD 1	Ordinary Share	PTTEP OM 100%
15	PTTEP Kim Long Vietnam Company Limited	PTTEP KV	50,000	USD 1	Ordinary Share	PTTEPO 100%
16	PTTEP Malunda Limited	PTTEP ML	50,000	USD 1	Ordinary Share	PTTEP ID 100%
17	PTTEP South Asia Limited	PTTEP SA	50,000	USD 1	Ordinary Share	PTTEPH 100%
18	PTTEP Netherland Holding Limited	PTTEP NL	50,000	USD 1	Ordinary Share	PTTEP IH 100%
19	PTTEP New Zealand Limited	PTTEP NZ	50,000	USD 1	Ordinary Share	PTTEPH 100%
20	PTTEP Offshore Investment Company Limited	PTTEPO	6,667	USD 1	Ordinary Share	PTTEP 75% PTTEPI 25%



## General and Other Significant Information

No.	Company Name	Abbreviation	Number of Shares Sold	Par Value	Share Type	Shareholders
Petroleum Exploration and Production Business						
21	PTTEP Oman Company Limited	PTTEP OM	50,000	USD 1	Ordinary Share	PTTEPO 100%
22	PTTEP Rommana Company Limited	PTTEPR	50,000	USD 1	Ordinary Share	PTTEP AI 100%
23	PTTEP Sadang Limited	PTTEP SD	50,000	USD 1	Ordinary Share	PTTEP ID 100%
24	PTTEP Semai II Limited	PTTEP SM	50,000	USD 1	Ordinary Share	PTTEP ID 100%
25	PTTEP South Mandar Limited	PTTEP SMD	50,000	USD 1	Ordinary Share	PTTEP ID 100%
26	PTTEP South Sageri Limited	PTTEP SS	50,000	USD 1	Ordinary Share	PTTEP ID 100%
27	PTTEP Southwest Vietnam Company Limited	PTTEP SV	50,000	USD 1	Ordinary Share	PTTEPO 100%
28	PTTEP MEA Limited	PTTEP MEA	50,000	USD 1	Ordinary Share	PTTEP 100%
29	Sinphuhorm Holdings Limited	SHL	50,000	USD 0.01	Ordinary Share	PTTEPO 100%
30	PTTEP Australia Pty Ltd	PTTEP AU	50,000	AUD 1	Ordinary Share	PTTEPH 100%
31	PTTEP Australia Offshore Pty Ltd	PTTEP AO	50,000	AUD 1	Ordinary Share	PTTEP AU 100%
32	PTTEP Australia Perth Pty Ltd	PTTEP AP	50,000	AUD 1	Ordinary Share	PTTEPH 100%
33	PTTEP Australia Browse Basin Pty Ltd	PTTEP AB	50,000	AUD 1	Ordinary Share	PTTEP AP 100%
34	PTTEP Australasia (Staff) Pty Ltd	PTTEP AAS	10	AUD 1	Ordinary Share	PTTEP AB 100%
35	PTTEP Australasia Pty Ltd	PTTEP AA	409,895,440	various <sup>1</sup> price (average AUD 0.4895)	Ordinary Share	PTTEP AB 100%
			40,000,000	AUD 0.4957	Preference Share	
			1,575,000	AUD 0.4895	Class B Share <sup>2</sup>	
36	PTTEP Australasia (Petroleum) Pty Ltd	PTTEP AAP	10	AUD 1	Ordinary Share	PTTEP AA 100%
37	Tullian Pty Ltd	PTTEP AAT	1	AUD 1	Ordinary Share	PTTEP AAP 100%
38	PTTEP Australasia (Finance) Pty Ltd	PTTEP AAF	1	AUD 1	Ordinary Share	PTTEP AA 100%
39	PTTEP Australasia (Ashmore Cartier) Pty Ltd	PTTEP AAA	1,700,000	AUD 2	Ordinary Share	PTTEP AB 100%

<sup>1</sup> Total amount equals AUD 200,631,256.48 (plus AUD 19,826,452.31 for the preference shares and AUD 770,914.25 for the Class B shares = total AUD 221,288,623.04).

<sup>2</sup> A type of share issued to employees under an Employee Share Option Plan, which was subsequently acquired by PTTEPAB.

No.	Company Name	Abbreviation	Number of Shares Sold	Par Value	Share Type	Shareholders
Petroleum Exploration and Production Business						
40	PTTEP Australasia (Operations) Pty Ltd	PTTEP AAO	106,686,517	AUD 0.20	Ordinary Share	PTTEP AB 100%
41	PTTEP Australia Timor Sea Pty Ltd	PTTEP AT	50	No Par Value (average AUD 827,048.78) <sup>3</sup>	Ordinary Share	PTTEP AB 100%
42	PTTEP Netherlands Coöperatie U.A.	PTTEP NC	- <sup>4</sup>	-	-	PTTEP IH 0.00005% PTTEP NL 99.99995%
43	PTTEP Netherlands Holding Coöperatie U.A.	PTTEP NH	- <sup>5</sup>	-	-	PTTEP HK 75% PTTEPI 25%
44	PTTEP Brazil Investment B.V.	PTTEP BI	324,423,816.34	USD 1	Ordinary Share	PTTEP NH 100%
45	PTTEP Canada Limited	PTTEP CA	1,643,241,372.84	CAD 1	Ordinary Share	PTTEP NC 100%
46	PTTEP FLNG Holding Company Limited	PTTEP FH	10,000	HKD 1	Ordinary Share	PTTEP IH 100%
47	PTTEP HK Holding Limited	PTTEP HK	10,000	HKD 1	Ordinary Share	PTTEP 25% PTTEPI 75%
48	Cove Energy Limited	COVE	5,089,129.47	GBP 1	Ordinary Share	PTTEP AI 100%
49	Cove Energy East Africa Limited	CEEAL	1,000	EUR 1	Ordinary Share	COVE 100%
50	Cove Energy Mozambique Rovuma Onshore Limited	CEMROL	1,000	EUR 1	Ordinary Share	CEEAL 100%
51	PTTEP Mozambique Area 1 Limited	PTTEP MZA1	1,000	EUR 1	Ordinary Share	CEEAL 100%
52	Cove Energy Kenya Limited	CEKL	1,000	KES 100	Ordinary Share	CEEAL 99.9% COVE 0.1%
53	Cove Mozambique Terra Limitada	CMTL	50,000	MZN 1	Ordinary Share	CEMROL 99% PTTEP MZA1 1%
54	Cove Mozambique Energia Limitada	CMEL	50,000	MZN 1	Ordinary Share	PTTEP MZA1 99% CEMROL 1%
55	PTTEP Brasil Investimentos Em Exploração e Produção de Petróleo e Gás Ltda.	PTTEP BL	790,293,700	BRL 1	Ordinary Share	PTTEP BI 99.9999999% PTTEP NH 0.0000001%

<sup>3</sup> PTTEP AB acquired PTTEP AT's 50 shares for a total amount of AUD 41,352,439.

<sup>4</sup> PTTEP NC had total amount of Member Contribution of USD 1,517,050,000.00 from 2010 to 2015.

<sup>5</sup> PTTEP NH had total amount of Member Contribution of USD 324,423,816.77 from 2013 to 2014 (no member contribution in 2015).

## General and Other Significant Information

No.	Company Name	Abbreviation	Number of Shares Sold	Par Value	Share Type	Shareholders
Petroleum Exploration and Production Business						
56	PTTEP SP Limited	PTTEP SP	2 95,279,585	GBP 2 USD 95,279,585	Ordinary Share	SHL 100%
57	PTTEP HK Investment Limited	PTTEP HKI	10,000	HKD 1	Ordinary Share	PTTEP HK 100%
Service Business						
58	PTTEP Services Limited (Personnel Services Support)	PTTEP Services	100,000	THB 10	Ordinary Share	PTTEP 25% PTTEPI 75%
59	Andaman Transportation Limited (Investments in gas pipeline projects in Myanmar)	ATL	62,500	USD 1	Ordinary Share	PTTEPO 80% MOGE 20%
60	PTTEP Southwest Vietnam Pipeline Company Limited (Investments in gas pipeline projects in Vietnam)	PTTEP SVPC	50,000	USD 1	Ordinary Share	PTTEP H 100%
61	PTTEP Australia International Finance Pty Ltd (Raise Fund for PTTEP Business)	PTTEP AIF	50,000	AUD 1	Ordinary Share	PTTEP AP 100%
62	PTTEP Canada International Finance Limited (Raise Fund for PTTEP Business)	PTTEP CIF	50,000	CAD 1	Ordinary Share	PTTEP NC 100%
63	PTTEP Treasury Center Company Limited (Treasury Center for PTTEP and our subsidiaries)	PTTEP TC	10,000,000	THB 10	Ordinary Share	PTTEP 25% PTTEPI 75%

Remark: Name of other shareholders in subsidiaries

Abbreviation

KrisEnergy

MOGE

MOECO BV

Name

KrisEnergy (Gulf of Thailand) Ltd.

Myanmar Oil and Gas Enterprise

MOECO International B.V.

## Associated Companies' Information\*

As of December 31, 2015, PTTEP had 17 associated companies. Details of the directors of each associated company are disclosed in Attachment 2.

No.	Company Name	Type of Business	Abbreviation	Number of Shares Sold	Par Value	Share Type	Shareholders
1	<b>Energy Complex Company Limited</b> Head Office: 555/1 Energy Complex Building A, Vibhavadi-Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900 Telephone: 66 (0) 2140-1000 Facsimile: 66 (0) 2 140-1122	Property Leasing	EnCo	180,000,000	THB 10	Ordinary Share	<ul style="list-style-type: none"> <li>● PTTEP 50%</li> <li>● PTT 50%</li> </ul>
2	<b>PTT ICT Solutions Company Limited</b> Head Office : 555/1 Energy Complex Building A, floor 4-5, Vibhavadi-Rangsit Road, Chatuchak, Chatuchak, Bangkok 10900 Telephone: 66 (0) 2537 - 3456 Facsimile: 66 (0) 2537 - 2935	Information Technology and Communication Services	PTT ICT	15,000,000	THB 10	Ordinary Share	<ul style="list-style-type: none"> <li>● PTTEP 20%</li> <li>● PTT 20%</li> <li>● PTTGC 40%</li> <li>● ThaiOil 20%</li> </ul>
3	<b>Carigali-PTTEPI Operating Company SDN BHD</b> Head Office: Level 8, Tower 2, PETRONAS Twin Towers Kuala Lumpur City Centre, 50088 Kuala Lumpur, Malaysia Telephone: (603) 2782-2555 Facsimile: (603) 2713-9877	Petroleum Exploration and Production	CPOC	350,000	MYR 1	Ordinary Share	<ul style="list-style-type: none"> <li>● PTTEPI 50%</li> <li>● PC JDA 50%</li> </ul>

\* Associated Company including the business entities in which the Company invests for more than 10% and not exceeding 50%



## General and Other Significant Information

No.	Company Name	Type of Business	Abbreviation	Number of Shares Sold	Par Value	Share Type	Shareholders
4	<b>Moattama Gas Transportation Company</b> Head Office: No.5 Sacred Tooth Relic Lake Avenue, Punn Pin Gone Quarter No. 5, Mayangon Township, Yangon, Myanmar Telephone: (951) 650-977, 660-466 Facsimile: (951) 650-478, 650-479	Gas Pipeline in Myanmar	MGTC	1,000,000	USD 0.03	Ordinary Share	<ul style="list-style-type: none"> <li>PTTEPO 25.5%</li> <li>Unocal Myanmar 28.2625%</li> <li>Total E&amp;P Myanmar 31.2375%</li> <li>MOGE 15%</li> </ul>
	<b>Taninthayi Pipeline Company LLC</b> Head Office: 16 Shwe Taung Kyar Bahan, Yangon, Myanmar Telephone: (951) 526-411-4 Facsimile: (951) 525-698	Gas Pipeline in Myanmar	TPC	100,000	USD 1	Ordinary Share	<ul style="list-style-type: none"> <li>PTTEPO 19.31784%</li> <li>PCM III 30.00140%</li> <li>PCML 10.90878%</li> <li>MOGE 20.45414%</li> <li>NOEL 19.31784%</li> </ul>
	<b>B8/32 Partners Limited</b> Head Office: 19 Siam Commercial Bank Park Plaza, East 3rd Building, 5 <sup>th</sup> floor, Ratchadapisek Road, Chatuchak, Bangkok, 10900 Telephone: 66 (0) 2545-5555 Facsimile: -	Petroleum Exploration and Production	B 8/32 Partners	110,000	THB 100	Ordinary Share	<ul style="list-style-type: none"> <li>PTTEPO 25%</li> <li>MOECO BV 16.71%</li> <li>KrisEnergy 4.63%</li> <li>Chevron Global 46.34%</li> <li>Chevron 7.32%</li> </ul>
	<b>Hoang Long Joint Operating Company</b> Head Office: Suite 2001, Me Linh Point Tower, 2 Ngo Duc Ke Street, District 1, Ho Chi Minh City, S.R. Vietnam Telephone: (848) 3829-9359 Facsimile: (848) 3822-6106	Petroleum Exploration and Production	HL JOC	<sup>6</sup>	-	-	<ul style="list-style-type: none"> <li>PTTEP HL 28.5%</li> <li>PVEP 41%</li> <li>SOCO 28.50%</li> <li>OPECO 2.0%</li> </ul>

<sup>6</sup> No share was issued. Percentage of shareholding is subject to participation interest of the concession.

No.	Company Name	Type of Business	Abbreviation	Number of Shares Sold	Par Value	Share Type	Shareholders
8	<b>Hoan-Vu Joint Operating Company</b>	Petroleum Exploration and Production	HL JOC	7	-	-	<ul style="list-style-type: none"> <li>● PTTEP HV 25%</li> <li>● SOCO 25%</li> <li>● PVEP 50%</li> </ul>
	Head Office: Suite 2006, Me Linh Point Tower, 2 Ngo Duc Ke Street, District 1, Ho Chi Minh City, S.R. Vietnam						
	Telephone: (848) 3823-9525						
	Facsimile: (848) 3823-9526						
9	<b>Mungalalu Truscott Airbase Pty Ltd</b>	Operation of Air Base	-	600	AUD 1	Ordinary Share	<ul style="list-style-type: none"> <li>● PTTEP AAO 50%</li> <li>● Mr. Arthur Hamilton 41.667%</li> <li>● Mr. Alex Wood 8.333%</li> </ul>
	Head Office: Unit 8, 9 Swan Crescent, Winnellie, Northern Territory, 0820, Australia						
	Telephone: (61) 8-8981-6981						
	Facsimile: (61) 8-8918-8017						
10	<b>Troughton Island Pty Ltd</b>	Operation of Air Base (Secondary)	-	100	AUD 1	Ordinary Share	<ul style="list-style-type: none"> <li>● PTTEP AAO 50%</li> <li>● Mr. Arthur Hamilton 44%</li> <li>● Mr. Alex Wood 6%</li> </ul>
	Head Office: Unit 8, 9 Swan Crescent, Winnellie, Northern Territory, 0820, Australia						
	Telephone: (61) 8-8981-6981						
	Facsimile: (61) 8-8918-8017						
11	<b>Groupement Bir Seba</b>	Petroleum Exploration and Production	GBRS	8	-	-	<ul style="list-style-type: none"> <li>● PTTEP AG 35%</li> <li>● PVEP 40%</li> <li>● Sonatrach 25%</li> </ul>
	Head Office: Zone d'activité Route Nationale N°3 BP 256 EURO JAPAN Hassi Messaoud, Ouargla, Algeria						
	Telephone: (213) (0) 29 79 71 66						
	Facsimile: (213) (0) 29 79 09 15						

<sup>7</sup> No share was issued. Percentage of shareholding is subject to participation interest of the concession.

<sup>8</sup> No share was issued. Percentage of shareholding is subject to participation interest of the concession.

## General and Other Significant Information

No.	Company Name	Type of Business	Abbreviation	Number of Shares Sold	Par Value	Share Type	Shareholders
12	<b>PTT FLNG Limited</b> Head Office: 1401 Hutchison House, 10 Harcourt Road, Hong Kong Telephone: (852) 2846 1888 Facsimile: (852) 2845 0476	Manufacture/Production/ Trading of Oil/Gas/Other Energy Supply	PTT FLNG	1,000	HKD 10	Ordinary Share	<ul style="list-style-type: none"> <li>● PTTEP FH 50%</li> <li>● PTT International 50%</li> </ul>
13	<b>Erawan 2 FSO Bahamas Ltd.</b> Head Office: Ocean Centre, Montagu Foreshore, East Bay Street, Nassau, New Providence, Bahamas P.O. Box SS-19084, Nassau, New Providence, Bahamas Telephone: - Facsimile: -	Lease of FSO (vessel)	Erawan 2 FSO Bahamas	100	USD 1	Ordinary Share	<ul style="list-style-type: none"> <li>● JV Marine 13.11%</li> <li>● Chevron Global 65.91%</li> <li>● MOECO 20.98%</li> </ul>
14	<b>Leismer Aerodrome Limited</b> Head Office: Suite 3600, 308 - 4 <sup>th</sup> Ave S.W., Calgary, Alberta T2P 0H7, Canada Telephone: (403) 234-0123 Facsimile: (403) 234-0103	Operation of Air Base	LAL	200	No Par Value	Ordinary Share	<ul style="list-style-type: none"> <li>● PTTEP CA 32%</li> <li>● Statoil Canada 48%</li> <li>● FCCL 20%</li> </ul>
15	<b>Asia Pacific Marine Services (EF) B.V.</b> Head Office: Naritaweg 165, Telestone 8, 1043 BW Amsterdam, The Netherlands Telephone: - Facsimile: -	Lease of FSO (vessel)	Asia Pacific Marine Services	18,000	EUR 1	Ordinary Share	<ul style="list-style-type: none"> <li>● Erawan 2 FSO 100%</li> </ul>

No.	Company Name	Type of Business	Abbreviation	Number of Shares Sold	Par Value	Share Type	Shareholders
16	<b>UAQ Petroleum Inc.</b>	Petroleum Exploration and Production	UAQ	10,000	HKD 1	Ordinary Share	<ul style="list-style-type: none"> <li>● PTTEP FH 30%</li> <li>● Canemir 70%</li> </ul>
	Head Office: Room 3105, Alexandra House						
	18 Chater Road Central, Hong Kong						
	Telephone: (852) 2234-9349						
17	<b>Natuna 2 B.V.</b>	Petroleum Exploration and Production	Natuna 2	90,000	EUR 1	Ordinary Share	<ul style="list-style-type: none"> <li>● PTTEP NH 50%</li> <li>● PHE OG 50%</li> </ul>
	Head Office: Teleportboulevard 140,						
	1043 EJ Amsterdam, The Netherlands						
	Telephone: -						
	Facsimile: -						

Remark: Name of other shareholders in associated companies

Abbreviation	Name	Abbreviation	Name
PTT	PTT Public Company Limited	PC JDA	PC JDA Ltd.
PTTGC	PTT Global Chemical Public Company Limited	PCML	Petronas Carigali Myanmar (Hong Kong) Ltd.
ThaiOil	Thai Oil Public Company Limited	PCM III	Petronas Carigali Myanmar III Inc.
Chevron	Chevron Block B8/32 (Thailand) Ltd.	PHE OG	Pertamina Hulu Energi Oil and Gas Company
Canemir	Canemir Petroleum (UAQ) Corp.	PTT International	PTT International (Singapore) Company Pte. Ltd.
Chevron Global	Chevron Global Energy Inc.	PVEP	PetroVietnam Exploration & Production Corporation
Erawan 2 FSO	Erawan 2 FSO Bahamas Ltd.	SOCO	SOCO Vietnam Ltd.
FCCL	FCCL Partnership	Sonatrach	Société Nationale pour Recherche, la Production, le Transport, la Transformation et la Commercialisation des Hydrocarbures
KrisEnergy	KrisEnergy (Gulf of Thailand) Ltd.		Statoil Canada Ltd.
MOGE	Myanmar Oil and Gas Enterprise		Total E&P Myanmar SAS
MOECO BV	MOECO International B.V.		Unocal Myanmar Offshore Co., Ltd.
MOECO	Mitsui Oil Exploration Co., Ltd.		
NOEL	Nippon Oil Exploration (Myanmar) Ltd.		
OPECO	OPECO Vietnam Ltd.		



## General and Other Significant Information

### References

#### Share Registrar

<b>Name</b>	Thailand Securities Depository Company Limited
<b>Address</b>	93 Rachadapisek Road, Dindaeng, Bangkok 10400, Thailand
<b>Telephone</b>	+66-2009-9000
<b>SET Call Center</b>	+66-2009-9999
<b>Facsimile</b>	+66-2009-9991
<b>E-mail</b>	SETContactCenter@set.or.th
<b>Website</b>	<a href="http://www.set.or.th/tsd">http://www.set.or.th/tsd</a>

#### Registrar and Paying Agent

Registrar and paying agent for THB 2,500 million debentures issued in March 2003, THB 5,000 million debentures issued in May 2009, and THB 5,000 million subordinated capital debentures issued in June 2012

<b>Name</b>	TMB Bank Public Company Limited
<b>Address</b>	Floor 5A, 3000 Phahon Yothin Road, Chatuchak, Bangkok 10900, Thailand
<b>Telephone</b>	+66-2299-1536, +66-2299-1321
<b>Facsimile</b>	+66-2242-3270

Registrar and Paying Agent for THB 11,400 million debentures issued in June 2014, and THB 8,200 million debentures issued in June 2014

<b>Name</b>	Siam Commercial Bank Public Company Limited
<b>Address</b>	3 <sup>rd</sup> Floor, Building 2, 1060 Phetchaburi Road, Makkasan, Ratchthwee, Bangkok 10400, Thailand
<b>Telephone</b>	+66-2256-2325, +66-2256-2326, +66-2256-2327, +66-2256-2328, +66-2256-2329
<b>Facsimile</b>	+66-2256-2406

#### Debentureholders' Representative

Debentureholders' representative for THB 5,000 million debentures issued in May 2009, and THB 5,000 million subordinated capital debentures issued in June 2012

<b>Name</b>	Siam Commercial Bank Public Company Limited
<b>Address</b>	3 <sup>rd</sup> Floor, Building 2, 1060 Phetchaburi Road, Makkasan, Ratchthwee, Bangkok 10400, Thailand
<b>Telephone</b>	+66-2256-2316
<b>Facsimile</b>	+66-2256-2401, +66-2256-2402, +66-2256-2403, +66-2256-2404

#### Trustee

Trustee for USD 700 million debentures issued in April 2011, USD 500 million debentures issued in September 2013, and USD 1,000 million subordinated capital debentures issued in June 2014

<b>Name</b>	BNY Mellon Corporate Trust
<b>Address</b>	#03-01 Millenia Tower, 1 Temasek Avenue, Singapore 039192
<b>Telephone</b>	+65-6432-0351, +65-6432-0354, +65-6432-0120
<b>Facsimile</b>	+65-6883-0338

Trustee for USD 490 million debentures issued in June 2012

<b>Name</b>	Citicorp International Limited
<b>Address</b>	39 <sup>th</sup> Floor, Citibank Tower, 3 Garden Road, Central, Hong Kong
<b>Telephone</b>	+852-2868-7964
<b>Facsimile</b>	+852-2323-0279

#### Registrar and Paying Agent

Registrar and paying agent for bills of exchange with a total revolving credit of up to THB 50,000 million

<b>Name</b>	TMB Bank Public Company Limited
<b>Address</b>	Floor 5A, 3000 Phahon Yothin Road, Chompon, Chatuchak, Bangkok 10900, Thailand
<b>Telephone</b>	+66-2299-1536, +66-2299-1321
<b>Facsimile</b>	+66-2242-3270

### Facility Agent

Facility agent for USD 500 million loan agreement dated in November 2010

**Name** The Bank of Tokyo-Mitsubishi UFJ, Ltd.  
**Address** 6<sup>th</sup> Floor, AIA Central,  
1 Connaught Road, Central, Hong Kong  
**Telephone** +852-2823-6698, +852-2823-6691,  
+852-2823-6962, +852-2823-6693  
**Facsimile** +852-2823-6686

### Process Agent for Bank Loan

Process agent for USD 500 million loan agreement dated in November 2010

**Name** Law Debenture Corporate  
Services Limited  
**Address** 5<sup>th</sup> Floor, 100 Wood Street,  
London EC2V 7EX  
**Telephone** +44-20-7606-5451  
**Facsimile** +44-20-7606-0643

### Process Agent for Equity

**Name** CT Corporation System  
**Address** 13<sup>th</sup> Floor, 111, Eight Avenue,  
New York, NY 10011, U.S.A.  
**Telephone** +1-212-894-8800  
**Facsimile** -

### Interest Rate Swap Counterparties

**Name** Kasikornbank Public Company Limited  
**Division** Capital Markets Business Division  
**Address** 400/22 Phahon Yothin Avenue,  
Samsen-Nai, Phayathai  
Bangkok 10400, Thailand  
**Telephone** +66-2470-2020  
**Facsimile** +66-2470-3065

### Cross Currency Swap Counterparties

**Name** Krung Thai Bank Public Company Limited  
**Division** Corporate Sales, Treasury  
**Address** Building 1 (Nana Nua), 8th Floor,  
35 Sukhumvit Road, Klongtoey Nua,  
Wattana, Bangkok 10110, Thailand  
**Telephone** +66-2208-4649  
**Facsimile** +66-2256-8398

**Name** Kasikornbank Public Company Limited  
**Division** Capital Markets Business Division  
**Address** 400/22 Phahon Yothin Avenue,  
Samsen-Nai, Phayathai Bangkok  
10400, Thailand  
**Telephone** +66-2470-3006  
**Facsimile** +66-2470-3065

**Name** Deutsche Bank AG, Bangkok Branch  
**Division** Corporate Treasury Sales  
**Address** 63 Athenee Tower, 27-29th Floor,  
Wireless Road, Lumpini, Pathumwan,  
Bangkok 10330, Thailand  
**Telephone** +66-2646-5139  
**Facsimile** +66-2651-5892

**Name** Siam Commercial Bank Public  
Company Limited  
**Division** Financial Market Division  
**Address** 12<sup>th</sup> Floor, Zone B, 9 Ratchadapisek Road,  
Chatuchak, Bangkok 10900, Thailand  
**Telephone** +66-2544-5745  
**Facsimile** +66-2937-7969

**Name** Barclays Bank PLC  
**Division** Investment Banking  
**Address** Level 28 One Raffles Quay South Tower,  
Singapore 048583  
**Telephone** +65-6308-2075  
**Address** +65-6308-3319

## General and Other Significant Information

### FX Contracts Counterparties

**Name** Krung Thai Bank Public Company Limited

**Division** Corporate Sales, Treasury

**Address** Building 1 (Nana Nua), 8th Floor, 35 Sukhumvit Road, Klongtoey Nua, Wattana, Bangkok 10110, Thailand

**Telephone** +66-2208-4640

**Facsimile** +66-2256-8398

**Name** Bank of Ayudhya Public Company Limited

**Division** Global Sales Division

**Address** Harindhorn Tower, 54 North Sathorn Road, Silom, Bangrak, Bangkok 10500, Thailand

**Telephone** +66-2021-6380

**Facsimile** +66-2266-3048

**Name** Kasikornbank Public Company Limited

**Division** Capital Markets Business Division

**Address** 400/22 Phahon Yothin Avenue, Samsen-Nai, Phayathai Bangkok 10400, Thailand

**Telephone** +66-2470-3006

**Facsimile** +66-2471-4486

**Name** Citibank, N.A.

**Division** Corporate Sales & Structuring Thailand

**Address** Interchange 21 Building, 399 Sukhumvit Road, Klongtoey Nua, Wattana, Bangkok 10110, Thailand

**Telephone** +66-2788-2785

**Facsimile** +66-2785-4825

**Name** CIMB Thai Bank Public Company Limited

**Division** Global Sales Division

**Address** 44 Langsuan Road, Lumpini, Pathumwan, Bangkok 10330, Thailand

**Telephone** +66-2670-4658, +66-2670-4659

**Facsimile** +66-2657-3281

**Name** TMB Bank Public Company Limited

**Division** Capital Markets

**Address** 3000 Phahon Yothin Road, Chatuchak, Bangkok 10900, Thailand

**Telephone** +66-2676-8008

**Facsimile** +66-2292-4690

**Name** Siam Commercial Bank Public Company Limited

**Division** Financial Market Division

**Address** 12<sup>th</sup> Floor, Zone B, 9 Ratchadapisek Road, Chatuchak, Bangkok 10900, Thailand

**Telephone** +66-2544-5741

**Facsimile** +66-2937-7969

**Name** BNP Paribas, Bangkok Branch

**Division** Global Markets

**Address** 990 Abdulrahim Place, 29th Floor, Rama IV Road, Silom, Bangrak, Bangkok 10500, Thailand

**Telephone** +66-2659-8991

**Facsimile** +66-2636-1929

**Name** Bank of America, N.A., Bangkok Branch

**Division** Fixed Income Currencies and Commodities

**Address** 87/2 All Seasons Place, CRC Tower, 20<sup>th</sup> Floor, Wireless Road, Bangkok 10330, Thailand

**Telephone** +66-2305-2985, +66-2305-2986

**Facsimile** +66-2685-3224

**Name** The Hongkong and Shanghai Banking Corporation Limited

**Division** Corporate Marketing and Sales

**Address** 968 HSBC Building, Rama IV Road, Silom, Bangrak, Bangkok 10500, Thailand

**Telephone** +66-2614-4847-53

## Auditor

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 Phayathai, Bangkok 10400, Thailand  
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## Legal Advisors

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**Name** Ashurst LLP  
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 Financial Centre Tower 3,  
 Singapore 018982  
**Telephone** +65-6221-2214  
**Facsimile** +65-6221-5484

**Name** Baker Botts  
**Address** One Shell Plaza 910 Louisiana Street,  
 Houston, Texas 77002-4995, U.S.A.  
**Telephone** +1-713-229-1234  
**Facsimile** +1-713-229-1522

**Name** Baker & McKenzie/ Trench,  
 Rossi e Watanabe Advogados  
 (Associado a Baker &  
 McKenzie International)  
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 Rio Branco, 1, 19º andar,  
 Setor B 20090-003 Rio de Janeiro,  
 RJ - Brasil  
**Telephone** +55-21-2206-4900  
**Facsimile** +55-21-2206-4949  
**Address (2)** 25th Floor, Abdulrahim Place,  
 990 Rama IV Road, Bangkok 10500,  
 Thailand  
**Telephone** +66-2636-2000  
**Facsimile** +66-2636-2111

**Name** Goodrich, Riquelme y Asociados  
**Address** Paseo de la Reforma 265 Col.  
 Cuauhtemoc 06500 Mexico,  
 D.F. Apartado postal 93 bis  
**Telephone** +52-55-5533-0040  
**Facsimile** +52-55-5525-1227

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**Address (1)** 22F West Tower, Center 1 Building 26,  
 Eulji-ro 5-gil, Jung-gu, Seoul KOREA  
 100-210  
**Telephone** +82-2-6321-5600  
**Facsimile** +82-2-6321-5601  
**Address (2)** Exchange House Primrose Street,  
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 England  
**Telephone** +44-20-7374-8000  
**Facsimile** +44-20-7374-0888  
**Address (3)** 23<sup>rd</sup> Floor, Gloucester Tower,  
 15 Queen's Road Central, Hong Kong  
**Telephone** +852-2845-6639  
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**Address (4)** 50 Raffles Place  
 #24-01 Singapore Land Tower,  
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**Address (5)** Herbert Smith Freehills (Thailand) Limited  
 1403 Abdulrahim Place,  
 990 Rama IV Road, Silom, Bangrak,  
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 8 Connaught Place, Central, Hong Kong  
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**Name** Mallesons Stephen Jaques  
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 152 St Georges Terrace,  
 Perth WA 6000, Australia  
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**Name** Mattos Filho, Veiga Filho,  
 Marrey Jr. e Quiroga Advogados  
**Address** Praia do Flamengo, 200 - 11º andar  
 22210-901 Rio de Janeiro RJ, Brasil  
**Telephone** +55-21-3231-8206  
**Facsimile** -

**Name** Mochtar Karuwin Komar  
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 Sudirman Kav. 31, Jakarta 12820,  
 Indonesia  
**Telephone** +62-2-1571-1130  
**Facsimile** +62-2-1571-1162, +62-2-1570-1686

**Name** Pracha Tooppoltup Law Office  
**Address** 54 Soi 73 Chokchai 4 Road, Ladprao,  
 Ladprao, Bangkok 10230, Thailand  
**Telephone** +66-2-530-3173  
**Facsimile** -

**Name** SAL & Caldeira Advogados, Lda.  
**Address** Julius Nyerere Av. 3412,  
 Maputo, Mozambique - Cx - Postal 2830  
**Telephone** +25-8-2124-1400  
**Facsimile** +25-8-2149-4710

**Name** Siam Premier International Law  
 Office Limited  
**Address** The Offices at CentralWorld,  
 26<sup>th</sup> Floor, 999/9 Rama 1 Road,  
 Pathumwan, Bangkok 10330, Thailand  
**Telephone** +66-2646-1888

**Facsimile** -

**Name** Slaughter and May (Hong Kong)  
**Address** 47<sup>th</sup> Floor, Jardine House,  
 One Connaught Place,  
 Central, Hong Kong  
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### Advisors to the Board of Directors

**Name** Mr. Tongchat Hongladarom  
**Address** 8/48 Prasanmit Condominium,  
 Sukhumvit 23, Klongtoey-Nua,  
 Wattana, Bangkok 10110, Thailand  
**Telephone** +66-2258-4363  
**Facsimile** +66-2258-4363

**Name** Ms. Sukhon Kanchanalai<sup>9</sup>  
**Address** 188 Soi 16, Tesbanimit Tai Road,  
 Prachanivej, Chatuchak,  
 Bangkok 10900, Thailand  
**Telephone** +66-2589-5566  
**Facsimile** -

### Advisor to the Risk Management Committee

**Name** Mr. Nuttachat Charuchinda  
**Address** 52/48 Moo 2, Bangkhen, Nonthaburi  
 11000, Thailand  
**Telephone** +66-2140-3811  
**Facsimile** -

<sup>9</sup> Resigned from Advisor of the Board of Directors on January 1, 2016.

## Other Significant Information

- None -



# Shareholders and Dividend Policy

## Shareholders

### A Top 10 shareholders

As of February 12, 2016, the top 10 shareholders of PTTEP were as follows:

Rank	List of Top 10 Shareholders	Number of Shares	% of Total Number of Shares
1	PTT PUBLIC COMPANY LIMITED	2,591,860,489	65.29
2	THAI NVDR COMPANY LIMITED	173,185,605	4.36
3	CHASE NOMINEES LIMITED	129,219,234	3.26
4	STATE STREET BANK EUROPE LIMITED	94,693,469	2.39
5	THE BANK OF NEW YORK MELLON	51,316,033	1.29
6	SOCIAL SECURITY OFFICE	37,516,877	0.95
7	STATE STREET BANK AND TRUST COMPANY	36,067,018	0.91
8	THE BANK OF NEW YORK (NOMINEES) LIMITED	28,450,921	0.72
9	HSBC BANK PLC-CLIENTS GENERAL A/C	27,180,921	0.69
10	PEOPLE'S BANK OF CHINA	24,161,900	0.61
Total number of shares held by top 10 shareholders		3,193,652,467	80.47
Total fully-paid capitals as of February 12, 2016		3,969,985,400	100

NVDR holder who owns more than 0.50% of the paid-up PTTEP shares\*

Rank	NVDR holder (as of February 12, 2016)	Number of NVDR issues	% of total outstanding shares in underlying stock
1	CHASE NOMINEES LIMITED	32,580,355	0.82
2	STATE STREET BANK AND TRUST COMPANY	31,054,614	0.78
Total shares		63,634,969	1.60

Source: <http://www.set.or.th/set/companyholder.do?symbol=PTTEP-R>

\* Since January 18, 2010, Thai NVDR Co., Ltd. has changed its rule to disclose the names of NVDR holders having over 0.50% of paid-up capital of the underlying securities.

## Major shareholder with controlling influence over PTTEP's policy or operation

PTT, a major shareholder of PTTEP, takes part in determining PTTEP's policy and our operations under the Board's approval. As of December 31, 2015, there were 4 out of 15 directors who were a director or an executive of PTT.

### Dividend Payment Policy

Under normal circumstances, it is a policy of PTTEP's Board of Directors to generally recommend to the shareholders an annual dividend payout of no less than 30% of net income after tax. The Board of Directors, if appropriate, may also decide to pay the interim dividends and subsequently inform the shareholders in the next shareholders' meeting. For PTTEP's subsidiaries, dividend policy is subject to cash flow, future investment plans, and other factors necessary for continuity of their operations, and must be in compliance with related laws and regulations.

Meanwhile, under terms and conditions of PTTEP Subordinated Perpetual Capital Debentures No. 1/2555 THB 5,000 million issued in June 2012 and PTTEP Subordinated Perpetual Capital Debentures USD 1,000 million issued in June 2014, if PTTEP defers the interest payment on these debentures; the Company shall not declare or make any dividend payments.

#### Five-year dividend payment history of PTTEP

Year	Earnings per Share	Dividend per Share	Dividend Payout Ratio
2011	13.48	5.40	40%
2012	17.08	5.80	38%
2013	14.07	6.00	40%
2014	5.19	4.50	82%
2015	-7.96	3.00	N/A*

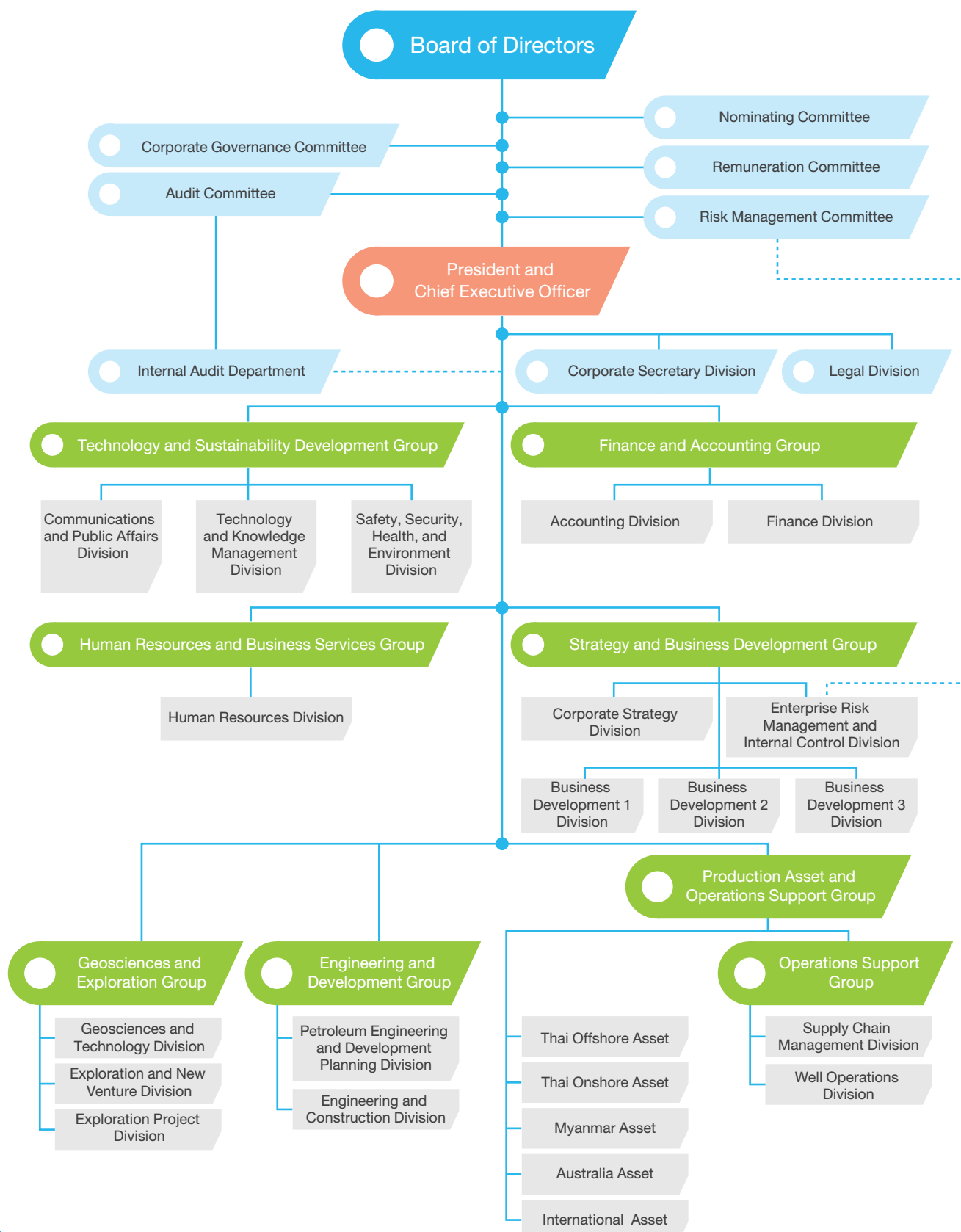
\* Dividend Payout Ratio 2015 is not available due to net loss.



# Management Structure

## PTTEP Organization Structure

As of January 1, 2016





## The Board of Directors

### The Board's Structure

PTTEP's Board of Directors (Board) consists of qualified directors who possess a versatility of expertise with a skill mix in the fields of industry knowledge, accounting and finance, business judgment, management skills, international marketing, business strategy, crisis management, corporate governance, and law. The Company meanwhile does not have any policies which discriminate against the directors based on their gender and race. The directors however must not be over 70 years old and shall possess qualifications according to the Good Corporate Governance and Business Ethics of PTTEP Group (CG&BE), laws relevant to Public Limited Companies and Securities and Exchange, as well as rules and regulations of the Securities Exchange Commission (SEC), the Capital Market Supervisory Board (CMSB), the Stock Exchange of Thailand (SET), and relevant resolutions of the Cabinet. The directors shall also be highly committed and dedicated their time to fully perform the duties and responsibilities. The directors, for example, would be regarded as unqualified if absent from the Board's meeting for more than three consecutive times without a reasonable justification.

The Board structure consists of 15 skillful directors, and this is considered appropriate for the Company's operational size. The Board is divided into two categories, non-executive and executive directors. In addition, the Board shall not comprise independent directors of less than half of the incumbent members. As of December 31, 2015, the Board consisted of 15 directors.

- 14 non-executive directors (93.34% of total members)
- 1 executive director: President and Chief Executive Officer
- 8 independent directors (53.34% of total members, a ratio which was more than half of the incumbent members)

PTT is the only major shareholder of PTTEP, while the minor shareholders are dispersed. Therefore, the aforementioned Board's component and proportion are considered appropriate to maintain the balance within the Board for the best interests of all the shareholders.

Names, biographies, qualifications, experience and shareholding percentage of non-executive directors, executive directors, independent directors, and directors from the private sector, including directors from PTT, are disclosed in the "Information of the Board of Directors, Management, Controlling Persons and Corporate Secretary" section as well as in PTTEP's annual report and website.

### Authorities and Responsibilities of the Board

Based on the principles of accountability, duty of care and duty of loyalty, the Board has clearly defined their roles and responsibilities and effectively carried them out strictly in line with those stipulated by the laws, objectives, Articles of Association of PTTEP, and resolutions of the shareholders' and Board's meetings. The scope of the authorities and responsibilities of the Board are as follows:

- 1) To govern PTTEP's operations to be in compliance with CG&BE as well as to be a leader and role model in adopting, advising, communicating, and educating CG&BE for the PTTEP Group's employees and other organizations
- 2) To consider and approve of the statement of vision, mission, and corporate values of PTTEP Group to ensure that they are effectively applicable and practical
- 3) To consider and approve of the PTTEP Group's strategic plan, business direction, targets, workforce structure, and other significant operations, including regularly monitoring and reviewing operation results to ensure they are in line with the Company's strategy, operational direction, targets, and policies as planned with emphasizes on mobility and applicability in order to allow the management to effectively and efficiently manage the business

## Management Structure

- 4) To establish efficient and adequate internal control systems by having a clear set of regulations and work processes as well as having a standardized and reliable accounting system and financial reporting, appropriate and adequate risk management, effective compliance program, and a regular monitoring system
- 5) To consider and approve significant matters as prescribed by the laws or in the Company's affidavits, policies or regulations, as well as matters that may result in corporate obligations
- 6) To consider the cases which are related to conflicts of interest in a prudent and transparent manner as well as to report to the Company of vested interests of oneself and/or of related persons, including prevention of misuse of the Company's properties and execution of transactions with the Company's connected persons in an inappropriate way
- 7) To ensure that the Company has clear and proper regulations, a standardized and reliable financial reporting, an efficient internal control system, and a proper risk management
- 8) To govern the Company to engage with both the internal and external auditors to ensure that they perform their duties effectively
- 9) To govern the Company to communicate and disclose information to the Company's stakeholders in an accurate, complete, appropriate, and timely manner
- 10) To govern the Company to treat the stakeholders with a fair and equal treatment
- 11) To consider, approve and appoint specialists from different professional fields to provide the Company with insight information as well as to act on our behalf on significant matters which can significantly affect the financial standing and reputation of PTTEP Group
- 12) To consider and approve the Board Performance Target as well as to evaluate performance of the Board, Chairman of the Board, and sub-committees
- 13) To consider and approve the Performance Agreement of the President and Chief Executive Officer (CEO) as well as to evaluate performance and determine

remuneration of CEO to align with the performance results. The Board is also responsible for governing that PTTEP has an effective performance evaluation process of our executives.

- 14) To consider and delegate appropriate authority to CEO to manage PTTEP's operations according to the Company's strategic plan, business direction, targets and policies of the organization, as well as to govern the Company to implement appropriate and effective evaluation tools for the performance of CEO

The Board is permitted to make requests for information and seek advice and services regarding the business operations from the management. In addition, if deemed necessary and appropriate, the directors may seek advice from external and independent advisors at the Company's expense.

### Sub-Committees

#### The Corporate Governance Committee

PTTEP's Corporate Governance Committee has the duties and responsibilities according to its charter as follows:

- 1) To establish the Good Corporate Governance and Business Ethics of PTTEP Group (CG&BE) for the Board's approval for implementations throughout the organization
- 2) To promote CG&BE to the Board, management, and employees to ensure that it is complied with in all areas of the Company's business operations
- 3) To review Business Ethics of the Company as well as practices regarding the Company's Good Corporate Governance to ensure that they are in line with relevant laws as well as practices of and recommendations from leading international organizations before proposing them to the Board for approval and corresponding them with the shareholders
- 4) To govern PTTEP to carry out an assessment on our compliance with CG&BE
- 5) To disclose information, with prior approval of the Board, regarding the Company's Good Corporate Governance to our stakeholders in the Company's annual report

- 6) To oversee and provide recommendations on the Corporate Social Responsibility (CSR) activities
- 7) To regularly review and update its own charter to ensure appropriateness
- 8) To disclose the performance of the Corporate Governance Committee in the Company's annual report
- 9) To perform other duties relevant to the Good Corporate Governance of PTTEP Group as assigned by the Board

The Corporate Governance Committee consists of at least three directors, all of whom must be independent directors. As of December 31, 2015, the Committee comprised three members as follows:

- Admiral Tanarat Ubol  
Chairman of the Committee and Independent Director
- Mr. Songsak Saicheua  
Member and Independent Director
- Mr. Piti Tantakasem  
Member and Independent Director

Mr. Songsak Saicheua was appointed on April 30, 2015 in replacement of Mr. Nuttavudh Photisarao.

According to its charter, the Committee must hold the meeting at least four times a year. In 2015, the Committee held six meetings, while all incumbent directors as well as the Company's Corporate Secretary, acting as the Committee's secretary, attended all the meetings. The Committee has disclosed its annual performance in the Corporate Governance Committee Report for 2015.

### The Audit Committee

PTTEP's Audit Committee has the duties and responsibilities according to its charter as follows:

- 1) To review the Company's financial reports with the external auditor on a quarterly basis to ensure accuracy and adequacy
- 2) To review the Company's performance in compliance with the securities and exchange laws, SET's regulations, and other laws related to the business

- 3) To review connected transactions or transactions that may lead to conflicts of interest to ensure that these transactions comply with the laws and SET's regulations and that they are reasonable as well as in the best interests of the Company
- 4) To ensure that the Company has efficient and appropriate internal control and internal audit systems, including the audit reports and approaches taken, as well as to assess our audit results in various activities according to the procedures and acceptable standards in coordination with the external auditor
- 5) To consider, select, and propose appointment of the external auditor, to consider proposal of the audit fees, and to attend the non-executive meetings with the external auditor at least once a year
- 6) To determine the independence of the Company's Internal Audit Department, as well as to endorse appointments, transfers, and review of merits or punishments of the Head of the Internal Audit Department. If the Head of the Internal Audit Department is the subject of a report, the Audit Committee will appoint the Investigation Committee to assume the role.
- 7) To approve the audit plan of the Internal Audit Department
- 8) To endorse budget and workforce requirements of the Internal Audit Department for the management to propose to the Board
- 9) To approve charter of the Internal Audit Department
- 10) To approve the Conflict of Interest Form required for the Head of the Internal Audit Department in case he or she must personally conduct the auditing
- 11) To endorse auditing results in the annual audit plan as well as additional auditing results as requested
- 12) To attend the shareholders' meeting to answer questions regarding the Committee's performance or appointment of the external auditor
- 13) To annually review and update its own charter to ensure its appropriateness
- 14) To perform other duties as assigned by the Board
- 15) To prepare and disclose the Audit Committee Report in the Company's annual report

## Management Structure

The Audit Committee consists of at least three directors, all of whom must be an independent director with knowledge, expertise, and experience in auditing financial statements. As of December 31, 2015, the Committee comprised three members as follows:

Director Name	Position	Financial Statements Audit Experience
Mr. Ampon Kittiampon	Chairman for two terms <ul style="list-style-type: none"> <li>1<sup>st</sup> term: April 25, 2011 - March 30, 2013</li> <li>2<sup>nd</sup> term: April 25, 2013 - Present</li> </ul>	<ul style="list-style-type: none"> <li>December 2005 - April 2007: Member of the Audit Committee, Rayong Refinery Plc.</li> <li>May - December 2007: Chairman of the Audit Committee, Rayong Refinery Plc.</li> <li>April 2010 - April 2011: Chairman of the Audit Committee, PTT Plc.</li> </ul>
Mr. Achporn Charuchinda	Member October 31, 2013 - Present	<ul style="list-style-type: none"> <li>2007 - 2013: Chairman of the Audit Committee, Bank of Thailand's Financial Institutions Development Funds</li> <li>2013 - 2014: Member of the Audit Committee, Metropolitan Waterworks Authority</li> </ul>
Mr. Sethaput Suthiwart-Narueput	Member September 25, 2014 - Present	<ul style="list-style-type: none"> <li>2011 - 2012: Director and Chairman of the Audit Committee, TMB Bank Plc.</li> <li>Experiences in Financial Statements Analysis:                             <ol style="list-style-type: none"> <li>2008 - 2009: President, SCB Asset Management</li> <li>2007 - 2008: Managing Director and Head of Research, SCB Securities</li> </ol> </li> </ul>

According to its charter, the Committee must hold the meeting on a quarterly basis. In 2015, the Committee held 11 meetings, and 66 agenda items were considered. The majority of incumbent directors and the Committee's secretary, who was the Vice President of the Internal Audit Department, attended all the meetings. The Committee disclosed its annual performance in the Audit Committee Report for 2015.

## The Nominating Committee

PTTEP's Nominating Committee has the duties and responsibilities according to its charter as follows:

- 1) To select and nominate individuals who are qualified to be directors or President and Chief Executive Officer (CEO) to the Board for their consideration as well as to the Annual Shareholder's General Meeting for the shareholders' approval when there is a vacancy or a need to replace those whose term has expired by taking into consideration the Board composition, their knowledge and capability, experience proven useful to PTTEP, the number of companies in which they had served as a director, and their conflict of interest
- 2) To prepare a list of possible candidates for the Company's new directors or CEO in advance and/or when there is a vacancy
- 3) To accept opinions or suggestions from the Board and/or CEO of PTT (if any) to supplement the nomination selection decision before submitting it to the Board for consideration and to the AGM (as the case may be)
- 4) To consider the annual Board Performance Target and the Performance Agreement of the Board and CEO and propose them to the Board for approval as well as to set the Performance Evaluation Form of the Chairman, directors, sub-committees, and President and Chief Executive Officer
- 5) To consider and propose qualified directors to be a member of the Board or the chairman of the sub-committees when there is a vacancy as well as to propose restructuring of the sub-committees as deemed appropriate
- 6) To regularly review and update its own charter in order to ensure its appropriateness
- 7) To disclose performance of the Committee in the Company's annual report
- 8) To perform other duties relevant to the nomination of directors or the Chief Executive Officer, as assigned by the Board

The Nominating Committee consists of at least three directors, in which the Chairman and the majority of the members must be an independent director. As of December 31, 2015, the Committee comprised three members, two of which were independent directors as follows:

The Nominating Committee consists of at least three directors, in which the Chairman and the majority of the members must be independent directors. As of December 31, 2015, the Committee comprised three members, two of which were independent directors as follows:

- Mr. Ampon Kittiampon  
Chairman and Independent Director
- Mr. Manas Jamveha  
Member
- Colonel Nimit Suwannarat  
Member and Independent Director

Mr. Ampon Kittiampon assumed the chairmanship from January 29, 2015 in replacement of Mr. Nuttavudh Photisaro.

According to its charter, the Committee must hold the meeting at least two times a year. In 2015, the Committee held seven meetings, and the majority of incumbent directors as well as the Company's Corporate Secretary, acting as the Committee's secretary, attended all the meetings. The Committee has disclosed its annual performance in the Nominating Committee Report for 2015.

## The Remuneration Committee

PTTEP's Remuneration Committee has the duties and responsibilities according to its charter as follows:

- 1) To consider remuneration of the Board and sub-committees before proposing at the Annual General Shareholders' Meeting for approval, using the fair and reasonable criteria or principles, while also ensuring that the remunerations are according to the individual performance results, the Company's performance, the industry practices, as well as the scope of the duties and responsibilities



## Management Structure

- 2) To consider the remunerations of the President and Chief Executive Officer (CEO), and the salary structure of the Company's executives with the fair and reasonable criteria or principles before proposing them to the Board for approval. The remuneration of CEO must be in line with the duties and responsibilities as well as his or her performance results
- 3) To evaluate performance of the Remuneration Committee and report to the Board for an annual disclosure to the shareholders
- 4) To regularly review and update the Remuneration Committee Charter to ensure its appropriateness
- 5) To perform other duties as assigned by the Board

The Remuneration Committee consists of at least three directors, in which the Chairman and the majority of the members must be independent directors. As of December 31, 2015, the Committee comprised three members, two of which were independent directors as follows:

- Mr. Achporn Charuchinda  
Chairman and Independent Director
- Admiral Tanarat Ubol  
Member and Independent Director
- Chakkrit Parapuntakul  
Member

Mr. Chakkrit Parapuntakul was appointed as a member of the Committee in replacement of Mr. Pailin Chuchottaworn on April 30, 2015.

According to its charter, the Committee must hold the meeting at least two times a year. In 2015, the Committee held two meetings, and all incumbent directors as well as the Company's Corporate Secretary, acting as the Committee's secretary, attended all the meetings. The Committee has disclosed its annual performance in the Remuneration Committee Report for 2015.

### The Risk Management Committee

PTTEP's Risk Management Committee has the duties and responsibilities according to its charter as follows:

- 1) To define the policy framework and process for risk management, including recommendations on corporate risk management to the Board and management
- 2) To promote and implement the risk strategy and policy by enhancing the level of risk awareness within the Company, through the development of appropriate procedures and commitment of resources
- 3) To maintain an enterprise-wide view of risks which are related to corporate direction and E&P value chain such as exploration risk, development risk, SSHE risk, investment and geopolitical risk, financial risk, organizational capability risk, and law and regulatory risk, as well as to recommend mitigation strategy to manage the risks to keep them within the acceptable level according to clause (1) and to continuously monitor, assess and improve the mitigation strategy in responding to changing of the business environment
- 4) To support the risk management function in assessing key risk factors and provide advices on other potential risks which may impact the Company for a continuous and efficient risk management comparable to other leading companies, as well as to assign certain tasks related to PTTEP's risk management to the risk management function to perform
- 5) To support the monitoring of risks across PTTEP and regularly report to the Board
- 6) To disclose the Committee's performance in the Company's annual report
- 7) To regularly review and update its own charter to ensure its appropriateness
- 8) To perform other duties relating to the Company's risk management as assigned by the Board

The Risk Management Committee consists of at least three directors, while at least one member must be an independent director. As of December 31, 2015, the Committee comprised six members, three of which were independent directors as follows:

- Mr. Sethaput Suthiwart-Narueput  
Chairman and Independent Director
- Colonel Nimit Suwannarat  
Member and Independent Director
- Mr. Piti Tantakasem  
Member and Independent Director
- Mr. Pitipan Teparatimargorn      Member
- Mr. Wirat Uanarumit              Member
- Mr. Twarath Sutabutr            Member

On November 1, 2015, Mr. Sethaput Suthiwart-Narueput assumed the chairmanship in replacement of Mr. Nuttachat Charuchinda, who resigned from the Committee, while Mr. Pitipan Teparatimargorn, Mr. Wirat Uanarumit, and Mr. Twarath Sutabutr were appointed as members of the Risk Management Committee.

According to its charter, the Committee must hold the meeting at least four times a year. In 2015, the Committee held 11 meetings and two informal meetings without any remuneration, while the majority of incumbent directors attended all the meetings. The Committee's secretary, who was the Executive Vice President of the Strategy and Business Development Group, also attended the meetings. The Committee has disclosed its annual performance in the Risk Management Committee Report for 2015.

### Independent Directors Committee

PTTEP's Independent Directors Committee has the duties and responsibilities according to its charter as follows:

- 1) To propose to the Board and/or President and Chief Executive Officer (as the case may be) on significant matters that are beneficial to the Company as well as major and minor shareholders
- 2) To advise the Board and independent directors on their roles and responsibilities for the benefits of the Company as well as major and minor shareholders
- 3) To review the Company's operations to ensure that they comply with the laws relevant to independent directors, as well as to review the definition of independent directors to be lawfully appropriate and complete

- 4) To perform other duties as assigned by the Board, provided that such duties do not affect the Committee's independence
- 5) To regularly review and update the Independent Directors Committee Charter to ensure its appropriateness

The directors who meet all of the qualifications of an independent director according to CG&BE are considered as an independent director without requiring appointment from the Nominating Committee. As of December 31, 2015, the Committee comprised eight members as follows:

- Mr. Prajya Phinyawat              Chairman
- Admiral Tanarat Ubol              Vice Chairman
- Mr. Ampon Kittiampon            Member
- Mr. Achporn Charuchinda        Member
- Colonel Nimit Suwannarat        Member
- Mr. Sethaput Suthiwart-Narueput    Member
- Mr. Piti Tantakasem              Member
- Mr. Songsak Saicheua              Member

According to its charter, the Committee must hold the meeting at least four times a year. In 2015, the Committee held four meetings, and the majority of incumbent directors as well as the Company's Corporate Secretary, acting as the Committee's secretary, attended all the meetings. There was no compensation paid to the members of the Committee for their meeting attendance. The Committee has disclosed its annual performance in the Independent Directors Committee Report for 2015.

### PTTEP's Definition of Independent Directors

The Good Corporate Governance of PTTEP has defined the qualifications of the Company's independent directors more strictly than those defined by the Capital Market Supervisory Board, specifically in the area of shareholding as clarified in No. (1) below. Our definitions of an independent director, whose qualification are annually reviewed, are as follows:

- 1) Holding shares not exceeding 0.5 percent of the total number of shares with voting rights of PTTEP, our parent company, subsidiary company, associated company, major shareholder or controlling person, including

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shares held by related persons of such independent director

- 2) Neither being nor used to be an executive director, employee, staff, or advisor who receives salary, or a controlling person of PTTEP, our parent company, subsidiary companies, associated companies, same-level subsidiary companies, major shareholder or controlling person, unless the foregoing status has ended for not less than two years prior to his or her appointment as the Company's independent director. Such prohibited characteristic shall not include the case where the independent director used to be a government official or advisor of a government unit, which is a major shareholder, or a controlling person of the Company.
- 3) Not being a person related by blood or legal registration as a father, mother, spouse, sibling, and child, including spouse of a child of the Company's director, executive, major shareholder, controlling person, or person to be nominated as a director, executive, or controlling person of PTTEP or one of our subsidiary companies
- 4) Neither having nor used to have a business relationship with PTTEP, our parent company, subsidiary company, associated company, major shareholder, or controlling person, in the manner which may interfere with his or her independent judgment, and neither being nor used to be a significant shareholder or controlling person of anyone having a business relationship with the Company, our parent company, subsidiary company, associated company, major shareholder or controlling person, unless the foregoing relationship has ended for not less than two years.

The term 'business relationship' under the first paragraph shall include normal business transactions, rental or lease of immovable property, transactions relating to assets or services or granting or receiving of financial assistance. For example, these include receiving or extending of loans, guarantee, providing assets as collateral, and other similar actions which can potentially result in PTTEP or his counterparty being subject to

indebtedness payable to the other party in the amount of three percent or more of the net tangible assets of PTTEP or twenty million baht or more, whichever is lower. The amount of such indebtedness shall be calculated according to the method for calculation of the value of connected transactions under the notification of the Capital Market Supervisory Board's governing rules on connected transactions *mutatis mutandis*. 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 PTTEP, our parent company, subsidiary company, associated company, 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, our parent company, subsidiary company, associated company, major shareholder or controlling person, unless the foregoing relationship has ended for not less than two years
- 6) Neither being nor used to be a provider of any professional services, including those as a legal advisor or financial advisor who receives service fees exceeding two million baht per year from PTTEP, our parent company, subsidiary company, associated company, major shareholder or controlling person, and not being a significant shareholder, controlling person or partner of the provider of the professional services, unless the foregoing relationship has ended for not less than two years
- 7) Not undertaking any businesses in the same nature and in competition to the business of PTTEP or our subsidiary company, or not being a significant partner in a partnership or being an executive director, employee, staff, advisor who receives salary or holds shares exceeding one percent of the total number of shares with voting rights of a company which undertakes its business in the same nature and in competition to that of the Company or our subsidiary

- 8) Not being a director appointed as representative of directors of PTTEP, the major shareholder or any shareholders who are related to the major shareholder
- 9) Not having any other characteristics which cause an inability to express independent opinions regarding PTTEP's business operations

After being appointed as an independent director with the qualifications under No. (1) to (9), the independent director may be assigned by the Board to take part in the business decision of PTTEP, our parent company, subsidiary company, associated company, same-level subsidiary company, major shareholder or controlling person, provided that such decision shall be in the form of a collective decision.

The definition of each of the specific words mentioned is subject to the Notification of the Capital Market Supervisory Board's RE: Determination of Definitions relating to Issuance and Offer for Sale of Securities.

#### Business Relationship or Professional Services of Independent Directors for the Company during the Past Fiscal Year

- None -

### Performance Appraisal of the Board

The Good Corporate Governance and Business Ethics of PTTEP Group (CG&BE) stipulates that there should be an annual performance appraisal for the Board. In 2015, the appraisal of the Board derived from the score from Board Performance Target, while the Chairman's and sub-committees' would be evaluated by the Board using the corresponding appraisal forms. This allows the Company's directors to review their performance, key issues, and obstacles with which they had faced during the past year as well as to enhance their directorship efficiencies. The Nominating Committee determines the appraisal forms and considers the Board Performance Target prior to proposing to the Board for consideration and approval. The Board's performance appraisal comprises the followings:

- 1) Individual self-appraisal and individual cross-appraisal by the other directors, including four evaluation topics, namely (1) Qualifications, (2) Independence (3) Roles and Responsibilities (4) Training and Self-Development
- 2) Appraisal of the entire Board, including six evaluation topics, namely (1) Corporate Policies and Strategic Planning (2) Board Performance (3) Management Governance (4) Board Meetings (5) Board Structure and Qualifications (6) Training and Development
- 3) Appraisal of the sub-committees which includes questions on each of the sub-committee's performance efficiency according to the roles and responsibilities stated in their individual charter
- 4) Appraisal of the Chairman which includes questions on the Chairman's performance efficiency according to the roles and responsibilities of the Chairman as stated in CG&BE under Section 6.3: Roles of the Board of Directors and Management. This includes topics such as acting as the Chairman of the Board meetings and the Annual General Shareholders' Meeting, setting agendas for the Board meetings, and performing the others of the Board's meeting-related roles.

Unchanged from 2014, the 2015 appraisal set a weight for each of the topics with a scoring system of 1 to 5: 1 = urgent improvement needed, 2 = improvement needed, 3 = fair, 4 = good, 5 = very good. The 2015 annual results were as follows:

The appraisal of the Board consisted of two parts, in which each weighs 50%, i.e. score from the self-appraisal of the Board and score from the Board Performance Target. Details can be summarized as follows:

- 1) The self-appraisal score averaged at 4.85 which was within the highest range, while it was 4.71 in 2014. The individual cross-appraisal by other directors' score averaged at 4.87.
- 2) The appraisal score of the Board derived from two parts, namely
  - 2.1) Score from the Board Performance Target was 3.44, where the score was 3.54 in 2014.

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- 2.2) Score from the self-appraisal of the Board averaged at 4.92, while it was 4.80 in 2014.

The overall appraisal score of the Board for 2015 therefore averaged at 4.18, while it was 4.17 in 2014.

- 3) The appraisal scores of the five sub-committees were within the highest range as follows:

3.1) The appraisal score of the Audit Committee was 4.97, while it was 4.91 in 2014.

3.2) The appraisal score of the Remuneration Committee was 4.97, while it was 4.84 in 2014.

3.3) The appraisal score of the Nominating Committee was 4.91, while it was 4.79 in 2014.

3.4) The appraisal score of the Corporate Governance Committee was 4.87, while it was 4.80 in 2014.

3.5) The appraisal score of the Risk Management Committee was 4.96, while it was 4.83 in 2014.

- 4) The appraisal of the Chairman by the Board was 4.95, while it was 4.96 in 2014.

PTTEP reports the score results to the Board for acknowledgement before disclosing them in the annual report. Recommendations from the Board's appraisal will then be used for efficiency improvement of the Board, sub-committees, Chairman, and management in the future. To exemplify, the Board shall allocate much more timing to discuss, review, and consider important matters such as policy setting, long-term strategic and investment planning, human resource management especially on the succession plan development for critical roles, and establishment of a more apparent Corporate Social Responsibility (CSR) plan. In addition, the directors will put more emphasis toward self-development by attending trainings relative to the Board performance efficiency and fully support the initiatives which would enhance the Company's medium-term and long-term strategic planning.

### Performance Appraisal of the President and Chief Executive Officer

The Board assigns the Remuneration Committee to conduct a performance appraisal of the President and Chief Executive Officer (CEO). The appraisal form is determined by the Nominating Committee and based on the Performance Agreement for CEO, in which the result will be measured by the Company's KPI in that year. The appraisal result must also be approved by the Board to ensure check and balance system as well as to allow the Company to monitor the performance of CEO in comparison to his or her preset short- and long-term targets. The appraisal result essentially provides the transparency and justification in consideration of CEO's remuneration, in addition to promoting the Company's Good Corporate Governance and a greater operational efficiency in the future.

### The Board's Meeting

The Board's monthly meetings and agendas are scheduled and predetermined in advance each year by the Board itself, while there are normally 12 meetings being held annually on the last Thursday of every month. The Board members have been informed of 2016 meeting schedule since September 2010. Meetings related to the Company's strategic planning, in which the Board has greatly committed its time and priority, are commonly held as an off-site meeting. Additional meetings will be held when deemed appropriate. In 2015, there were 15 of the Board's meetings. The Board usually receives meeting invitations from the Corporate Secretary, along with agendas and important documents related to the meetings, to consider at least 7 working days prior to the meeting date, except in those urgent cases. In addition, the agenda documents are delivered through Application Software to facilitate the convenience and timeliness for the directors as well as to promote a paperless process.



Generally, the Company's Chairman, the President and Chief Executive Officer (CEO), and the Corporate Secretary will consider the agendas which will be proposed in the Board's meetings, but in practice, the Company's directors also have the eligibility to propose the agendas as well.

The Board's meeting agendas are clearly classified, namely, the agendas for approval, agendas for acknowledgement, and the monthly agenda of Performance Review as well as Budget Execution. In 2015, there were 66 and 146 agendas proposed for approval and acknowledgement, respectively, while the important standing agendas are as follows:

Month	Standing Agendas
January	<ul style="list-style-type: none"> <li>● Annual General Shareholders' Meeting Documents Preparation, including:               <ol style="list-style-type: none"> <li>1) Unaudited Annual Financial Statements</li> <li>2) Dividend Payment</li> <li>3) Auditor Appointment and Auditor's Fees Consideration</li> <li>4) Board of Directors' and Sub-committees' Remuneration</li> <li>5) Appointment of New Directors in Replacement of those who are due to Retirement by Rotation</li> </ol> </li> </ul>
February	<ul style="list-style-type: none"> <li>● Annual Registration Statement and Annual Report</li> <li>● PTTEP's Board Performance Agreement</li> </ul>
March	<ul style="list-style-type: none"> <li>● Annual Strategic Direction and Planning</li> <li>● Annual General Shareholders' Meeting Preparation</li> </ul>
April	<ul style="list-style-type: none"> <li>● Election of the Chairman, Appointment of Sub-committee Members and Authorized Directors who may Sign to Bind the Company</li> </ul>
July	<ul style="list-style-type: none"> <li>● Policy Setting and Strategic Direction; Annual Manpower Structure</li> <li>● Interim Dividend Payment (If any)</li> </ul>
September	<ul style="list-style-type: none"> <li>● Board Meeting Schedule</li> </ul>
November	<ul style="list-style-type: none"> <li>● Business Plan, 5-Year Investment Plan, and Annual Expenditure Budgeting</li> <li>● Annual Procurement Plan</li> </ul>
December	<ul style="list-style-type: none"> <li>● Annual Performance Appraisal of PTTEP's Board of Directors, Sub-committees, and the Chairman</li> <li>● PTTEP Corporate Key Performance Indicator (KPI) and Employees' Merit Increase and Annual Special Payment</li> <li>● President and Chief Executive Officer's Key Performance Indicator (KPI) and Performance Agreement</li> </ul>



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There were also agendas for consideration corresponding to the business impacts from the continuous decline in oil price. These included risk management, cost reduction, business plan and budget adjustments, project investment plans, appointment of President and Chief Executive Officer, PTTEP Reorganization for long-term growth, and Company's Charters amendment such as the Procurement for Exploration and Production Business Charter and the Procurement Charter B.E. 2558.

During each of the meetings, which usually lasted approximately three hours, the Chairman would allocate an adequate period of time for each agenda to provide the opportunity for the directors to express their opinions independently. The Company's executives were also invited to attend the meetings to provide the necessary information as well as to acknowledge the policies and issues being raised to accommodate the implementation. The Corporate Secretary, who was also appointed as the Board's Secretary, attended every meeting to administer and provide advice to the Board on related rules and regulations for proper practices, took the minutes of the meetings, and kept a complete filing of all the necessary meeting information and documents.

The Board's resolution is based on the majority vote, whereas one director is eligible for one vote. Shall a director have a stake in one of the issues, he or she will not be allowed to attend the meeting and/or to exercise a vote in the particular issue. In the circumstances where the voting is tied, the Chairman of the meeting is entitled to the one additional and final vote.

The issues which are required to receive an approval of more than three-fourth of the total number of the Company's eligible shareholders attending the meeting are as follows:

- 1) Selling or transferring, in whole or a significant part, of the Company's business
- 2) Purchasing or accepting of transfer of business of Other Companies or private companies by PTTEP

- 3) Making, amending or terminating of contracts related to hiring of the Company's business, in whole or a significant part, including entrustment of the management to or consolidation of the business with other entities with the purpose of profit and loss sharing
- 4) Amending of the Company's Memorandum of Association or the Articles of Association
- 5) Increasing and decreasing of the Company's capital, issuing of debentures, merger and acquisition, and business dissolution
- 6) In case where the Company or one of our subsidiaries agrees to enter connected transactions or sales or acquisition of the Company or the subsidiaries assets, as determined by the Stock Exchange of Thailand's announcement on connected transactions of listed companies (as the case may be)

The minutes of the Board meetings cover all significant matters in completion. For the issues seeking approval, the resolutions are unanimous. Name of the persons attending or absented from the meetings, name of meetings' attendants, and name and content of those who state his or her opinions, questions, answers, or clarifications are recorded in details, while the reports of the minutes are systematically filed and kept in safety. All directors of the Board usually attend all of the meetings unless an absence deemed necessary. In which case, the director must provide the Boards' Chairman with an absent letter which is subsequently recorded in the report of individual directors' meeting attendance.

In 2015, the non-executive meetings were held two times, in July and December, which were without the presence of the management and were held prior to the ordinary Board Meeting. The purpose of the meetings was to discuss and clarify some ongoing issues which were of interest, while the results were summarized and acknowledged to CEO for further evaluation.

## Meeting Attendance of PTTEP Directors in 2015

Director's Name	Board	Independent Directors Committee	Non-Executive Director Committee	Corporate Governance Committee	Audit Committee	Remuneration Committee	Nominating Committee	Risk Management Committee	Annual General Shareholders' Meeting 2015
	Total number of meetings								
	15 times	4 times	2 times	6 times	11 times	2 times	7 times	11 times	1 time
1. Mr. Prajya Phinyawat <sup>1</sup>	15/15	4/4	2/2	-	-	-	-	-	1/1
2. Mr. Chakkrit Parapuntakul <sup>1</sup>	13/15	-	1/2	-	-	2/2	-	-	1/1
3. Mr. Ampon Kittiampon <sup>2</sup>	15/15	4/4	2/2	-	11/11	-	7/7	-	1/1
4. Mr. Tevin Vongvanich	15/15	-	1/1	-	-	-	-	-	1/1
5. Mr. Manas Jamveha	15/15	-	2/2	-	-	-	7/7	-	1/1
6. Mr. Achporn Charuchinda <sup>3</sup>	13/15	4/4	2/2	3/3	11/11	2/2	-	-	1/1
7. Admiral Tanarat Ubol <sup>1</sup>	14/15	4/4	2/2	6/6	-	2/2	-	-	1/1
8. Colonel Nimit Suwannarat	13/15	4/4	2/2	-	-	-	5/7	5/11	1/1
9. Mr. Sethaput Suthiwart-Narueput <sup>4</sup>	14/15	4/4	2/2	-	10/11	-	-	11/11	1/1
10. Mr. Piti Tantakasem <sup>1</sup>	15/15	4/4	2/2	6/6	-	-	-	7/7	1/1
11. Mr. Wirat Unanarumit <sup>5, 6</sup>	11/13	-	2/2	-	-	-	-	1/2	1/1
12. Mr. Songsak Saicheua <sup>1, 7</sup>	11/11	3/3	2/2	3/3	-	-	-	-	-
13. Mr. Twarath Sutabutr <sup>6, 8</sup>	3/4	-	1/1	-	-	-	-	2/2	-
14. Mr. Pitipan Tepartimargorn <sup>6</sup>	2/2	-	1/1	-	-	-	-	2/2	-
15. Mr. Somporn Vongvuthipornchai <sup>9</sup>	3/3	-	-	-	-	-	-	-	-
Former directors resigning during 2015 <sup>10</sup>									
1. Mr. Chavalit Pichalai <sup>11</sup>	9/9	-	1/1	-	-	-	-	5/6	1/1
2. Mr. Pailin Chuchottaworn <sup>12</sup>	9/10	-	1/1	-	-	-	-	-	1/1
3. Mr. Nuttachat Charuchinda <sup>13</sup>	12/13	-	1/1	-	-	-	-	8/9	1/1

<sup>1</sup> From April 30, 2015, there were appointments of directors as follows:

- Mr. Prajya Phinyawat was elected to serve as Chairman of the Board of Directors.
- Mr. Chakkrit Parapuntakul assumed directorship of the Remuneration Committee.
- Admiral Tanarat Ubol assumed chairmanship of the Corporate Governance Committee and directorship of the Remuneration Committee.
- Mr. Piti Tantakasem assumed directorship of the Risk Management Committee.
- Mr. Songsak Saicheua assumed directorship of the Corporate Governance Committee.

<sup>2</sup> Mr. Ampon Kittiampon assumed directorship and chairmanship of the Nominating Committee from January 29, 2015.

<sup>3</sup> Mr. Achporn Charuchinda ended directorship of the Corporate Governance Committee from May 1, 2015.

<sup>4</sup> Mr. Sethaput Suthiwart-Narueput assumed chairmanship of the Risk Management Committee on November 1, 2015.

<sup>5</sup> Mr. Wirat Unanarumit was elected as the director on February 23, 2015.

<sup>6</sup> From November 1, 2015, there were election and appointments of directors as follows:

- Mr. Pitipan Tepartimargorn was elected as the director.
- Mr. Wirat Unanarumit, Mr. Twarath Sutabutr, and Mr. Pitipan Tepartimargorn assumed directorship of the Risk Management Committee.

<sup>7</sup> Mr. Songsak Saicheua was elected as the director in the 2015 Annual General Shareholders' Meeting on March 26, 2015.

<sup>8</sup> Mr. Twarath Sutabutr was elected as the director on October 1, 2015.

<sup>9</sup> Mr. Somporn Vongvuthipornchai was elected as the director on October 22, 2015.

<sup>10</sup> Mr. Nuttavudh Photisaro resigned from directorship, chairmanship of the Nominating Committee, and directorship of the Corporate Governance Committee on January 1, 2015.

<sup>11</sup> Mr. Chavalit Pichalai resigned from directorship and directorship of the Risk Management Committee on August 1, 2015.

<sup>12</sup> Mr. Pailin Chuchottaworn resigned from directorship on September 10, 2015.

<sup>13</sup> Mr. Nuttachat Charuchinda resigned from directorship and chairmanship of the Risk Management Committee on November 1, 2015.

# Management Structure

## Number of PTTEP Shares Held by the Directors

Director's Name	Number of Shares											
	Director				Spouse				Minor child			
	As of January 1, 2015	Changes in 2015		As of December 31, 2015	As of January 1, 2015	Changes in 2015		As of December 31, 2015	As of January 1, 2015	Changes in 2015		As of December 31, 2015
		Acquisition	Disposition			Acquisition	Disposition			Acquisition	Disposition	
1. Mr. Prajya Phinyawat <sup>†\$, #, \$#, %</sup>	15,000	-	-	15,000	-	-	-	-	-	-	-	-
2. Mr. Chakkrit Parapuntakul <sup>%</sup>	-	-	-	-	-	-	-	-	-	-	-	-
3. Mr. Ampon Kittiampon <sup>%, %</sup>	-	-	-	-	-	-	-	-	-	-	-	-
4. Mr. Tevin Vongvanich <sup>%</sup>	118,977	27,566	-	146,543	-	-	-	-	-	-	-	-
5. Mr. Manas Jamveha <sup>%</sup>	-	-	-	-	-	-	-	-	-	-	-	-
6. Mr. Achporn Charuchinda <sup>%, %</sup>	-	-	-	-	-	-	-	-	-	-	-	-
7. Admiral Tanarat Ubol <sup>%, %</sup>	-	-	-	-	-	-	-	-	-	-	-	-
8. Colonel Nimit Suwannarat <sup>%, %</sup>	-	-	-	-	-	-	-	-	-	-	-	-
9. Mr. Sethaput Suthiwart-Narueput <sup>%, %</sup>	-	-	-	-	-	-	-	-	-	-	-	-
10. Mr. Piti Tantakasem <sup>%, %</sup>	-	-	-	-	-	-	-	-	-	-	-	-
11. Mr. Wirat Uanarumit <sup>%, @</sup>	-	-	-	-	-	-	-	-	-	-	-	-
12. Mr. Songsak Saicheua <sup>%, %, @@</sup>	-	-	-	-	-	-	-	-	-	-	-	-
13. Mr. Twarath Sutabutr <sup>%, @@@</sup>	-	-	-	-	-	-	-	-	-	-	-	-
14. Mr. Pitipan Teparitarnorn <sup>%, @@@@</sup>	-	-	-	-	-	-	-	-	-	-	-	-
15. Mr. Somporn Vongvuthipornchai <sup>%, %, @@@@</sup>	187,039	19,888	-	206,927	3,500	-	-	3,500	-	-	-	-
Former directors resigning during 2015*												
1. Mr. Chavalit Pichalai**	-	-	-	-	-	-	-	-	-	-	-	-
2. Mr. Pailin Chuchottaworn***	-	-	-	-	-	-	-	-	-	-	-	-
3. Mr. Nuttachat Charuchinda****	-	-	-	-	-	-	-	-	-	-	-	-

<sup>†</sup> Independent Director  
<sup>#</sup> Chairman of the Board  
<sup>‡</sup> Chairman of the Independent Directors Committee  
<sup>%</sup> Non-Executive Director  
<sup>%%</sup> President and Chief Executive Officer  
<sup>@</sup> Assumed position on February 23, 2015  
<sup>@@</sup> Assumed position on March 26, 2015  
<sup>@@@</sup> Assumed position on October 1, 2015  
<sup>@@@@</sup> Assumed Position on November 1, 2015  
<sup>@@@@@</sup> Assumed Position on October 22, 2015  
<sup>\*</sup> Mr. Nuttavudh Photisaro resigned from directorship, chairmanship of the Nominating Committee, and directorship of the Corporate Governance Committee on January 1, 2015.

<sup>\*\*</sup> Resigned from directorship and director of the Risk Management Committee on August 1, 2015  
<sup>\*\*\*</sup> Resigned from directorship on September 10, 2015  
<sup>\*\*\*\*</sup> Resigned from directorship and chairmanship of the Risk Management Committee on November 1, 2015  
 Members of the Corporate Governance Committee are directors 7, 10, and 12  
 Members of the Audit Committee are directors 3, 6, and 9  
 Members of the Nominating Committee are directors 3, 5, and 8  
 Members of the Remuneration Committee are directors 2, 6, and 7  
 Members of the Risk Management Committee are directors 8, 9, 10, 11, 13, and 14

## The Management

As of January 1, 2016, PTTEP's management, according to the definition of management as defined by the Capital Market Supervisory Board (CMSB), consists of 16 members. The details of their biographies, qualifications, and past experience are disclosed in the "Information of the Board of Directors, Management, Controlling Persons and Corporate Secretary" section (page 144).

### List of Management Names and Number of Shares Held by Management\*, Their Spouse and Minor Child

Name	Position of Management	Number of Shares					
		As of January 1, 2015	Changes in 2015				As of December 31, 2015
			Acquisition		Disposition		
			Others	EJIP	Others	EJIP	
1. Mr. Somporn Vongvuthipornchai <sup>1</sup>	President	187,039	-	19,888	-	-	206,927
Spouse	and Chief Executive Officer	3,500	-		-		3,500
Minor child		-	-		-		-
2. Mr. Phongsthorn Thavisin <sup>2</sup>	Chief	16,902	-	17,460	-	-	34,362
Spouse	Operating Officer,	-	-		-		-
Minor child	Production Asset and Operations Support Group	-	-		-		-
3. Mr. Thiti Mekavichai	Executive	27,796	-	20,118	-	-	47,914
Spouse	Vice President, Human	-	-		-		-
Minor child	Resources and Business Services Group	-	-		-		-
4. Mr. Kanit Sangwongwanich	Executive	79,752	-	17,495	-	-	97,247
Spouse	Vice President, Engineering	-	-		-		-
Minor child	and Development Group	-	-		-		-
5. Mr. Kitisak Nualchanchai <sup>3</sup>	Executive Vice President,	37,277	-	17,715	-	-	54,992
Spouse	Technology	-	-		-		-
Minor child	and Sustainability Development Group, and Acting Executive Vice President, Operations Support Group	-	-		-		-

\* The number of shares held by the management may also include shares purchased under the Employee Joint Investment Program (EJIP) which commences from 2013 to 2018 to build a motivation among the staff to work efficiently and effectively, create alignment between the employees, management and shareholders, as well as to establish long-term loyalty and a sense of ownership to PTTEP. More details are disclosed in the "Corporate Governance" section under "Policy on Treatment to Stakeholders - Employee" part.

<sup>1</sup> Appointed as the President and Chief Executive Officer on October 22, 2015

<sup>2</sup> Appointed as Chief Operating Officer, Production Asset and Operations Support Group (position equivalent to Executive Vice President) on January 1, 2016

<sup>3</sup> Appointed as Executive Vice President, Technology and Sustainability Development Group and Acting Executive Vice President, Operations Support Group on January 1, 2016



## Management Structure

### List of Management Names and Number of Shares Held by Management\*, Their Spouse and Minor Child (Continued)

Name	Position of Management	Number of Shares					
		As of January 1, 2015	Changes in 2015				As of December 31, 2015
			Acquisition		Disposition		
			Others	EJIP	Others	EJIP	
6. Mr. Prapat Soponpongpiat <sup>4</sup>	Executive Vice	N/A	N/A	N/A	N/A	N/A	30,049
Spouse	President, Geosciences	N/A	N/A		N/A		-
Minor child	and Exploration Group	N/A	N/A		N/A		-
7. Mrs. Suchitra Suwansinpan <sup>5</sup>	Executive Vice President,	N/A	56,400	14,746	8,000	-	76,054
Spouse	Strategy and Business	N/A	10,600		2,600		8,000
Minor child	Development Group	N/A	-		-		-
8. Ms. Pannalin Mahawongtikul <sup>6</sup>	Executive	N/A	N/A	N/A	N/A	N/A	4,783
Spouse	Vice President, Finance	N/A	N/A		N/A		-
Minor child	and Accounting Group	N/A	N/A		N/A		-
9. Mr. Chatchawal Eimsiri <sup>7</sup>	Executive	17,484	-	17,931	-	-	35,415
Spouse	Vice President, attached	-	-		-		-
Minor child	to President and Chief Executive Officer	-	-		-		-
10. Mr. Yongyos Krongphanich	Senior Vice President,	66,049	-	14,782	-	-	80,831
Spouse	Finance Division	-	-		-		-
Minor child		-	-		-		-
11. Ms. Jaroonsri Wankertphon <sup>8</sup>	Vice President,	43,662	-	9,509	-	-	53,171
Spouse	Accounting Policy and	-	-		-		-
Minor child	Solution Department, and Acting Senior Vice President, Accounting Division	-	-		-		-
12. Mrs. Chanamas Sasnanand	Vice President,	17,572	-	7,992	-	-	25,564
Spouse	Capital and Investor	-	-		-		-
Minor child	Relations Department	-	-		-		-
13. Ms. Porntip Jansuksri	Vice President,	8,712	-	8,605	-	-	17,317
Spouse	Treasury Department	-	-		-		-
Minor child		-	-		-		-
14. Mrs. Sirirat Sararattanakul	Vice President,	191,555	1,000	8,332	-	-	200,887
Spouse	Financial Accounting	-	-		-		-
Minor child	Department	-	-		-		-

**List of Management Names and Number of Shares Held by Management\*,  
Their Spouse and Minor Child (Continued)**

Name	Position of Management	Number of Shares					
		As of January 1, 2015	Changes in 2015				As of December 31, 2015
			Acquisition		Disposition		
			Others	EJIP	Others	EJIP	
15. Ms. Kanchanan Panananda <sup>9</sup>	Vice President,	N/A	-	-	-	-	43,007
Spouse	Managerial Accounting	N/A	-	-	-	-	-
Minor child	Department	N/A	-	-	-	-	-
16. Mrs. Maneeya Srisukhumbowornchai <sup>10</sup>	Vice President,	N/A	-	-	-	-	-
	Tax Department						
Spouse		N/A	-	-	-	-	-
Minor child		N/A	-	-	-	-	-
Management Who Retired or Resigned During 2015*							
1. Mr. Tevin Vongvanich <sup>11</sup>	President	118,977	10,000	17,566	-	-	146,543
Spouse	and Chief Executive Officer	-	-	-	-	-	-
Minor child		-	-	-	-	-	-
2. Ms. Penchun Jarikasem <sup>12</sup>	Executive Vice President,	23,076	-	12,912	-	-	35,988
Spouse	Finance and	-	-	-	-	-	-
Minor child	Accounting Group	-	-	-	-	-	-
3. Mr. Pairoj Rangponsumrit <sup>12</sup>	Executive Vice President,	126,721	17,000	19,721	-	-	163,442
Spouse	Production Group	3,500	-	-	-	-	3,500
Minor child		-	-	-	-	-	-
4. Mr. Nawee Anantraksakul <sup>12</sup>	Executive Vice President,	16,877	-	16,195	-	-	33,072
Spouse	Geosciences	-	-	-	-	-	-
Minor child	and Exploration Group	-	-	-	-	-	-

<sup>4</sup> Appointed as Executive Vice President, Geosciences and Exploration Group on January 1, 2016

<sup>5</sup> Appointed as Executive Vice President, Strategy and Business Development Group on December 1, 2015

<sup>6</sup> Appointed as Executive Vice President, Finance and Accounting Group on January 1, 2016

<sup>7</sup> Authorized a management secondment as Executive Vice President, PTT Public Company Limited (PTT) on November 1, 2015

<sup>8</sup> Also appointed as Acting Senior Vice President, Accounting Division, Finance and Accounting Group during 2015

<sup>9</sup> Appointed as Vice President, Managerial Accounting Department, Accounting Division, Finance and Accounting Group on April 1, 2015

<sup>10</sup> Appointed as Vice President, Tax Department, Accounting Division, Finance and Accounting Group on May 1, 2015

<sup>11</sup> Position as President and Chief Executive Officer of PTTEP ended due to his appointment as President and Chief Executive Officer of PTT Public Company Limited (PTT) effective from September 10, 2015

<sup>12</sup> Retired on January 1, 2016

# Management Structure

## Corporate Secretary

The Corporate Secretary plays a major role in effectively coordinating internally among the Company's Chairman, and President and Chief Executive Officer, and management, and externally among companies, our shareholders, and regulators. Currently, Mrs. Pranot Tirasai, who possesses knowledge, ability, experience and is a law graduate, is the Corporate Secretary as appointed by the Board. Mrs. Tirasai also holds a position of the Company's Board's Secretary. More details are disclosed in the "Information of the Board of Directors, Management, Controlling Persons and Corporate Secretary" section (page 144).

## Remuneration of Directors and Executives

### Remuneration of the Board and Members of the Sub-Committees

PTTEP has a sound and transparent policy regarding remuneration of the Company's directors of the Board and sub-committees. The Remuneration Committee, who is responsible for the policy, reviews the remuneration with prudence by taking into consideration remuneration of listed and comparable companies in the industry, performance of PTTEP, duties and responsibilities of the directors, the overall economic situation, and the shareholders' opinions. The 2015 Annual General Shareholders' Meeting (AGM) approved the following remunerations for members of the Board and sub-committees, as proposed by the Remuneration Committee.

### Remuneration Rates for Members of the Board

- 1) Monthly allowance of THB 40,000 per person per month in a full-month payment
- 2) Meeting allowance of THB 40,000 per person per a meeting attendance
- 3) Bonus for the Board if there is a dividend in that year, totaling 0.1 percent of the Company's consolidated net profit in that year, but no more than THB 60 million per year, and proportionally to the director's period in the position
- 4) 25 percent increase in all of the above for the Chairman

### Remuneration Rates for Members of the Sub-Committees

This is in association with the Company's five standing sub-committees, namely the Corporate Governance Committee, the Audit Committee, the Remuneration Committee, the Nominating Committee, and the Risk Management Committee.

- 1) Meeting allowance of THB 40,000 per person per a meeting attendance
- 2) 25 percent increase for the sub-committee's Chairman
- 3) No remuneration in a case of circulation
- 4) Excluding the sub-committees' members who are in the management from the top executive level down.

### Other Remuneration for PTTEP Directors

- None -



Remuneration of Members of the Board and Sub-Committees in 2015

Director's Name	Remuneration							2015 Bonus Paid in 2016 <sup>s</sup>	Total
	Board		Audit Committee	Corporate Governance Committee	Remuneration Committee	Nominating Committee	Risk Management Committee		
	Meeting Allowance	Monthly Allowance	Meeting Allowance	Meeting Allowance	Meeting Allowance	Meeting Allowance	Meeting Allowance		
1. Mr. Prajya Phinyawat	750,000	600,000	0	0	0	0	0	0	1,350,000
2. Mr. Chakkrit Parapuntakul	520,000	480,000	0	0	80,000	0	0	0	1,080,000
3. Mr. Ampon Kittiampon	600,000	480,000	550,000	0	0	350,000	0	0	1,980,000
4. Mr. Tevin Vongvanich <sup>ss</sup>	600,000	480,000	0	0	0	0	0	0	1,080,000
5. Mr. Manas Jamveha	600,000	480,000	0	0	0	280,000	0	0	1,360,000
6. Mr. Achporn Charuchinda	520,000	480,000	440,000	120,000	100,000	0	0	0	1,660,000
7. Admiral Tanarat Ubol	560,000	480,000	0	300,000	80,000	0	0	0	1,420,000
8. Colonel Nimit Suwannarat	520,000	480,000	0	0	0	200,000	200,000	0	1,400,000
9. Mr. Sethaput SuthiwartNarueput	560,000	480,000	400,000	0	0	0	460,000	0	1,900,000
10. Mr. Piti Tantakasem	600,000	480,000	0	240,000	0	0	280,000	0	1,600,000
11. Mr. Wirat Uanarumit	440,000	440,000	0	0	0	0	40,000	0	920,000
12. Mr. Songsak Saicheua	440,000	400,000	0	120,000	0	0	0	0	960,000
13. Mr. Twarath Sutabutr	120,000	120,000	0	0	0	0	80,000	0	320,000
14. Mr. Pitipan Tepartimargorn	80,000	80,000	0	0	0	0	80,000	0	240,000
15. Mr. Somporn Vongvuthipornchai	120,000	120,000	0	0	0	0	0	0	240,000
Former Directors Resigning in 2015*									
1. Mr. Chavalit Pichalai	360,000	280,000	0	0	0	0	200,000	0	840,000
2. Mr. Pailin Chuchottaworn	360,000	360,000	0	0	0	0	0	0	720,000
3. Mr. Nuttachat Charuchinda	480,000	400,000	0	0	0	0	400,000	0	1,280,000
Total	8,230,000	7,120,000	1,390,000	780,000	260,000	830,000	1,740,000	0	20,350,000

<sup>s</sup> The 2015 Annual General Shareholders' Meeting (AGM) approved bonus for the Board if there is a dividend in that year, totaling 0.1 percent of the Company's consolidated net profit in that year. However, in 2015, the Company has no net profit; therefore there is no bonus payment for the Board.

<sup>ss</sup> Mr. Tevin Vongvanich has returned his directorship remuneration during September - December 2015 to PTT Public Company Limited (PTT) according to PTT's President and Chief Executive Officer management contract.

Note: PTTEP provides the Chairman with a corporate car to carry out corporate-related purposes while in the chairmanship.

\* Mr. Nuttavudh Photisarso resigned from directorship, chairmanship of the Nominating Committee, and directorship of the Corporate Governance Committee on January 1, 2015.

## Remuneration of the Directors of Subsidiaries and Associated Companies

PTTEP's subsidiaries and associated companies are functional units of the Company in carrying out E&P and related businesses in order to optimize the Company's benefits, taking into account of the business and investment conditions. PTTEP assigns the Company's executives to hold a directorship position in our subsidiaries and/or associated companies in order to ensure that they are managed in compliance with the business direction and strategy of PTTEP.

The Company's executives who are assigned to be directors of the subsidiaries and associated companies either in the E&P business or related business such as PTTEP Services Co., Ltd., and B8/32 Partners Co., Ltd. do not receive any additional remunerations since it is considered as a part of their duties and responsibilities on behalf of the Company. However, the executives who are assigned to be directors of subsidiaries or associated companies engaging in other business, for example, PTT ICT Solutions Co., Ltd., and Energy Complex Co., Ltd. are entitled to an additional remuneration since it is considered as an additional assignment in accordance with the Good Corporate Governance and Business Ethics of PTTEP Group.

## Remuneration of the President and Chief Executive Officer

Remuneration of the President and Chief Executive Officer is defined under the principles which are unbiased, reasonable, justifiable, and transparent. PTTEP's Remuneration Committee is responsible for reviewing remuneration of the President and Chief Executive Officer prior to proposing for the Board's approval. The approval from the Board is based on his or her performance, duties and responsibilities, the Company's performance, remuneration of listed companies comparably in size and industry, and the overall economic situation. The President and Chief Executive Officer's remuneration consists of both short- and long-term arrangements such as salary and bonus payment as well as eligibility in the Employee Joint Investment Program (EJIP), respectively.

Remuneration of the President and Chief Executive Officer is determined by using fair and appropriate procedures, relating to his or her annual performance, and duties and responsibilities.

The ratio of annual compensation of the President and Chief Executive Officer, and the average annual compensation of the Executives is approximately 1.5 : 1 whereas the ratio of annual compensation of the President and Chief Executive Officer, and the average annual compensation of all employees is approximately 8.9 : 1

## Remuneration of the Executives

PTTEP's Remuneration Committee is responsible for the salary structure of the Company's executives. The key principles are to produce an unbiased and reasonable structure which reflects the Company's own business nature, performance, his or her performance, as well as some of the variables which can be compared to and justified by those of other leading companies in the industry. The Board must give an approval to the structure before the implementation.

Meanwhile, the President and Chief Executive Officer is responsible for reviewing appropriateness of the executives' remuneration as well as their annual salary increase, taking into consideration his or her overall performance, group-oriented and target-based performance, and the Company's performance.

To maintain the Company's remuneration competitiveness, PTTEP conducts an annual survey on remuneration of leading companies in the industry. The information gathered through the survey allows the Remuneration Committee to better understand the current market situation to further increase our competitiveness in the job market as well as to be able to provide the Board with thorough explanations particularly when the changes in the salary structure and payment method are drastic.



Remuneration of the Executives				
	2014		2015	
	Number	Total Amount (THB)	Number	Total Amount (THB)
Salary	12 <sup>1</sup>	75,845,182	10 <sup>2</sup>	80,943,178
Bonus		35,826,916 <sup>3</sup>		15,142,138 <sup>4</sup>
Other compensation <sup>5</sup>		10,616,211		10,663,254
<b>Total</b>		<b>122,288,309</b>		<b>106,748,570</b>

<sup>1</sup> Executives, 12 in total, consisted of the President and Chief Executive Office, Executive Vice Presidents, and PTT's executives who have been seconded to PTTEP.

<sup>2</sup> Executives, 10 in total, consisted of the President and Chief Executive Office, Executive Vice Presidents and equivalent, and PTT's executives who have been seconded to PTTEP.

<sup>3</sup> Bonuses for 2014, paid in January and February 2015

<sup>4</sup> Includes bonuses for 2015, paid in January and February 2016

<sup>5</sup> Provident Fund

In 2015, employee compensation such as salary, bonus, and contribution to the provident fund of PTTEP and the subsidiaries, PTTEP Services Limited and PTTEP Siam Limited, including wages of the seconded workers, totaled THB 7,088,575,523.



## Personnel

As of December 31, 2015, PTTEP and our subsidiaries had a total workforce of 4,297.

- Of the total number of permanent employees, 2,189 were of PTTEP, while 4 were of PTTEP Siam Limited. The number also excluded 11 employees who were on a long-term leave.
- Of the total number of national employees abroad, 369 were of permanent employees, while 208 were of contracted employees where 17 of which were foreigners.
- The total number of Thai contracted employees did not include 335 of outsourced staff such as maids and drivers.

## Number of Employees

Employee Type	Total (Persons)
Permanent Employees	2,193
Thai Contracted Employees	1,392
Non-Thai Contracted Employees	120
National Employees	577
Seconded Employees	15
<b>Total</b>	<b>4,297</b>

Remarks:

- Based on the Company's SAP database as of December 31, 2015
- Seconded employees are employees from Other Companies in PTT Group who are assigned to work at PTTEP.

## Employee Turnover

Employee Type	Ins	Outs
Permanent Employees	80	84
Thai Contracted Employees	63	188
Non-Thai Contracted Employees	9	65
National Employees	70	74
Seconded Employees	1	5

Remarks:

- Based on the Company's SAP database as of December 31, 2015
- Turnover number excluded outsourced staff such as maids and drivers. Outsourced staff resigned were 44, while 16 signed.

## Management Structure

Number of Employees of Each Function Group					
Function Group	Permanent Employee	Thai Contracted Employee	Non-Thai Contracted Employee	National Employee	Seconded Employee
President and Chief Executive Officer	62	14	-	-	-
Engineering and Development Group	351	185	39	54	-
Finance and Accounting Group	149	116	-	-	-
Geosciences and Exploration Group	166	47	24	15	-
Human Resources and Business Services Group	126	107	2	-	-
Operations Support Group	297	262	36	27	-
Production Asset Group	857	601	13	481	15
Strategy and Business Development Group	89	11	2	-	-
Technology and Sustainability Development Group	96	49	4	-	-
<b>Total</b>	<b>2,193</b>	<b>1,392</b>	<b>120</b>	<b>577</b>	<b>15</b>

Remarks: - Based on the Company's SAP database as of December 31, 2015  
 - The function groups as shown in the table were as of December 31, 2015

In 2015, the Company has the total employee turnover rate at 6.3% and the voluntary turnover rate during 2011-2015 as below.

Voluntary Turnover Rate*				
2011	2012	2013	2014	2015
6.6%	6.6%	7.9%	6.6%	6.3%

\* i.e., resignation, early retirement and participation in mutual separation program.

### Human Resources Development Policy

To improve the competency and accelerate the efficiency of our staff, both Thais and Non-Thais, as well as to strengthen our organizational capability for continuous expansion of the Company's business in Thailand and overseas, PTTEP has improved our development systems and processes by implementation of competency-based training and development. Based on this competency concept and development model by focusing on 70:20:10 between On the Job Training/Coaching and Mentoring/Formal Training), the Company provided training and development programs throughout the past year through the following channels.

#### In-House and External Training

The Company provided in-house and external trainings, both locally and overseas, to our staff at all levels, including management. These trainings comprised a wide variety of courses, including technical and professional training, Safety, Security, Health and Environment (SSHE) training, IT training, foreign language training, organizational knowledge as well as business administration and leadership development.

In 2015, PTTEP conducted in-house trainings by using our own internal instructors, allowing the Company to save approximately 75% of the total training budget or THB 362,309,623.

### Long-term Training and Development Programs

Long-term training and development programs prepare employees for roles and assignments in the Company's current and future projects. The programs are generally provided to selected staff based on their Individual Development Plan (IDP) in 1 - 3 years. By this approach, the staff are required to undertake on-the-job training with or be temporarily transferred to the Company's business partners as well as services companies, in Thailand and overseas, such as British Gas and GE Oil & Gas., etc.

In 2015, PTTEP invested in human capital development programs, costing the Company a total of THB 265,827,256 with an average of 41 training hours per person per year. The Company was able to develop our employee's capacity at an average of 5% which was higher than our target.

### Master's Degree Scholarship Programs for Employees

The Company provided scholarships to employees to help them pursue master's degree studies in world-class universities in Thailand and overseas in the following fields.

- 1) Petroleum Geosciences
- 2) Petroleum Engineering
- 3) Engineering
- 4) Drilling and Well Engineering
- 5) Business Administration

The Company also provided master's degree scholarships for employees to study in Thailand's reputable institutes as follows:

- 1) Business Administration (Executive), SASIN Graduate Institute of Business Administration of Chulalongkorn University
- 2) Petroleum Geoscience (International Program), Chulalongkorn University
- 3) Petroleum Geophysics (International Program), Chiang Mai University

PTTEP calculated Human Capital Return on Investment (HCROI) in several dimensions, including man-hours and cost spent on development of the activities against the total revenue and production rate, as well as time to autonomy of young technical professionals and readiness of immediate successors for senior management positions. The results are subsequently used to evaluate and elevate the efficiency and effectiveness of the development activities for continuous improvement.





## Good Corporate Governance Policy

PTTEP Board of Directors (Board) recognizes the significance of strictly operating businesses under the Good Corporate Governance and Business Ethics of PTTEP Group (CG&BE). The Board is confident that the strict adherence will successfully lead PTTEP to achieve the Company's goals of "Growth, Prosperity, Stability, Sustainability and Dignity" and provide a strong support to enhance the confidence of our shareholders and other stakeholders. In this regard, the Board has assigned the Corporate Governance Committee to govern, supervise and provide necessities to ensure that the Company's operations are in line with CG&BE and that the good corporate governance is maintained at the level comparable to that of international standards.

Consequently, in 2015, PTTEP earned various acceptances through numerous awards and recognitions for our good corporate governance, domestically and internationally. More details are disclosed in the "Awards and Recognitions for Good Corporate Governance" part (page 126). The Company also has dutifully continued to comply with the Corporate Governance Principles for Listed Companies of 2012 (CG 2012) established by the Stock Exchange of Thailand (SET), as well as practices comparable to those internationally accepted standards.

## Shareholders' Rights and Equal Treatments

PTTEP understands the importance of shareholders' rights and equal treatments; the Company's Good Corporate Governance therefore has included a number of guidelines to assure shareholders of their basic rights are protected which, among others, allow them to trade and transfer PTTEP shares, declare the share ownership, and attend the Company's shareholders' meetings in person or through their proxies. In addition, shareholders and their proxies are allowed to participate and vote in significant issues required an approval at a shareholders' meeting. These issues are, for example, election of new members of the Board in replacement of those retired by rotation, determination of the Board's remuneration of

all forms, appointment and approval of the external auditor and remuneration, approval of connected transactions, acquisition or disposition of assets which, according to relevant laws, are sizeable, and other issues which are of significance to PTTEP. Shareholders are also entitled to profit sharing in a form of dividend and receive adequate and timely information from the Company. The Company has only one class of shares, namely, ordinary shares, and one share equals one vote. Our efforts to ensure and enhance shareholders' rights are listed as follows:

1) PTTEP held the 2015 Annual General Meeting of Shareholders (AGM or the Meeting) on March 26, 2015 with a primary objective to maintain good relationship with our shareholders particularly over the matters related to their shareholding rights.

1.1) Shareholders were allowed to propose agenda item and nominate qualified candidates for the election of PTTEP directors prior to the AGM from September 8 to December 31, 2014. Shareholder's proposal and its criteria were announced publicly through SET portal and Company's website in advance on September 8, 2014. Shareholders' proposals were then considered using PTTEP's relevant rules and regulations to ensure that the qualification of each candidate was in line with our business in order to truly be beneficial to the Company. The Nominating Committee was in charge of shortlisting candidates to the Board for approval. Consequently, the Board would inform our shareholders of the resolution together with rationale for each proposal at the AGM. None of such agenda or a candidate for the directors' nomination was proposed at the AGM however.

1.2) The Board determined the date which would be the AGM date on January 29, 2015, and PTTEP disclosed the AGM date to shareholders two months prior to the Meeting date to provide shareholders with adequate time to prepare themselves. On that same date, the Board also resolved to set the record date on which shareholders have the right to attend the Meeting

and to receive dividend to be on February 12, 2015, subsequently resulting the share registration closing date to be on February 13, 2015.

1.3) The AGM invitation letter and supplementary documents, both in Thai and English, were distributed to shareholders 16 days prior to the Meeting. The invitation letter included details of each agenda, which clearly stated type of the agenda, be it for the acknowledgement or approval. The invitation letter meanwhile was completed with the Meeting's agenda items, supplementary documents, the Board's opinions on each agenda item as well as other rules and regulations related to the Meeting. A proxy form, which was stipulated by the Ministry of Commerce, was also included in the invitation letter. A comprehensive list of required documents that shareholders were required to bring to the Meeting, on the other hand, was provided to preserve their rights to attend, while other important attachments included were instructions of the Meeting, voting procedures, and a map of the venue. All of the aforementioned information was both in Thai and English and published on the Company's website ([www.pttep.com](http://www.pttep.com)) 30 days (February 24, 2015) prior to the Meeting. The Company also notified shareholders about the publication of this information on our website.

1.4) PTTEP provided names of the three independent directors in the proxy form to provide shareholders with an option to appoint one of them as their proxy. The Company also informed shareholders about the stake of independent directors in each agenda item. In electing new directors in replacement of those retired by rotation, an independent director whose term was completed then re-nominated for another term, would be considered as having a conflict of interest (but not a special one). In the agenda to approve the remuneration of the Board, all directors would be however considered as having a special



interest and therefore were abstained from the voting regardless of the amount of their shareholding percentage. The Company also provided shareholders with advices on how to use the proxy form which would properly represent their voting right to ensure that they could cast votes on their own.

- 1.5) At the Meeting, the barcode and electronics system were used for registration, vote counting, compilation, and display of each resolution in order to ensure that the Meeting was carried out with full efficiency and accuracy. To accelerate the registration process, the registration was opened to shareholders four hours prior to the Meeting, and the barcode system was used to confirm details of each legitimate shareholder by using the barcode appeared on the proxy form. The Company also provided a revenue stamp to shareholders who intended to vote through a proxy.
- 1.6) PTTEP provided a manual underlying the entire procedure of the Meeting to all participants to ensure a better understanding among shareholders. Examples of details included in the manual were voting procedure for shareholders and for the proxies whose voting rights could not be split (with exception of the C-type proxy), vote-tallying process, and procedures for making inquiries and voicing of one's opinion in the Meeting, etc.
- 1.7) Before the start of the Meeting, the Chairman assigned the PTTEP's Corporate Secretary to inform before the Meeting of the voting and vote-tallying procedures as specified in the Company's Articles of Association (AoA). Shareholders and proxies were required to use voting ballot for voting on each agenda item scheduled for the Meeting. For each agenda item, a barcode system was used to tally disagreed and abstained votes, and to deduct them from the total eligible voting rights to ensure accurate and effective vote-counting procedure. The voting

procedure was in compliance with relevant laws and the AoA. Voting results for all agenda items were summarized and reported in the Meeting room. In addition, volunteers selected from the Meeting's participants and independent inspectors were appointed as witnesses of the Meeting. To protect rights of shareholders, each agenda item was treated and voted separately, whereas, for an agenda item regarding an election and appointment of directors, shareholders were allowed to cast their votes to appoint a director on an individual basis. Under the maximum number of director to be appointed at such AGM, candidates who received the most "Agree" votes were appointed as new directors. Appointed candidates however must also receive the "Agree" votes more than half of the total voting right of shareholders who attended the Meeting and casted their vote.

- 1.8) External independent legal advisors, acting as inspectors as well as witnesses, were engaged to oversee the Meeting to ensure its transparency and that it was conducted lawfully and according to the AoA. Responsibilities of inspectors included examination of documents provided by shareholders or their proxies eligibility of quorum, as well as verification of potential conflict of interest as to whether he/she shall be abstained from voting on the given agenda item, voting procedure and voting count whether they are in line with AOA or as informed by Chairman of the Meeting, and collect ballot from attended shareholders. In addition, volunteer, who represented shareholders at the Meeting, were appointed to act as witness for vote counting procedure for each agenda item.
- 1.9) The Meeting proceeded with all agenda items in the sequence stated in the invitation letter. There was also a policy of not allowing any new agenda item to be proposed at the Meeting without a prior notification to shareholders in order to provide them with an opportunity and adequate time to carefully consider the given agenda before making a decision.

1.10) The Chairman allocated sufficient time for the Meeting and conducted it with transparency and according to the agenda items specified in the invitation letter. During the Meeting, shareholders were allowed to share their views and make in-depth inquiries regarding subjects relating to PTTEP's operations and the Meeting's agenda, prior to the voting and the resolutions. The Company also permitted shareholders to submit questions to the Board prior to the Meeting regarding matters relating to the Meeting or other information relevant to the Company.

All information presented at the Meeting was available in both Thai and English, while a translator translating from Thai to English for foreign shareholders who attended the Meeting was also provided to ensure fairness and equality amongst all shareholders.

1.11) PTTEP encouraged shareholders to use voting ballot cards in all agenda items by issuing different ballot cards for each agenda. Shareholders therefore could cast their votes as they deemed appropriate. For the disagreed and abstained votes, shareholders' ballots would be collected, combined, and counted together with those voted in the proxy form by the shareholders' proxies. The resolution of each agenda item would then be reported at the Meeting. For a higher level of transparency, volunteers who were selected from shareholders and independent inspectors would be appointed to witness the vote-tallying and sign off on all ballot cards collected, counted and signed. These cards were for internal reviews after the Meeting adjourned.

1.12) PTTEP permitted shareholders who arrived at the Meeting after it was commenced to cast their votes in the agenda that was in the consideration process or had not been considered or voted at the time of their arrival.

1.13) All PTTEP directors attended the Meeting.

In addition, members of the sub-committees, senior executives from the Finance and Accounting Group, and external auditors also participated in responding and providing clarifications to inquiries from shareholders.

1.14) Minutes of the Meeting, in both Thai and English, were accurately and completely recorded, and they covered explanations of the Meeting's voting and vote-tallying procedures, contents, questions and opinions related to PTTEP's business operations and the Meeting's agenda, as well as clarifications of each agenda item made by the Company's directors and top executives. In addition to the inclusion of directors who attended and who were absent from the Meeting, the Company also recorded the resolution of each agenda, categorized as agreed, disagreed, abstained, and voided (if any) as well as the name and position of the directors. If a director was absent, the Company also disclosed the reason of the absence in the minutes. Resolutions from each agenda item were immediately submitted to SET and disclosed in the Company's website after the Meeting. Meanwhile, within 14 days after the Meeting, the final version of the minutes of the Meeting would be delivered to the Ministry of Commerce, SET, Office of the Securities and Exchange Commission (SEC), and the Company's shareholders in order to provide evidence of the Meeting as well as to allow shareholders to make objections within the timeline enforced by relevant laws. In 2015, PTTEP however did not receive any objections or inquiries from shareholders regarding the Meeting. The approved minutes, video and audio clips of the Meeting were also published in Thai and English in the Company's website.

- 2) PTTEP regularly discloses information to shareholders through various channels such as SET, media or printed media, and our website to ensure understanding of the Company's business operations in order to develop a long-term engagement with shareholders. In May 2015, we organized the Corporate Social Responsibility (CSR)-related activities for shareholders by inviting them to join the forest plantation activity under the Forest Rehabilitation at Sri Nakhon Khuen Khan Park Project (under patronage of Her Royal Highness Princess Maha Chakri Sirindhorn) at Bang Kachao, Samutprakarn Province. In addition, in November 2015, we organized four trips for shareholders to visit our Sirikit Oil Field in Kam Paeng Petch Province. Meanwhile, we also publish the PTTEP quarterly newsletter to provide additional means of communication between the Company and our shareholders on a regular basis.
- 3) PTTEP provides a direct communication channel between our minor shareholders and independent directors through e-mails. Shareholders, for example, are able to attain more information from or make inquiries to independent directors regarding their activities, Corporate Governance, and audit-related issues. In addition, shareholders are allowed to directly contact the Corporate Secretary or Investor Relations units of the Company for additional information.
- 4) PTTEP clearly discloses shareholding interests in our subsidiaries and associated companies, as well as controlling shareholder, PTT, to ensure shareholders that our organization structure is transparent, verifiable, and does not constitute any forms of cross- or pyramidal-shareholding structure.
- 5) PTTEP operates businesses with optimal efficiency, with a focus on sustainability of the organization, appropriate and consistent returns to shareholders, and long-term relationship with stakeholders. We ensure that all of which are managed and assessed by the use of modern and well-accepted management tools.
- 6) PTTEP strongly prevents misuse of the Company's internal information. PTTEP puts a great emphasis on controlling the use of our internal information by including this matter in CG&BE. In addition to being in line with securities laws, policies relating to use of the internal information are regularly reviewed to preserve the integrity and equality among all stakeholders. Key approaches are as follows:
  - 6.1) Directors, management, and employees are always informed of the PTTEP's regulations and policies regarding the use of the internal information to ensure that they are understood and strictly followed to prevent one from misusing the information directly or indirectly for his or her personal interests. Disciplinary actions are clearly specified, while the supervisors, who are appointed as the CG leaders, are responsible for advising and encouraging their subordinates to follow suit. During 2015, there was no report of any misuses of internal information.
  - 6.2) Starting from the release of the 2011 financial statements, PTTEP requires a group of personnel to abstain from trading of PTTEP's securities during the silent periods which are announced in advance by the Corporate Secretary Unit. These personnel include all directors and senior executives, including all Executive Vice Presidents (EVPs) and Senior Vice Presidents (SVPs), as well as Vice Presidents (VPs) of the Finance and Accounting Group (FNA). This prohibition also applies to their spouses and minor children. In addition, the aforementioned individuals are refrained from directly and indirectly selling and/or buying of PTTEP's securities. For example, a trading through a nominee or a private fund is prohibited. The silent periods commonly take place prior to PTTEP's disclosure of important information which can potentially affect PTTEP share price. An example of a silent period is between

one month prior to the release of the Company's financial statements or operating results and one day after such information is submitted to SET and disclosed to the public. Violation of this prohibition is considered as a disciplinary offense.

6.3) PTTEP must disclose a complete information regarding securities held by the Company's directors and senior executives in the annual report as required by SEC. These executives include the position of EVPs and above as well as SVPs and VPs of FNA. While being monitored by the Board for their use of PTTEP's internal information, these individuals must also submit a report each time when there is a change to their shareholding interest in the Company to the Corporate Secretary Division which is responsible for submitting this report to the Board for acknowledgement. Meanwhile, it is also a duty of the Corporate Secretary Unit to oversee the Company's Business Ethics in respect to the use of the internal information.

- 7) PTTEP requires directors and senior executives, as mentioned in 6.3 above, to immediately report their conflicts of interest to the Company shall there be concerns, either by himself or herself or a related person. The Chairman of the Board and Chairman of the Audit Committee must then review the report within seven working days after receiving the report from the Corporate Secretary, as stipulated by the Board, the Securities and Exchange Act (Volume 4), B.E. 2551, and regulations of the Capital Market Supervisory Board.
- 8) PTTEP assembles a set of guidelines to handle conflicts of interest in CG&BE in order for directors, management, and employees to strictly follow. These guidelines require directors and senior executives mentioned in 6.2 above to report to the Company about the conflicts of interest of themselves and their related persons. Shall there be a conflict of interest, the individual must immediately report to the Company and be excluded from participation or abstained from voting in the issues involved.

## Roles of Stakeholders

The Board has approved PTTEP mission which puts an emphasis on significance of the stakeholders' rights. PTTEP's mission is to operate globally to provide a reliable energy supply and sustainable value to all stakeholders, and we also have a vision to become a leading Asian E&P company driven by technology and green practices. The Company's stakeholders, whether they are internal or external parties, have always been taken into account when decisions are made. Major stakeholders of PTTEP are, including but not limited to, shareholders, customers, employees, governments, joint venture partners, communities and societies, environment, suppliers, creditors, competitors, customs and traditions, and human rights. The importance of the Company's stakeholders is clearly written in our CG&BE in which practical guidelines with respect to business ethics are established in an effort to maintain the balanced duties and responsibilities between PTTEP and our stakeholders. More details of CG&BE are disclosed in the Company's website.

## Anti-Corruption

### Importance

PTTEP's Board of Directors (Board) recognizes the importance of the corporate governance to be transparent, fair and free from all forms of direct and indirect corruption, with a mechanism to regulate every area in order to remain the consistency. On January 28, 2016, the Board held a meeting and approved amendments to the "Good Corporate Governance and Business Ethics of PTTEP Group" (CG&BE) which considered as the regulations of PTTEP Group. All people in the organization including directors, executives and employees at all levels are strictly requested to sign and complete the Commitment of Compliance with the highest standard. The revised version of CG&BE improves the alignment, completeness and clarity of our anti-corruption principles and practical guidelines within the areas of, for example, political neutrality, conflicts of interest, procurement and contracts, accepting and giving of gifts and hospitality or other benefits, and anti-money laundering. The Board also determines to apply CG&BE to all subsidiaries and juristic persons that PTTEP Group controls, while supporting

other related parties such as agents, vendors and joint venture partners to uphold the best practices on this matter. The Board understands that effective anti-corruption measures require a good corporate governance with clear management and governance structures as well as adequate and appropriate risk management and internal control coupled by supervision for compliance, as well as independent audit, and clear guideline in relevant issue as stipulated in CG&BE by having the Board of Directors and management as the exemplary role model and Corporate Governance Leader (CG Leaders), while the Corporate Governance Committee has a role in monitoring the compliance. CG&BE is written according to internal control principles and published for related stakeholders as well as on PTTEP Group's website ([www.pttep.com](http://www.pttep.com)). Those who are interested may download the full version for further study and information.

PTTEP also displays strong commitment towards anti-corruption by setting "Integrity & Ethics" values as PTTEP values and instilling them into all employees across the organization to adhere to.

### Scope of PTTEP Group's Anti-Corruption Policy

PTTEP's CG&BE is also treated as anti-corruption policy which includes all principles, practical guidelines and clear examples of the issues related to anti-corruption measures such as good corporate governance structure as stipulated in the Corporate Governance part, practical guidelines for conflicts of interest, procurement and contracts, anti-money laundering, political neutrality, the use and maintaining of data and assets as well as practical guidelines for anti-corruption especially in the part of Business Ethics. CG&BE has mandatory conditions on the directors, management and employees of all subsidiaries and juristic persons which PTTEP Group controls, as well as on PTTEP Group's vendors who are required to sign an agreement to conduct their business according to the CG&BE.

PTTEP defines corruption based on related principles and laws at both domestic and international levels where there are mandatory conditions with which the Group has to comply.

The Company primarily considers that all actions must not inappropriately entail the use of individual authority or other persons for undeserved exploitation in order to gain benefits as such act is deemed a violation of the laws and/or PTTEP Group's regulations.

Anti-corruption policy covers all forms of corruption whether conducted as a giver, receiver, or through a designated representative or agent. PTTEP recognizes that certain activities such as political support, not-for-profit donations, sponsorship, or facilitation of payments may be determined risky as these can potentially be used as a channel for corruption. The definition of "corruption" therefore also extends to include such activities with mala in se to ensure that they are conducted with extra precautions.

### Measures and Principles for Implementation

The implementation of anti-corruption measures is related to the internal control systems, risk management, compliance and auditing channels, as well as cultural and ethics enhancement of the organization where each of the topics has its own designated unit to be responsible for. PTTEP utilizes internal control forms and risk management procedures according to the three following Lines of Defense:

- 1) First Line of Defense: The departments with knowledge and understanding of the laws related directly to their operation are to be compliant with applicable laws and regulations. Internal control and appropriate risk management are conducted by the person responsible for the First Line of Defense. The person is required to pass rigorous training in order to ensure that he or she has an adequate level of knowledge and is ready to operate their duties, being responsible for handling a variety of different situations effectively.
- 2) Second Line of Defense: The units which perform duties and/or are responsible for the general laws, regulations and policies of the organization. These are such as the Risk Management Unit, Internal Control Unit, Compliance Unit, Corporate Governance Unit who is responsible for the Company's CG&BE, Human Resources Unit who, for example, is responsible for corporate culture authorization. In 2015, the main



sections who were responsible for the Second Line of Defense were the Corporate Governance Unit, Risk Management Unit, Internal Control Unit and Compliance Unit. These units collaborated with each other to develop a GRC Management System (GRC MS) for integrated proactive management between related units in order to simplify the Company's operations to achieve the objectives under adequate and appropriate internal control procedures. The sections can be divided into seven major operations: (1) Leadership and Commitment (2) Strategic Objective and Policies (3) Organization and Resources (4) Communication and Training (5) Assessment (6) Monitoring and Enforcement (7) Audit

- 3) Third Line of Defense: The Audit Unit works together with PTTEP's external auditors to perform auditing for the overall system in both the First and Second Line of Defense.

In 2015, the units responsible for GRC conducted several risk assessment sessions on corruption by organizing a focus group with managements from each of the nine function groups to access and compile activities with risks for corruption especially those related to government officials. The units also evaluated the adequacy of control measures assigned for each of the activities, as well as providing recommendations and advices regarding how to treat the risks. The Risk Register was also prepared according to the Guide for Anti-Corruption Risk Assessment of the United Nations Global Compact (UNGC) and the Committee of Sponsoring Organization of the Treadway Commission (COSO).

In addition, under the main operations of the Risk Management and the Internal Control units who are responsible for GRC, the Company also participates in internal assessment following the evaluation of the adequacy of the internal control system issued by the Office of the Securities and Exchange Commission (SEC). The assessment applies to all executives from manager level and above, especially on the topic of potentials for corruption. The definition of

"corruption" has been clarified and described as a form of fraud which is differentiated from exploitation by the fraudulent use, embezzlement of assets or other benefits from the organization. The assessment is meant to develop a better understanding and reflection of truth among those involved. The assessment's results on all of the topics indicate that PTTEP has an adequate and appropriate level of internal control. Almost every section is in agreement that the risk of corruption is highly important, and there is a need to increase the awareness to ensure that PTTEP Group continues to have a very good internal control and risk management measures in place to respond to external changes and pressure regarding corruption.

After receiving the results from the risk assessment and evaluation of adequacy of the internal control system, the Company compiles the information and creates an improved development plan. The units responsible for the GRC are the key mechanism in creating an effective plan to monitor the progress of the implementation of the measures with the department responsible in addition to reviewing and highlighting the issues. The issues will subsequently processed and presented to the Audit Committee and/or Risk Management Committee depending on the case for further reviews at least once a year prior to submitting to the Board for further analysis.

PTTEP also has other tools to prevent corruptions including:

- 1) Creating Guideline on Third Party Anti-Bribery and Corruption Due Diligence which is formed by the Compliance Department. The main objectives are to use them as a tool to assess the risk of corruption before entering into an agreement or sharing an investment with a third party. This tool sets out the four following steps for implementation:
  - 1.1) Identify the status of the third party whether they are a joint venture, agency, consultant, contractor, or vendor as actions of these parties may affect PTTEP Group.
  - 1.2) Assess the risk through an initial set of questions which is designed specifically to determine severity level of the risk.

1.3) Follow the instructions for each of the severity level. Low-risk parties may need only a slight background check and/or an affirmation document stating that the parties in question will not conduct or engage in any corruptions, while in some cases they might be required to put down some financial deposits. High-risk parties, on the other hand, will be required to go through the Company's additional measures as prescribed such as allowing us to assess and audit them. This, for example, includes the use of questionnaires which gather information for the purpose of risk assessment regarding to corruption risks. The result of the assessment will then be submitted to the Compliance Department in order to help establish further required measures of monitoring and control.

1.4) Related departments are required to regularly monitor third parties to ensure that no corruption occurs as well as to support them with appropriate information and training tools.

2) PTTEP also reviews the Company's regulations and practical guidelines to maintain the effectiveness of the following anti-corruption measures:

2.1) Improving CG&BE to reflect the Company's commitment to enhance the implementation and further reach to the related parties, and to describe specific details for clarity regarding anti-corruption measures such as principles of how to receive and give assets or any other benefits to others, and other forms of conflicts of interest.

2.2) Improving the regulations of the Company's procurement to be in line with the existing frameworks and guidelines of the strategic principles of procurement. We consider the following two dimensions, i.e., (1) Supply Positioning Model: Analysis of the costs and risks relating to goods and services toward the Company (2) Supplier Perception Model: Analysis of the value and interests of the Company in the view of sellers

The improvements help to ensure that the procurement is based on the best interests of the organization with full transparency. This helps to reduce allegations of unfair behavior or conduct of corruption, while increasing the effectiveness of the procurement in response to fluctuation of the business environment.

2.3) Improving the Company's Vendor Sustainable Code of Conduct to be in line with the policies of the various regulatory departments such as regulations from the Securities and Exchange Commission and Stock Exchange of Thailand (SEC) which emphasizes the importance of our extension of anti-corruption implementation towards vendors. The Company requires that all vendors acknowledge and abide by our CG&BE, while supporting and encouraging them to be our coalition to fight against the corruptions. This is to demonstrate the Company's commitment to support our vendors to implement appropriate anti-corruption policies and practical guidelines to build an ideal culture within the business group and the society in general.

2.4) Improving the Delegation of Authority and Signatures (DAS) in every area to be synchronized under the same principles and standards especially the authorization related to hospitality and donations as well as to add detailed conditions on spending as evidence of disbursement.

2.5) Improving standard of contracts used with vendors by adding clause which indicating that the contracted parties must acknowledge and abide by the laws and regulations of PTTEP and not be a part of any kinds of corruption, or else the Company has the right to terminate the contract.

### Continuing to Provide Communication, Knowledge and Training

PTTEP has a clear plan to inculcate anti-corruption policies in everyone in the organization through continuous trainings and activities for all related parties in every dimension. The departments which represent the Second Line of Defense held several of these training activities in 2015 and implemented the following operations related to anti-corruption measures:

- 1) Introduction the new Board members, new executives and new employees to the overall principles of CG&BE. This session was implemented during the initial period when joining the Company.
- 2) Arrangement of a GRC Course for employees. This was a full-day course developed with a collaboration between GRC-responsible departments and the human resources unit for those who had passed the induction session. The course covered in principles the Company's tools for risk management and internal control, and our CG&BE, with a focus on anti-corruption and related issues.
- 3) A CG&BE Workshop for both executives and employees from offshore operating sites and in Myanmar. The content and training methods were improved to meet the specific needs of the target group and encourage further CG&BE knowledge and understanding. Exchange of discussions, including support to work with *EP SPIRIT* in integrity and ethics, was encouraged to ensure effectiveness within and an increase of engagement toward the organization.
- 4) Training courses for anti-corruption related laws, designed by the Compliance Department in an electronics learning form. The training course was provided for all interesting employees through the Company's intranet for self-studying.
- 5) GRC Specific Communication, continued from E-Learning in 2014, to develop the Company's employees' knowledge in four topics, i.e., (1) Conflicts of Interest (2) Use of Internal Data (3) Procurement (4) Acceptance of Gifts, Hospitality or Other Benefits. These guidelines were developed to suit each group

within the departments and employees who could self-learn through educational emails and self-test on the web-based application which can be accessed from computers, smartphones and tablets.

- 6) Promotion of GRC to Board members and senior executives in order to acquaint them with useful knowledge that can benefit them in their duties on GRC-related matters at the Board and Management Committee meetings. In 2015, the Company gave a relatively more attention to promoting anti-corruption measures.
- 7) Holding a Whistleblowing Roadshow for the executives and employees in order to create understanding and further publicizing the Company's Whistleblowing System and Reporting and Whistleblowing Regulation which are parts of our anti-corruption measures. The Whistleblowing Roadshow was held in conjunction with a CG&BE Workshop.
- 8) Organizing other communication channels such as standee/notice board, newsletter, and posters to provide continuous knowledge for the Company's employees at the headquarters and all of our operating sites.
- 9) Communication through various channels to allow our vendors to learn more of the Company's anti-corruption policies regarding gifts, hospitality or other benefits which cannot be accepted at any times. Vendors must acknowledge and strictly abide by the guidelines. In addition, the Company also provided a communication channel for the third parties to contact or make inquiries by emailing [CGPromotion@pttep.com](mailto:CGPromotion@pttep.com).

### PTTEP Group Reporting & Whistleblowing Regulation and Reporting System

At the Board Meeting on November 28, 2013, the Board approved the Reporting and Whistleblowing Regulation (B.E. 2556) to further ensure of the appropriateness, effectiveness, and flexibility comparable to that of the international standards. This is also meant to provide protection to the whistleblowers and those cooperating with the Company in good faith as well as protection from potential

retaliations. The procedure is a key mechanism which allows an opportunity for both internal and external parties of the organization a channel to seek justice and reach a solution for illegal or fraudulent activities including those alleged to be made by the Board, management, employees or representatives of PTTEP Group. More details are disclosed in the “Whistleblowing Reporting and Protection Procedures” part (page 108).

The whistleblowers may report to a Board member, a supervisor at any level, or the Corporate Secretary. He or she may also choose to be anonymous if preferred. Revealing of the whistleblower’s however allows the Company to be able to provide appropriate protection such as ensuring that there will be no change in position, nature of work, work location, suspension from work, intimidation, operations disruption, termination or any other forms of unfair treatment.

The whistleblower may choose to report through letter, email or an electronic system on the website or intranet of the Company. This helps to provide a safe channel for following up on the progress of the reported complaint and requesting of further details and inquiries. The system will assign an individual Report Number and PIN to the whistleblower to follow up the progress as well as for the Company to use as a channel to request further information, if necessary, for benefits of the complainant. In addition, password-access technology is also in place to ensure strong security and forbid access by unauthorized personnel.

Complaints received from the channels specified above are passed through a screening session, following the procedure and timeline as clearly defined in the regulation guidelines to ensure that everything is implemented transparently and unbiased.

- The Corporate Secretary will take into account the information and adequacy of the preliminary evidence before forwarding the complaint to the Company’s complaint reviewer within seven working days. If this period must be extended, the extension can only be made with an approval from the CEO. Each extension must not exceed seven working days.

- The review procedure and conclusion of the complaint depend on the types of the case. Non-complex cases will be completed within a timeframe of 30 working days, while more complex cases will be completed within a timeframe of 60 working days. If the period is extended due to necessity, the extension can only be made with an approval from the CEO. Each extension must not exceed 30 working days.

In case of a violation or failure to comply with the Company’s regulations, disciplinary action, including job termination, will be considered according to severity of the case. Meanwhile, if a law is violated, the individual will be subject to prosecution. All supervisors are obliged to supervise and guide their subordinates to abide by the Company’s policy and related laws with strict compliance. If the supervisors fail to ensure the compliance or take an appropriate action, disciplinary action against them will be taken as identified in the Company’s Human Resources Management Regulation.

Reviewers of a complaint cannot be any of the Company’s stakeholders. In the case in which the Head of the Internal Audit Department is alleged, the Audit Committee will appoint an independent investigation commission. Meanwhile, in the case in which the Company’s Chief Executive, Head of a function group, Chief Executive Officer, President, or Board member is alleged, the Board will appoint an independent review committee to investigate the facts. Every complaint received from one of the channels above will be summarized and reported to the Corporate Governance Committee and/or Audit Committee, depending on the case, in addition to the Company’s Board of Directors.

### Monitoring the Implementation of Anti-Corruption Measures

The Board has assigned the Corporate Governance Committee to monitor implementation of the anti-corruption policy which is a part of CG&BE. The Corporate Secretary is responsible for gathering of the information and reporting of the results to the Corporate Governance Committee at meetings on a quarterly basis. The implementation of

PTTEP Group's anti-corruption measures is under the cooperation of several units serving as the Second and Third Line of Defense. The units responsible for GRC are the main units to ensure the implementation of the policy. Each unit has its own individual reporting system, reporting to the one in charge at a higher level in the administrative structure. For example, the Risk Management and Internal Control unit reports to the Risk Management Committee, while the Audit Unit reports to the Audit Committee as well as the Board, in addition to reporting to all of the Company's shareholders in the Annual Report.

On September 11, 2015, the Corporate Governance Committee visited a project in the Republic of the Union of Myanmar with the project's executives to follow up on implementation of the Company's CG&BE. It was the first activity held overseas to promote CG&BE.

This emphasized the importance of the Company's anti-corruption policy and allowed an opportunity for the executives to discuss, exchange knowledge and learn from a case study from a multinational company regarding to anti-corruption measures in Myanmar. The workshop's format and content were developed accordingly to the nature of the business operations in Myanmar. PTTEP compiled the results of the activity, concerns and feedbacks to determine an appropriate plan for the suitable internal control system. The Company also translated CG&BE into Burmese and set out a work plan to enhance the knowledge and understanding for the executives and employees in Myanmar.

The Corporate Governance Committee also monitors the performance on a yearly basis, according to the CG&BE plan, which the Corporate Governance Committee has considered and approved. The Corporate Governance Committee also evaluates the performance by using Key Performance Indicators (KPI) to ensure that the performance goals are met.

## Audit

PTTEP has designated the Internal Audit Department to work with external independent auditors to perform the auditing tasks, which include investigation of corruption, by setting out an annual audit plan and undertaking further examination when there appears a related complaint or issue. The Internal Audit Department currently has practical guidelines on the investigation of corruption which covers risk assessment, prevention and detection of corruption, as well as practical guidelines used in the investigation process for complaints of corruption.

PTTEP has procedures to regularly review sales and marketing activities in order to monitor and prevent the risk of corruption as well as to provide the solutions. The Company sells most of the products to PTT, and the pricing structure is reviewed and specified clearly in the purchase agreement between the two. Sales prices are based on the global market prices on which the mutual agreement between the Company and the joint venture partners are based. The pricing structure requires an approval from the Audit Committee and the Board prior to arrangement of the purchase agreement. The Board members who have a vested interest in such agreement cannot participate in the review session and must be abstained from voting on that matter.

PTTEP also has procedures to regularly review procurements and contracts in order to monitor for and prevent the risk of corruption as well as to provide the solutions. The Internal Audit Department is responsible to regularly review procurements and contracts, covering the risk of corruption and internal control issues, as part of the Company's effective risk management.

## Review of Sufficiency and Adequacy of Anti-Corruption Measures

PTTEP believes that, for anti-corruption measures to be effective, they must be reviewed regularly. The units responsible for overseeing GRC must work together to



evaluate the effectiveness of the anti-corruption measures and monitor the process in each of the units. The evaluation results should be used as a reference in outlining PTTEP Group's operation plans. The results of the evaluation in 2015 led to a revision of the Company's CG&BE and stipulation of internal control measures for the units involved with transactions and provision of hospitality and gifts to government officials and government agencies as well as donations for the public causes. This was in order to ensure that clear guidelines are put in place for everyone in the organization to follow and that such disbursements and expenditures are recorded appropriately with transparency and accountability.

### Collective Efforts with the Public to Counter Corruption

PTTEP acknowledges the significance of our role as a listed company by assuring our shareholders and stakeholders with the confidence that the Company's management is transparent, fair, and corruption-free. PTTEP, as a company whose major shareholder is the government, has a responsibility to lead by example and encourage the society to adopt better anti-corruption standards. In the past year the Company proactively took several measures to counter corruption, including publically disclosing of the information regarding the Company's payments to the government according to the standards set forth by Transparency International, improving of the contract standards, establishing of the Vendor Sustainable Code of Conduct, and sponsoring of several anti-corruption events such as Thailand's 6<sup>th</sup> National Conference on Collective Action Against Corruption.

PTTEP became an "Active Level" member of the United Nations Global Compact (UNGC) in 2011, and on April 1, 2015, the Company was promoted by the UNGC to "Advanced Level" for complying with the UNGC's principles in the areas of human rights, labor, environment, and anti-corruption. The Company considers such international recognition as one of our achievements.

PTTEP was certified as a member of Thailand's Private Sector Collective Action Coalition Against Corruption on July 4, 2014. The certification highlights our intention and commitment to fight all forms of corruption. The Company has also expanded our anti-corruption efforts to our subsidiaries, joint venture partners, vendors, and business partners, and we are committed to continuously improving the efforts so that an even more substantial result can be achieved by 2017.

### Policy on Treatment to Stakeholders

#### Shareholders

PTTEP respects the shareholders' rights and treats them with equality, while adhering to carrying out the Company's business with CG&BE in order to achieve the sustainability and create the optimal value for the shareholders. More details are disclosed in the "Shareholders' Rights and Equal Treatments" part (page 88).

#### Employees

1) PTTEP is in compliance with the UN principles by not employing illegal workforce and child labor in every area in which we invest. The following guidelines are described in the Company's CG&BE.

- 1.1) To understand and comply with all laws applicable to the Group's operations in the locations in which we conduct our business
- 1.2) To understand the local customs, cultures and traditions of the locality in which we operate
- 1.3) To respect the local traditions, cultures and cultural differences, and not to conduct ourselves in any ways which contradict them
- 1.4) Not to discriminate against any individuals based on our personal relationship with that individual, his or her ethnicity, nationality, gender (including pregnancy, and sexual preference), age, religion, disability, personal views or any other conditions or characteristics which are not concerned with work

- 2) PTTEP recruits, selects, and employs our staff based on their qualification, experiences and abilities to work in the right position. As per the Good Corporate Governance and Business Ethics of PTTEP Group, candidates are fairly treated during our transparent recruitment process. The employment is implemented with internal and external equity. Our employees are consistently developed, promoted in their career path, and allowed to join external activities under the Company's policy.
- 3) PTTEP sets up, regularly reviews, and revises a fair compensation system for our staff according to the short and long-term corporate performance in order to attract and retain competent staff. The salary rate and payment method paid within the petroleum industry in the country, the difference of each work position, the required skills and expertise, the level of work difficulty, the assigned responsibility, and the capacity of the Company's employees are also considered.
- 4) PTTEP manages and enhances fair welfare for the Company's staff as well as for ourselves. We consider the payment capacity not only for the present, but also for the long term, and we emphasize sustainable welfare not only for the staff, but also their families. These are, for example, housing interest subsidy program, and healthcare benefits for employees and their families. This is generally a common provision provided within the domestic industry. PTTEP regularly reviews our welfare program for its appropriateness and pertinence in response to changing social, economic and other obligatory conditions of the business. In addition, the Company has also helped the staff to be relieved from anxiety through the Sabaijaidee program which provides consulting services to all of the Company's staff, their spouse and children on the matters relating to family, private life, work, love, laws by the psychologists and professionals recommended by one of our consulting companies.

PTTEP has established a provident fund for staff in order to enrich their living and provide them with supposedly a sufficient financial security once they resign or retire. The provident fund consists of contributions from the Company as well as our staff. The Company makes a monthly contribution at a rate of 15 percent of the staff's basic salary, while the staff contributes 2 percent, but not more than 15 percent, of their monthly salary. Receiving this fund is subject to PTTEP's regulations. The Company has also established the Employee Joint Investment Program (EJIP) which is intended to encourage our staff to participate on a voluntary basis. The purpose of this program is to provide the Company's staff with the motivation to work efficiently and effectively, create alignment among the employees, management, and shareholders, as well as to establish a long-term loyalty and sense of ownership within. Purchasing of ordinary shares generally is carried out through SET's trading system. This program was commenced on February 1, 2013 and will be opened until January 31, 2018, carrying over a total of 5 years. In principle, eligible staff will have to make a request for PTTEP to deduct a sum from their basic salary at the rate of 2 - 10 percent of their basic salary, while the Company will contribute another portion for the staff equally to 100 percent of the money paid by the staff in each month. Receiving and realizing the share value, on the other hand, is subject to the Company's performance in the long-term.

The Long Service Awards Program celebrates and commemorates the long-term commitment and loyalty of PTTEP employees who have achieved significant milestone years of service. The program recognizes 5, 10, 15, 20, 25, 30, 35 and 40 years of employment with the Company. Award recipients are honored at the special event held at PTTEP Office in June of each year. The purpose of the program is to strengthen corporate employee engagement through recognizing and honoring the commitment and dedication of long-term employees, while promoting long-standing careers within the Company.

- 5) PTTEP gives a priority to human resource development in order to enhance our capacity for business performance as we deem that human resource is a key to the Company's success. The Company supports and promotes staff through training and development in both short- and long-term. Apart from academic and technical capacity building, we also build the working values altogether so that all staff can work with the same standard to attain the Company's vision and mission as targeted. In 2015, PTTEP employees attended courses and trainings such as ISO 14001 Environment Awareness Course for an average of 41 hours per person per year. More details on the trainings are disclosed in the "Human Resource Development Policy" part under the "Management Structure".
- 6) PTTEP realizes the value and importance of a timely consultation between employees and their supervisors in order to maintain a good relationship. Shall any conflicts arise among the Company's employees and supervisors, the employees may file a complaint through one or more communication channels provided. The employees who comply with the provided measure and procedure and act in good faith as well as those relevant witnesses shall be protected, without facing a penalty, termination, or any other negative consequences. The CG Hotline channels are also established for our employees to raise the issues relating fraud, while reports received through these channels will be investigated confidentially and made known only to relevant persons in order to protect the whistleblower.
- 7) PTTEP conducted the Employee Engagement Survey for the fourth time in 2015 with the objective to understand the factors impacting the Company's employee engagement. The engagement score was 50%, which is 4% higher than last year. Currently, we are conducting focus group sessions to find out more details from this quantitative research in order to initiate the improvement plan for the organization and the function group levels.

PTTEP executes the improvement plan to increase the engagement level and occasionally monitors the progress of the plan. The next Employee Engagement Survey is planned to be concluded in 2016.

### Clients

PTTEP is committed to our mission to be a leading producer and supplier of crude oil, condensate, and natural gas at fair and competitive prices. We sell the products under short- to long-term contracts as well as in the spot markets. The Company assesses clients' suitability by the following four criteria, namely, economic return of the product prices, financial stability, operational readiness, and compliance to local laws and regulations of each client. The Company treats all buyers equally for the optimal benefit of all and is also committed to strictly complying with the contracts and regularly coordinating with buyers so that we can produce and deliver quality products as specified in the contracts on schedule and according to their demand.

### Governments

PTTEP conducts business by adhering to the Good Corporate Governance and Business Ethics of PTTEP Group (CG&BE). With our determination to explore for new hydrocarbon fields, we rigorously comply with all the laws applicable to our operation in every location where the Company runs the



business. Based on honesty and transparency, we support the government agencies in procuring and managing energy effectively for the sustainable economic and social development of every given country.

As energy security, continuous economic and social development shall benefit the country and its people, PTTEP has been regularly supporting government activities to move forward to the target of sustainable development.

### Joint Venture Partners

Joint venture projects between PTTEP and our domestic and foreign joint venture partners operate under mutual working agreements according to international standards. These agreements include details regarding the rights and duties of joint venture partners such as the right to be a member of a project's management committee. The committee is responsible for establishing guidelines on the procurement of products and services as well as for developing a strategic plan and an annual budget with a clear scope and approach. In addition, the partners also have the right to audit annual financial and accounting records as well as to set proper and clear measures. For example, this includes penalty imposed on partners for failures to honor an agreement. The Company remains focused on distributing information to joint venture partners and external parties with transparency.

### Communities and Societies

PTTEP gives importance to building sustainable relationships with all stakeholders. We develop and elevate the quality of life for people in the communities regardless of their locations to our operation sites. When engaging with the communities, the Company adopts Issue and Stakeholder Management System (ISMS) as a tool to analyze social risks to which may impact our works. ISMS has been introduced and deployed in every operation site where PTTEP is an operator.

Social Risks and Mitigation Report comprises internal and external context, impacts and influences of stakeholders and risk drivers which can be grouped into four categories, namely, (1) stakeholder engagement, (2) stakeholder expectation, (3) operation impact control, and (4) laws and regulations. After risk drivers have been identified, mitigation plans can be put in place to cease or reduce the social risks which can interrupt the Company's operations. A follow-up and evaluation are also necessary for continual improvement. More details are disclosed in the 2015 PTTEP Sustainability Report.

### Environment

PTTEP strives to achieve an excellence and a position of leadership in Safety, Security, Health and Environment (SSHE). The Company's SSHE Policy is the core of SSHE management, allowing us to deliver our vision and commitment in SSHE. The Company continues to publicly disclose our SSHE performances indexes such as lost time injury frequency rate, total recordable injury rate, and hydrocarbon and chemical spill rates in the Company's website. The information is routinely communicated to the stakeholders and the Company's staff in our annual Sustainability Report, as well as being reported to the Department of Mineral Fuels. PTTEP has the SSHE Management System (SSHE MS) which comprises seven elements with 27 standards which are implemented throughout all of PTTEP Group's operations.

A cornerstone of sustainability is a strong environmental performance. Our approach to managing the environmental



impacts concentrates on our green practices such as having an international standardized environmental management system, eco-efficiency practices for mitigating environmental impacts from our operations, lowering our ecological, carbon and water footprints, and increasing biodiversity. To mitigate environmental impacts from our operations, the Company implemented the ISO 14001:2004 to improve the efficiency of the environmental management system. Certification was issued by AJA Registrars under the United Kingdom Accreditation Services (UKAS). The sites which were certified include Arthit Project, the Greater Bongkot North and South fields of Bongkot Project, S1 Project, PTTEP 1 Project, Petroleum Core Research Center, and PTTEP Petroleum Development Support Base, as well as PTTEP Australasia Project, support base at Darwin, and office of PTTEP Australasia (Ashmore Cartier) Pty Ltd in Australia. In 2016, PTTEP also plans to acquire the ISO 14001 certification for Sinphuhorm Project.

PTTEP has a Green Practice Roadmap which outlines the roadmaps for reducing our ecological and carbon footprint. The roadmap guides the Company in maintaining the biodiversity of our operating sites as well as improving our business values by reducing costs, improving resource efficiency, and reducing wastes. We also implement the 5S program in the offices of PTT Group and green supply chain practices, which involve green procurement, green logistic and green office, to use green and environmentally friendly products in the operations. In addition, the Company encourages all employees, including existing and new hires as well as the management, to understand environmentally friendly business practices by organizing fundamental and intensive environmental awareness training courses for them in compliance with the laws. More details on our green practices are disclosed in the Sustainability Report 2015.

### Suppliers

As stated in the Good Corporate Governance and Business Ethics of PTTEP Group (CG&BE), suppliers are important parts of our businesses. The Company therefore employs a policy to treat our business partners equally. Our procurement operations are carried out on the basis of equality and fair

competition. We also comply with the laws and terms of concerned legal transactions, taking into account the Safety, Security, Health, and Environment (SSHE). Suppliers must follow the operational standards which adhere to the Company's policy. Their employees meanwhile are also required to have good business ethics and respect human rights.

### Procurement Regulations and Procedures

In 2015, PTTEP revised the Procurement Regulations and Procedures to be more practical for petroleum exploration and production operation and more in line with PTT Group's Operational Excellence Management System (OEMS) by adding that the Company will strongly support the suppliers with good corporate governance, including social and environmental responsibility.

### PTTEP Vendor Guide

In 2015, PTTEP also developed the Vendor Guide to provide our suppliers with the Company's business information and practices such as the Good Corporate Governance and Business Ethics of PTTEP Group, Procurement Processes, Contract Management, the PTTEP Vendor Sustainable Code of Conduct and related laws, and the supplier communication channels.

More details of the PTTEP Vendor Guide are available in the Company's website at [www.pttep.com](http://www.pttep.com) > E-Service > Vendor Portal > PTTEP Vendor Guide.

### Vendor Registration

PTTEP maintains the concept of fairness and free competition without trade barriers toward all suppliers. There are 3 ways for the interested suppliers to register their company profile:

- 1) PTTEP website: Suppliers can offer their products and services through the Company's website at [www.pttep.com](http://www.pttep.com) > E-Service > Vendor Portal > Vendor Registration.
- 2) The Category & Vendor Management Section: Suppliers can at all times contact Category & Vendor Management officers during business hours to offer their products and services.



- 3) PTTEP Users: Suppliers can directly propose their products and services to the users who may provide the names of the suppliers to Category & Vendor Management Section for the vendor pre-qualification process.

#### New Vendor Pre-qualification

PTTEP pre-qualifies the suppliers by screening and evaluating them according to their product and service categories. The evaluation process is carried out by the Committee comprising the following functions:

- 1) Technical and QA&QC
- 2) Safety, Security, Health and Environment (SSHE)
- 3) Commercial, Legal and Social

Based on fairness and transparency, each function of the Committee has the authority to independently consider and evaluate the suppliers to ensure that they have the qualifications to deliver the products or provide services needed to PTTEP.

#### SSHE Contractor Management and Plan

PTTEP has enhanced the measures relevant to the management of suppliers in the SSHE area which is one of the Company's core values. The SSHE Contractor Management Procedure and Plan has been implemented to enhance the understanding and improve the SSHE performance of the suppliers. It includes operations guidelines to ensure that correct actions are taken. The Company also strongly encourages the suppliers to strictly comply with the SSHE Contractor Management Procedure and Plan through our annual SSHE Contractor Forum, as an effort to ensure that they correctly understand the SSHE policy, standards, manual and work procedures, and plan of the operations in every area that the Company operates.

#### The Notification of the National Anti-Corruption Commission (NACC) or Por.Por.Chor

According to the notification of the NACC, PTTEP has provided a page at [www.pttep.com](http://www.pttep.com) > E-Service > Procurement Announcement to disclose the information regarding

reference prices of procurement transitions for the suppliers and stakeholders. PTTEP has also recommended all the suppliers to strictly comply with the NACC announcement concerning the principles, methods and submission of accounting records by the persons being a party to the contract made with a State Enterprise or State Agency B.E. 2554.

#### Procurement Sourcing Strategy

PTTEP has prepared a business analysis especially to review the overall procurement performance by using the procurement spending data from the past three years. This data is to be analyzed to identify the supplier classification and risk assessment relating to operations and market trends. The results from the analysis also help the Company to identify critical suppliers who are vital to the operation of PTTEP.

Upon identifying the critical suppliers, PTTEP uses the analysis to prepare procurement and contract strategy plans for each product and service group. The Supply Market Analysis (SMA) will then be generated to support future procurement and contractual activities.

PTTEP needs to submit the procurement and contract strategy plan, including the bidder list, to the Procurement Committee (PC) and joint venture partners (if any) for approval before proceeding with the bidding. (The bidder list and the procurement/contract strategy plan must be internally approved by three parties, including the operations, assets, and procurement function before being submitted to the PC and the joint venture partners in order to counter balance for transparency purposes.)

#### Suppliers Selection

For the bidding process, two sealed envelopes and two-stage bidding are required. One envelope is for technical proposal, while the other is for commercial proposal. The technical envelope is opened first for evaluation of the technical aspects, quality and SSHE. Then for the technically acceptable bidders from the first stage, the process will continue with the opening of the commercial envelope.



The results of the bidding will be submitted to the Procurement Committee (PC), joint venture partners (if any), and the Company's Board of Directors (for high value procurement) for approval before contracting activities with the suppliers are initiated.

PTTEP will only select those suppliers who are technically and SSHE qualified and offer the lowest price or the best interest to the Company.

### Contract Management and Assessment

As an important and integral part of PTTEP's Contract Management and Supplier Relationship Management (SRM) for operating in the petroleum exploration and production business, the contract holders need to make sure that the suppliers and all relevant parties fully understand and comply with the work plan, contract objectives, SSHE standards, and risks mitigation plan as well as critical key performance indicators (KPIs). They periodically need to assess and follow up on the performance to ensure that the suppliers operate according to the contractual terms regarding quality, SSHE, and human rights. At the end of the contract management, the contract holders must complete the Contract Closed-out Report in order to record their performance result, identify area of improvement and development of the supplier's capability for the long-term relationship.

### Suppliers Collaboration Initiatives

PTTEP has various collaborative initiatives with the suppliers to create new techniques, concepts and technologies, for example, developing of a new chemical formula (Volatile Corrosion Inhibitor or VCI) to prevent corrosion in the pipelines. The objective is to exchange knowledge and experience to create petroleum development opportunities. The Company brings diverse knowledge and modern technology from leaders in petroleum exploration and production industry and apply it to our operations through knowledge management, workshops and lessons learnt.

PTTEP and the suppliers conduct business with social responsibility for sustainable development with a balance among business, society, and the environment driven by technology and green practices.

### Local Content

To enhance the capability of the local suppliers in Thailand to compete with international companies, PTTEP supports domestic procurements and services from the operation areas. This is to increase the employment and income generation to support the locals as well as to reduce the transfer of Thai currency to other countries. As a result of our commitment to building long-term relationships with the communities where we operate, the Company has gained from each of the communities a license to operate. In addition, PTTEP also encourages the suppliers to operate with care and responsibility wherever they are and to support local procurement within their area to lower the cost of goods as well as to support the community.

### Whistleblowing

To instill confidence and give protection to the suppliers and related parties from possible retaliation as a result of reporting in good faith about suspicious misconduct or wrongdoing of directors, management, employees, or persons acting on behalf of the Company that might be in violation of the laws, CG&BE, or other regulations of PTTEP Group, the Company has established the CG Hotline channels to handle whistleblowing cases from the suppliers. They can email to the [cghotline@pttep.com](mailto:cghotline@pttep.com) or report through the PTTEP's website through "PTTEP Whistleblowing System" at [www.pttep.com](http://www.pttep.com) or fax number +66-2537-4949.

### Creditors

PTTEP recognizes the importance of the Company's internal and external stakeholders including creditors. This is firmly based on our policy of equitable treatment for all stakeholders, which is an integral part of the Good Corporate Governance and Business Ethics of PTTEP Group (CG&BE).

Great emphasis is placed upon accurate, complete, timely, and transparent information disclosure to all of the stakeholders. Information disclosed by PTTEP consists of financial and non-financial information. Financial information particularly the financial statements is reviewed and audited by an independent auditor in compliance with the Generally Accepted Accounting Principles (GAAP). The information is also endorsed by our Audit Committee as well as the Board of Directors prior to public disclosure.

Regarding creditors, PTTEP's debentures issuance and all relevant processes are in compliance with the laws, policies and regulations stipulated by SEC as well as the policies, purposes, and resolutions set forth at the Company's shareholder's meeting. The Company agrees to fulfill the obligations stated in the term and conditions of bond and loan agreements and ensures that the information is accurately and adequately disclosed to all stakeholders. PTTEP also maintains all of the necessary measures to remedy incidents or other types of impairments which may arise as a result of non-compliance.

### Competitors

Based on professionalism and equality, PTTEP treats our competitors under transparent and fair rules. We, in our greatest effort, try to avoid all unethical manners and ill-intentions to defame the reputation of our competitors through false or unfair statements or acts. We are also committed to complying with local laws and regulations regarding trade competition. More details about the Trade Competition Policy are disclosed in CG&BE.

### Customs and Traditions

PTTEP adheres to local customs and traditions of all the areas and locations in which we operate. Trainings are provided to our employees by knowledgeable and experienced instructors, including representatives from the Ministry of Foreign Affairs or Embassy. Instructors will provide suggestions and information regarding customs, traditions, sensitive issues, and local practices to the employees who will be transferred there in order for them to understand and behave in a proper manner.

### Human Rights

PTTEP has a human rights policy where the Company is committed in respecting fundamental human rights by complying with all applicable legal requirements, cultures, customs and values in dealing with all of our stakeholders, avoiding complicity in human rights abuses, and strictly prohibiting ourselves from direct and indirect employment of child and forced labor. PTTEP human rights policy complies with the UN Universal Declaration of Human Rights and its corresponding covenants, where applicable to business including the international principles relating to labor practices and supporting the United Nations Declaration on the Rights of Indigenous Peoples. The Company also actively participates in the United Nations Global Compact (UNGC). Last year, we have updated our UNGC Communication on Progress Report as well as met each of the criterion required to achieve the "Advanced Level" status.

Whether or not the country in which PTTEP invests has local laws on human rights, the Company is still committed to providing fair employment while ensuring employees with a safe working environment and hygiene. We ensure that no threats exist among employees or those related to the Company. Ethical partners without any infringements of human rights are employed. We promote consultation between executives and employees through the employees' representatives in the welfare committee. Views and suggestions are communicated for improvement of welfare and other proper and necessary benefits to improve our employees' quality of living.

### Laws

PTTEP respects laws in everywhere we operate business. The Board sets the matters related to the compliance with applicable laws in the Business Ethics of PTTEP Group. The directors, management and employees are required to understand them as well as strictly abide by laws related to our operations in all areas to enable PTTEP Group to operate with accuracy and efficiency.

PTTEP has established the Compliance Department as the center of compliance performance supervision for PTTEP Group. The Department has a direct reporting line to the Senior Vice President of the Legal Division and the President and Chief Executive Officer. In 2013, the President and Chief Executive Officer announced the Compliance Policy to express our commitment to full legal compliance and define roles of all management and employees in promoting of the compliance. The Compliance Program has also been implemented to enhance awareness on compliance-related matters among the Company's employees.

### Whistleblowing Reporting and Protection Procedures

The ultimate operational goal of PTTEP Group is to optimize value of the Company for the shareholders, create a long-term satisfaction for our stakeholders, and, for ourselves, to become the Company of "Growth, Prosperity, Stability, Sustainability and Dignity". To achieve our goal, we understand that confidence and faith in CG&BE must be put in place as well as into practice. To provide ourselves with an opportunity to succeed, PTTEP has established the CG Hotline channels where the directors, management, employees, and external parties are able to report in good faith of suspicious misconducts or wrongdoings which might be of violation to the laws, CG&BE, or other regulations of PTTEP Group.

To instill confidence for a whistleblower from possible retaliations as a result of reporting in good faith, PTTEP has developed a set of regulations specifically to handle whistleblowing cases and provide protection for those related parties. The information received and the identity of a whistleblower is treated with confidentiality, only to be disclosed to those who must be involved in the case. Meanwhile, the investigation is conducted strictly in order and within the timeframe as prescribed in the "Reporting and Whistleblowing Regulation 2013" of PTTEP Group. The result of all the investigations must be reported to the Audit Committee or the Corporate Governance Committee (as the case may be), and later to the Board on a quarterly basis. The followings are the CG Hotline channels of PTTEP Group.

- 1) Mail to PTTEP director, supervisor, or Corporate Governance Section of the Corporate Secretary Division PTT Exploration and Production Public Company Limited 555/1 Energy Complex Building A, 33<sup>th</sup> Floor, Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900, Thailand
- 2) Fax to supervisor or Corporate Governance Section of the Corporate Secretary Division (+66-2537-4949)
- 3) E-mail to supervisor or Corporate Governance Section of the Corporate Secretary Division (cghotline@pttep.com)
- 4) Report through PTTEP website (www.pttep.com)
- 5) Report through PTTEP Intranet (CG Portal)

In addition, if there is a complaint made in good faith regarding the Company's subsidiaries, the complaints can also be reported to the coordinator of those related subsidiaries.

In 2015, PTTEP received a total of five complaints through the CG Hotline. After reviewing the complaints, evidence and witness accounts, the Company's Corporate Secretary Division acknowledged three of the five complaints submitted. The complaints mainly involved an inappropriate conduct of the Company's employees and a lack of communication between the management and employees on the subject of "Human Resources" under PTTEP's Good Corporate Governance and Business Ethics policy. The complainants were subsequently notified of the results of the complaint reviews, while the violator was disciplined through a verbal reprimand based on the Company's guidelines on disciplinary actions.

### Information Disclosure and Transparency Disclosure of Financial and Non-Financial Information

Information disclosure is a key aspect of a good corporate governance. PTTEP gives importance to the information disclosed to the Stock Exchange of Thailand (SET) as well as the shareholders. At the very least, the information must be accurate, sufficient, timely, and equally available to all parties. The information is prepared according to our Business Ethics Guidelines. At PTTEP, the departments responsible for providing information and replying to external queries from

the SET and the general public are the Investor Relations Section (IR) and the Corporate Communications Department. Our information disclosure consists of financial information and non-financial information. Financial information is disclosed through financial statements which are reviewed and audited by the external auditor to confirm that they are presented accurately, in all material respects, according to the Thai Financial Reporting Standards. The financial statements are subsequently approved by the Audit Committee and the Board of Directors before being disclosed to the public. The Board reports their responsibilities with respect to the financial statements in the PTTEP Annual Report. In addition to SET's requirements, the Company also releases the un-reviewed quarterly financial statements and unaudited annual financial statements in advance to allow timely access to the financial information for the shareholders and investors. Unless stated otherwise, the information before and after review and audit usually and generally does not contain any significant changes. PTTEP also discloses non-financial information such as the acquisition and disposal of assets, related party transactions, dividend payments, management's discussion and analysis, risk management, invitation letter for shareholders' meetings, minutes of meetings, annual corporate governance report and the 56-1 Form, as well as other information which is important for investment decisions according to the requirements of SET and SEC.

Information that PTTEP discloses to SET, the Company's shareholders, investors and the general public are disseminated in both Thai and English in the Company's

website which also features other up-to-date information viewed to be of interest to the aforementioned audience. Key information available in the website is petroleum exploration and production projects, investment projects, quarterly and annual analyst meeting presentations, webcasts, roadshow presentations, historical and latest stock performance, analyst coverage, and news releases. The Company also reports Safety, Security, Health and Environment performance which is included in the annual Sustainability Report. The Company also makes available in the website a downloadable excel spreadsheet which contains historical financial information and operating results to facilitate investors' access to information.

PTTEP also publishes a quarterly investor newsletter, called Explorer's Journal, which includes information that may be beneficial to our shareholders and investors, such as quarterly performance highlights, project updates, good corporate governance practices, topics on sustainable development, and knowledge sharing on the fundamentals of the exploration and production business. The newsletter is bi-lingual, Thai and English, and available in both hardcopy and electronic formats. The latter can be downloaded from our website, effectively serving as another communication channel between the Company and the shareholders for news and updates. In 2015, PTTEP disclosed a total of 38 articles through the SET portal and organized the following activities for the shareholders and analysts.

Activities	Amount (Times)
Domestic and overseas roadshows/conferences	12
Analyst meeting	4
Opportunity day (by SET)	4
Shareholders' and investors' site visit	7
Knowledge sharing event for investor	4
Company visit and conference call	60

Apart from the activities above, the Company also participated in events organized by SET to meet retail investors, such as SET in the City and daily telephone correspondence. The information above can also be found at the AGM Meeting, while IR was readily prepared to provide information and answers to questions raised by the Company's shareholders.

PTTEP understands that disclosure of the information which is accurate, complete, timely, and transparent is one of the keys to CG&BE and therefore is committed to performing our best in this area.

### Investor Relations

The Investor Relations section (IR) is responsible for communication of relevant information and news that reflect with PTTEP's fair value to analysts, the Company's shareholders, and general investors under the rules of SET and SEC in order to foster the confidence within the analysts and the investment community. In addition, IR is also entrusted with upholding the corporate image and perception among analysts and investors, while being readily available to serve the Company's executives over all IR-related issues whichever they might need.

Our IR can be contacted through the following three channels.

- 1) By phone: +66-2537-4378, +66-2537-5746, +66-2537-5304, +66-2537-4446, and +66-2537-5779
- 2) By e-mail: [ir@pttep.com](mailto:ir@pttep.com)
- 3) By fax: +66-2537-4444

### Board's Responsibilities

The followings are the major responsibilities of the Board. The full details are disclosed in the "Authorities and Responsibilities of the Board" part (page 65).

### Policy-Making and Operational Direction

The Board is responsible for making decisions regarding PTTEP's operational policies and determination of the corporate vision, mission, and values. The Board is also assigned to be directly involved in the Company's budgetary and planning, and organization development strategy to accommodate continuous changes in the business environment, as well as to provide the management with advices to lead the Company toward our five ultimate goals, being "Growth, Prosperity, Stability, Sustainability and Dignity".

### Good Corporate Governance and Business Ethics

The Board is responsible for establishment of PTTEP's CG&BE for all of the directors, management, and employees to adhere to while operating businesses for PTTEP Group. This is to ensure that our businesses are operated under good standards, justification, and ethics with transparency and efficiency. Moreover, the rights of the Company's stakeholders are preserved proportionately to their fair share to maintain the general confidence and acceptance operations of the Company. The Corporate Governance Section meanwhile has been established to be responsible for matters regarding CG&BE.

### Internal Control and Auditing

The Board is responsible for assuring that PTTEP Group is equipped with an effective internal control system that is comparable to the acceptable risk levels. The Audit Committee and the Internal Audit Department are assigned to periodically and regularly review and monitor the internal controls as well as to submit the results directly to the Audit Committee to ensure that they are in line with the operational objectives of PTTEP Group, in compliance with relevant laws and regulations, and in trust of the management, investors, and other stakeholders.

Our internal control system is comparable to those accepted by the international standards, considering the control environment, risk assessment relative to objectives, effective

control plans, internal and external provisions of adequate and reliable information and communications, as well as routine monitoring and evaluation procedures.

### Risk Management

The Board is responsible for regulating and overseeing the management of risks which can potentially deter PTTEP from achieving our strategic goals. In doing so, the Board has appointed the Risk Management Committee which is a standing sub-committee to monitor and ensure an efficient and effective management of risk for PTTEP Group as defined by the Risk Management Charter of 2014. The Risk Management Committee has also been assigned to assess the significant risks which are of significance at the organizational and project levels, evaluate and monitor operational plans, oversee the implementation and revision of risk mitigation to allow for continuous evaluation of risks in order to ensure that the risks are at acceptable levels, as well as to report the results to the Board regularly.

### Prevention of Conflicts of Interest

The Board establishes various management measures to ensure that the management is efficient and transparent and acts in the best interest of PTTEP Group, by assuring that the Company and our management are without any conflicts of interest. Shall anyone of the Company's directors, executives, or employees have a stake potentially leading to a conflict of interest, he or she must withdraw from participation or be abstained from voting in the given issue. Consequently, a report must be filed to inform the authority of the stake according to our Business Ethics as specified for the directors, management, and employees to follow as our business codes of conduct.

### Compliance

The Board values importance of full legal compliance in all of the areas in which PTTEP Group operates. The Board also provides the Group with the supports required to conform to the applicable laws and to properly manage relevant compliance risks. Compliance is considered one of the keys

that allow the Group to function discretely as well as to be able to operate according to our strategy toward the business goals. The Compliance Department has been assigned by the Board to be responsible for this matter.

## Sub-Committees

The Board is responsible for appointing the directors who have expertise and knowledge in certain areas according to the regulations specified by PTTEP. Each sub-committee meanwhile is responsible for a specific set of tasks specified by its respective charters' directors. Qualifications, responsibilities and service terms of the sub-committees are prescribed by the Company's regulations through the designated charter. All the members of the Audit Committee and the Corporate Governance Committee must be independent directors, while the majority of the members of the Nominating and Remuneration committees must be independent directors. The Chairman of the Board however is not allowed to obtain any chairmanships or directorships in the sub-committees. In addition, each Chairman of all sub-committees, only with exception of the Risk Management Committee, must be an independent director.

From every meeting, the sub-committees are required to report the results to the Board for acknowledgement as well as to disclose in the 56-1 Form and PTTEP Annual Report of their duties completed over the year.

Currently, the Company has five sub-committees, namely, (1) the Corporate Governance Committee, (2) the Audit Committee, (3) the Remuneration Committee, (4) the Nominating Committee, and (5) the Risk Management Committee. More details about the directors' names, duties and responsibilities, meeting attendance, and remuneration policy are disclosed in the "Management Structure" section. For the reports of all the sub-committees, they are disclosed in the "Reports of the Sub-Committees" part (page 130).



## Nomination of Directors and Management

### Nomination of Directors

When there is a vacancy of a director position, it is a duty of the Nominating Committee to select for the candidates. The process begins with the Committee going through a list of directors from state-owned enterprises (Directors' Pool), gathered by the State Enterprise Policy Office (SEPO) whose top personnel are regarded as highly-qualified in the area of state-enterprising. In addition, PTTEP also seeks advices from our major shareholder, PTT, as well as from the Company's minority shareholders (if any) according to the rules regarding nomination of a person to fill in the positions which are due to retire by rotation in advance. The Company places importance on those individuals with expert skills, experience, and the qualifications which are crucial, yet perhaps remained missing in the Boardroom, to the Company's business in making the organization more completed and well-rounded for the optimal benefits of PTTEP Group. Potential conflicts of interest of the new director are also being considered during the process. More details are disclosed in the "Management Structure" section (page 64).

Election of directors to replace those who are due to retire by rotation must obtain an approval from AGM by the majority vote which is based on the number of the Company's shareholders with voting eligibility at the Meeting. The election process is as follows:

- 1) The Nominating Committee proposes a list of qualified candidates, firstly to the State Enterprise Policy Committee in accordance to the Regulations of the Office of the Prime Minister on State Enterprise Policy and Governance Determination, then to the Board for their review prior to the annual general shareholders' meeting. The approved proposal would also include comments, if any, from the Board or the State Enterprise Policy Committee. PTTEP's shareholders meanwhile may also nominate other individuals whom they see fit for the director position. The Company provides channels for the minority shareholders to nominate the candidates prior to the meeting each year from

October 1 to December 31. We declare this process through SET, newspaper and also publish on the Company's website. The details of the disclosure on the website include the procedures for the shareholders to nominate a candidate, together with the Director Nomination Form.

- 2) Should the number of the director candidates be less than the number to be elected, PTTEP will propose at the shareholders' meeting to elect those candidates as the directors by voting for the individual candidates, under which each of them must receive majority votes.
- 3) Should the number of the director candidates exceeds the number to be elected, a ballot is to be held. Each shareholder may vote for as many director candidates as the number of the opened positions, and voting will then be carried out for the individual candidates. Those with the highest ballots will be elected, as many as the number of opened positions accommodates. Each of them must receive majority votes.

When a director position becomes vacant for reasons other than rotation, the Board may elect a new director, using the three-fourth majority voting rule, with approval from the State Enterprise Policy Committee. The elected director however is to remain in his or her directorship for only as long as the remaining term of the predecessor.

### Nomination of Management

The Board has granted the President and Chief Executive Officer an authority to select and appoint the individuals who possess the right knowledge, capabilities, and experience to the management positions in consultation with the Career Review Board Committee (CRB) and in accordance with the PTTEP Rules and Regulations for Human Resources Management. The nomination must then be acknowledged by the Board. Exceptions are made in the case of appointing of the Executive Vice Presidents, and the President and Chief Executive Officer where the Board's approval is required. If the nominee is from outside of the organization, an interview with the interview committee is required. Nomination of the Head of Audit Department meanwhile requires an approval from the Audit Committee.

## Development of Directors and Executives

### Directors Development

#### Orientation of New Directors

Orientations are provided to the Company's new directors and consist of the following elements.

- 1) Presentation by the President and Chief Executive Officer, and executives: This briefing involves the nature and the operation guideline of the business, knowledge and techniques regarding to the petroleum exploration and production business of PTTEP Group, relevant rules and regulations, CG&BE, and essential information for the directors to perform duties with efficiency.
- 2) Director Manual: This contains essential information, including strategic plan, relevant rules and regulations, and CG&BE, which will be beneficial for him or her to perform the director's duties. The Manual is regularly reviewed and updated for the directors to use as a reference.

- 3) Plant visit: New directors will visit operational sites of PTTEP Group as appropriate to increase their understanding of PTTEP business operations.

At the end of each orientation, new directors will evaluate the effectiveness of the orientation for further improvement. The director elected to be the Chairman and/or a member of the sub-committee is also required to attend an extra session in order to be informed of the important subjects which come with the additional new role, including performing duties of the Chairman and/or a member of the sub-committee with efficiency as well as conducting and leading meetings of the Company's directors and shareholders.

#### Trainings of Directors

PTTEP directors are knowledgeable and ambitious to learn and understand more about the business and their duties as a director; the Company therefore fully supports them to attend seminars and trainings which were organized by the Thai Institute of Directors Association (IOD) and are related to the Company's business operations. The followings are the details of the seminars and trainings attended by eight of the Company's directors during 2015.

Directors	Courses
Mr. Prajya Phinyawat	● The 1 <sup>st</sup> PLATTS-PTT Day Academic Seminar by PTT and Platts McGraw Hill Financial
Mr. Tevin Vongvanich	● Anti-Corruption for Executive Program (ACEP 15/2015) by IOD
Mr. Manas Jamveha	● Ethical Leadership Program (ELP 1/2015) by IOD
Admiral Tanarat Ubol	<ul style="list-style-type: none"> <li>● Director Certification Program (DCP 204/2015) by IOD</li> <li>● Ethical Leadership Program (ELP 1/2015) by IOD</li> <li>● Thailand CG Forum: Governance as a Driving Force for Business Sustainability by The Stock Exchange of Thailand</li> </ul>
Mr. Sethaput Suthiwart-Narueput	<ul style="list-style-type: none"> <li>● Advanced Audit Committee Program (AACP 18/2015) by IOD</li> <li>● Risk Management Committee Program (RMC 6/2015) by IOD</li> </ul>
Mr. Piti Tantakasem	<ul style="list-style-type: none"> <li>● Director Certification Program (DCP 202/2015) by IOD</li> <li>● Anti-Corruption for Executive Program (ACEP 15/2015) by IOD</li> <li>● Energy Literacy for a Sustainable Future Program (Class 6) by Thailand Energy Academy</li> </ul>
Mr. Wirat Uanarumit	<ul style="list-style-type: none"> <li>● Director Certification Program Update (DCPU 5/2015) by IOD</li> <li>● Thailand CG Forum: Governance as a Driving Force for Business Sustainability by The Stock Exchange of Thailand</li> </ul>
Mr. Songsak Saicheua	● Anti-Corruption for Executive Program (ACEP 15/2015) by IOD

Currently, out of 15 of the Company's directors, 9 of them have participated in IOD's Director Certification Program (DCP), while two of them have attended the IOD's Director Accreditation Program (DAP). Therefore, there are 11 out of 15 directors (73.34%) who have attended the two mentioned courses. In addition, PTTEP has applied an IOD membership for all of the directors and provided them with information regarding new and updated seminars or trainings to keep the directors consistently informed. More details on the training courses attended by the directors are disclosed in the "Information of the Board of Directors, Management, Controlling Persons, and Corporate Secretary" part (page 144).

To continuously provide knowledge and share opinions with the directors, PTTEP has invited guest speakers from Wood Mackenzie Limited to provide lecture session and exchange opinions with the Board on "Upstream Briefing" in 2015. The Company also updates the directors regularly with laws and best practices regarding good corporate governance for their stronger understanding.

### Management Succession Plan

PTTEP has a systematic succession planning for key positions to replace retiring staff and/or fill new positions in the next 5 years as a result of the Company's expansion domestically and internationally in order to serve our business growth. The Career Review Board Committee (CRB) is authorized to select and appoint successors to compare with PTTEP Management Success Profile in each of the business areas (Asset Management, Business Development, Technical Support and Business Support). The profile includes Competency, Personal Attribute, Organization Knowledge and Experience to the targeted key positions, and Currently Estimated Potential (CEP) result. Thereafter, individual short and long-term development plans focusing on technic, behavior and organization culture, will then be created to ensure that the successors will be ready and qualified for the positions that they will assume.

### Nomination and Succession Plan of the President and Chief Executive Officer

The Nominating Committee is responsible for considering the candidates' skills, experience, and various other specific qualifications of the candidates to bring about the best of interests to PTTEP, i.e., strategic vision in energy business and successful experience in managing capital projects as well as looking into their probable conflicts of interest. After the consideration, the Committee will propose the qualified candidates to the Board for approval.

PTTEP formulates a succession plan for the President and Chief Executive Officer to prepare the Company in case where the President and Chief Executive Officer is unable to perform his or her duties or when the serving term is completed. The plan helps to minimize the risks and the impacts, potentially resulting from the discontinuity, on the management. The succession planning procedure is as follows:

- 1) PTT Group Management Committee (PTTGMC), a committee in which the Company's President and Chief Executive Officer is a director, forms the Group Leadership Development Program (GLDP). The program primary focus is to enhance the capability of PTT Group's executives, senior vice presidents and above to prepare them for the possible nomination to become a President and Chief Executive Officer in one of PTT Group of companies.
- 2) PTTGMC, with PTT being the Company's major shareholder, reviews the shortlisted executive names from 1) above and proposes them to PTT's Board of Directors who is responsible to select PTTEP's next President and Chief Executive Officer.
- 3) After receiving the candidate names, accompanied by opinions of PTT's Board from 2) above, and comparing with PTTEP's potential candidates in the Executive Vice President level, the Company's Nominating Committee will reassess the individual's knowledge, capability, and experience beneficially related to the business, conflict of interest, and his or her vision to lead the Company to grow according to the strategic plan.

- 4) The Nominating Committee proposes the name of the final candidate, together with the opinions and a fair and reasonable package of the Remuneration Committee, to the Board for approval and appointment of the Company's new President and Chief Executive Officer.

## Authority of the President and Chief Executive Officer

### Authority under Resolutions from the Shareholder Meetings

The President and Chief Executive Officer is the authorized signatory who may sign to bind PTTEP with external parties under clause 9, paragraph 6, of the Company's Articles of Association registered with the Ministry of Commerce.

### Authority under Resolutions from the Board's Meetings of PTTEP

The Board authorizes the President and Chief Executive Officer to act and conduct, on the Company's behalf, normal course of business operations under the stated objectives in our Memorandum of Association, petroleum concessions and other agreements, including other businesses in which the Company has interests. In addition, the President and Chief Executive Officer is also authorized to be the acting body and conduct the business under PTTEP regulations, namely, the Budgetary, Finance and Accounting Charter B.E. 2555, Regulation on Human Resources Management B.E. 2548, Regulation on General Procurement B.E. 2558, Regulation on Procurement for E&P Business B.E. 2558, and Regulation on Project Investment Management B.E. 2557, by applying of the practices comparable to those of other private companies in the E&P business as well as in best interests of the Company. Delegation of the authority is permitted unless the concerned attorney has a direct or indirect conflict of interest with the Company or our subsidiaries in exercising of the authority.

## Corporate Governance Concerning Subsidiaries and Associated Companies

PTTEP has continuously expanded our E&P business both domestically and overseas. Due to the continuous expansion, establishing subsidiaries and/or associated companies in various regions is necessary for the investment purpose, the efficiency and competitive advantages comparable to other international oil companies as well as the operational flexibility by taking into account of various factors such as, laws and regulations, financial structure, tax regimes, business and investment conditions, and risk management.

PTTEP's policy is to manage our subsidiaries as "One Company" with the view that they must strictly follow the Company's business direction and strategy. Subsidiaries' operations are mainly managed by the Company's executives and employees, while adopting PTTEP's management and internal control systems. In managing our associated companies, PTTEP nominates representatives to serve as a shareholder and/or a member of the Board of Directors at least to a proportion corresponding to the Company's shareholding interest held in each associated company, in order to be able to effectively define the overall business strategy and policy of these companies. To manage both the subsidiaries and associated companies, the Company adheres to the Good Corporate Governance and Business Ethics of PTTEP Group to ensure effectiveness, transparency, fairness, and achievement of our business goals.

With respect to the directors of the Company's subsidiaries and/or associated companies, PTTEP assigns the executives responsible for the project under such subsidiary and associated company as directors of these entities to ensure that the companies are managed in line with the Company's business direction and strategy. The Company may also appoint a local director, if required by the laws and regulations or investment conditions of the specific countries. To provide operational flexibility for the subsidiaries and

associated companies, PTTEP delegates sufficient authority to directors of those companies as specified by the Corporate DAS (Delegation of Authority and Signatures), similarly to the practice of other leading E&P companies. The subsidiaries and associated companies meanwhile are obligated to report their performance to the Company on a quarterly basis in order to ensure their performance and effectiveness.

### Directors' Serving Terms and Their Directorship in Other Companies

PTTEP prescribes that one-third of the directors shall be retired by rotation in each AGM. According to PTTEP's Articles of Association, the Board shall consist of no more than 15 members, each with a 3-year serving term. Effective since 2006, the Board has determined that all of the Company's directors, including independent directors, are allowed to be in the directorship for no more than three consecutive terms or nine years. This essentially allows our competent and qualified directors the time to continuously and effectively perform duties for PTTEP.

A two-term limit, or six years in equivalence, is too stringent for the Company to benefit from the capability and experience which our directors have earned over the years in the position as well as often too soon for the Nominating Committee to best select the replacements for the optimal benefits of the Company and our shareholders.

In terms of the qualifications, PTTEP's directors shall not assume a directorship or executive-level position in more than four listed companies at once. More details on the number of directorships held by each of the Company's directors are disclosed in the "Information of the Board of Directors, Management, Controlling Persons, and Corporate Secretary" part (page 144). Currently, none of the directors

holds a directorship or executive-level position in more than three other listed companies. Similarly, serving term in each sub-committee, namely, Audit Committee, Remuneration Committee, Nominating Committee, Corporate Governance Committee, and Risk Management Committee, is equivalent to each director's Board term. For practicality purpose, the Board has resolved on October 22, 2015 to adjust this regulation from the previous sub-committees' serving term of three years. This modification will be effective in April 2016 onwards.

### Roles of the Chairman and the President and Chief Executive Officer

The Chairman, and President and Chief Executive Officer of PTTEP are of two different directors. The Chairman does not participate in the daily management of the business, providing that conducting and monitoring of the business policies are entirely separated from the daily operational management. Duties and responsibilities of the Chairman of the Board are as follows:

- 1) Lead and supervise the Board to perform its duties with efficiency, and independency from the management
- 2) Determine agenda of PTTEP's meetings with the President and Chief Executive Officer as stipulated in the duties and responsibilities of the Board
- 3) Be the Chairman at meetings of the Board and the shareholders to ensure that all of the Company's directors carry out their duties as stipulated in CG&BE

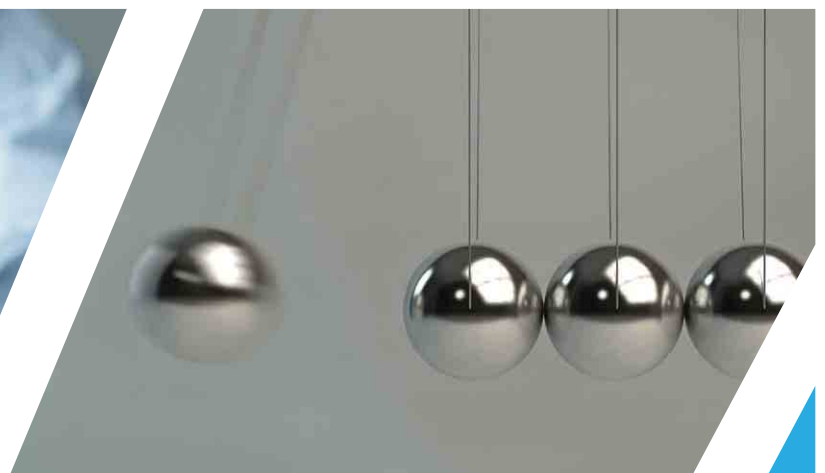
For transparency and appropriateness, the Chairman is not allowed to hold any positions in any of PTTEP's sub-committees as clearly stated in the charter of the sub-committees. The President and Chief Executive Officer meanwhile is responsible for the Company's daily management with the authority as empowered and granted by the Board.

## Independence of the Chairman

PTTEP considers independency as the first priority in electing the Company's Chairman of the Board. Shall there be none who is suitable for the position, other of the Company's directors will be considered. The current Chairman, Mr. Prajya Phinyawat, is an independent director and has performed his duties with autonomy and discretion (The appraisal score of the Chairman in 2015 was 4.95, and it was close to 5, the highest score). The Chairman and his performance are appraised and examined for future improvements by the Board members. More details on the appraisal results are disclosed in the "Performance Appraisal of the Board" part. In addition, all of the Company's directors are allowed to independently express their views with freedom regarding the business operation, whether in the meetings of the Board, sub-committees, or in other occasions. This is to ensure that the management is able to operate the businesses with efficiency, accuracy, transparency, and in the best interests of the shareholders.

## Policy and Practices for the President and Chief Executive Officer, and Executives with Directorships in Other Companies

PTTEP recognizes value of the knowledge and experience which the President and Chief Executive Officer, and executives have gained from holding a directorship in Other Organizations outside PTTEP. To ensure a productive, an uninterrupted and effective management, the Company however clearly states in CG&BE regarding the duration which the President and Chief Executive Officer, and executives are allowed, on only-if-necessary and no-harms-done basis, to hold a directorship position in other companies or organizations which are not of their own or families. In addition, the individuals must be given an approval from the Company's authorized personnel as well as accept the condition that they shall not, in every aspect, associate the Company and their position held in the Company in those external activities. Meanwhile, remuneration of the executives who are assigned by the Company to assume a directorship in the organizations or units in, or related to, the petroleum exploration and production are considered PTTEP's; otherwise, the remuneration is considered theirs. More details on the number of directorships held by each of the executives are disclosed in the "Information of the Board of Directors, Management, Controlling Persons, and Corporate Secretary" part (page 144).





## Conflict of Interest Policy

PTTEP, with the following principles, is committed to preventing all potential conflicts of interest to ensure the Company's stakeholders' confidence that our business management is efficient, transparent, and in compliance with CG&BE.

- 1) Directors, management, and employees shall treat the interests of PTTEP Group with priority and shall not involve or be involved in any activities potentially leading to a conflict of interest.
- 2) Directors, management, and employees shall review and disclose their transactions potentially leading to a conflict of interest to the Company.
- 3) Directors, management, and employees shall not participate in considering or voting in any matters in which they have stakes and, if such exists, shall completely disclose the information.
- 4) Directors, management, and employees shall strictly adhere to the laws and regulations as required by SET, particularly when involved with connected transactions.

PTTEP establishes preventive measures of conflict of interest as follows:

- 1) Directors, management, employees, and related persons must avoid financial involvement or engagement in a relationship with outsiders which may result in PTTEP Group's loss of benefits, conflicts of interest, or operational inefficiency.
- 2) Directors, management and employees who may have a potential conflict of interest regarding procedures relating to a bidding process, and selecting and awarding of the transactions must report to their supervisor or those participating in the given process through the Company's "Conflict of Interest Declaration Form". They must also withdraw themselves from participating in such processes.
- 3) Directors, management, and employees must notify the Company immediately if there is a suspicion or uncertainty that what they or their related persons are involved in or their shareholding in the business that has a transaction with the Company may lead to a conflict of interest.

## Business Ethics

PTTEP is committed to operating ethically as Business Ethics are regarded as the behavioral framework and guideline for the Company's directors, management, and employees to carry out our business operations effectively, transparently, and ethically, as well as to treat all of the stakeholders fairly. These practices will result in confidence and acceptance in the efficiency and transparency of the Company's business operations, thereby creating a long-term sustainable value for all the stakeholders.

The Business Ethics of PTTEP Group is a part of CG&BE. The Board first established the Business Ethics in 1989, and it has since been revised every year. The current version of CG&BE was approved by the Board on January 28, 2016, and it is regarded as the highest regulation for operating of businesses with PTTEP Group. The new structure of CG&BE enables the audiences to understand the contents with less difficulty. In addition, more details on the measures for implementation of anti-corruption were added. CG&BE is available for download from the Company's website.

Components of our Business Ethics consist of principles, samples of questions and answers, information for additional study, and the departments which are responsible for each of the principles. There are 10 ethical issues reflecting our organizational values in operating of the businesses to which all of the Company's directors, management, and employees must adhere.

- 1) Compliance with the Laws, Regulations and Rules, and Respect for Different Customs and Cultures
- 2) Political Neutrality
- 3) Human Resources
  - Workplace Environment
  - Privacy, Equal Treatment and Anti-Harassment
  - Illegal Drugs, Substance Abuse and Alcohol
  - Outside Employment, and Executives and Employees' Participation in Outside Activities
- 4) Use and Protection of Information and Assets
  - Keeping Records, Using, Disclosing and Safeguarding Information

- Use and Storage of Electronic Data and Information Technology Resources
  - Use and Protection of Intellectual Property
  - Insider Trading and Use of Inside Information
- 5) Conflicts of Interest
  - 6) Procurement and Contracts
  - 7) Anti-Corruption
  - 8) Trade Competition
  - 9) Anti-Money Laundering
  - 10) Safety, Security, Health and Environment

PTTEP distributes CG&BE booklets to all of our directors, management, and employees for their reference and adherence. They are also required to sign their name as an accord to be committed to applying CG&BE principles and carrying them out to the highest working standards. In addition, the booklets are provided to the Company's business partners, regulatory organizations, parties with regular business relationships with the Company and other interested parties. For the convenience of the shareholders, investors and interested parties, contents of the CG&BE booklets can also be found on the Company's website under the Corporate Governance section.

PTTEP continuously enhances and promotes the knowledge and understanding of CG&BE among the directors and personnel. The Board governs the ways which CG&BE is communicated to the directors and personnel to ensure that they are able to perform and conduct the business according to CG&BE. The means of the communication endorsed by the Board are as follows:

- 1) Developing PTTEP's CG&BE system and policy to conform with the "PTT Way of Conduct" guidelines to ensure consistency in all aspects of the operations of PTT Group and to add value for the benefits of all the parties, emphasizing collective understanding of the policies, procedures and actions especially in the area of anti-corruption.
- 2) Developing a complaint handling system which is credible and meets the international standards. The complaint system is not only a system which links

all information during the entire complaint lifecycle starting from the submission to resolution but is also a system that notifies the complainant of the progress of the complaint handling. The system allows all complaints which the Company has received to be securely stored and conveniently searched. The system has also been expanded to include all the complaints received locally and overseas by the subsidiaries under PTTEP. All these developments have helped to improve the efficiency of the Company's complaint handling and are in line with the Company's growth strategy.

- 3) Promoting the knowledge and understanding of CG&BE policy among the Company's directors, management, and employees through activities covering target groups at all levels and age groups. The activities have been designed with consideration for interest and knowledge levels of the target groups as well as expanded to include the stakeholders outside of the Company such as vendors in order to ensure the optimal results. Activities held can be summarized as follows:
  - 3.1) Organizing a workshop regarding the Foreign Corrupt Practices Act (FCPA) as part of an effort to promote CG&BE knowledge among the Company's directors and management. The workshop focused on highlighting useful contents of CG&BE for the directors and management and encouraging them to put what they had learned into practice.
  - 3.2) Organizing two orientation programs for new executives and members of the Corporate Governance Committee with lectures on an overview of CG&BE and the scope of responsibility of the Corporate Governance Committee.
  - 3.3) Organizing four CG&BE orientation programs for new employees of PTTEP and PTTEP Services which is a subsidiary of PTTEP in order to provide them with a basic understanding of CG&BE.
  - 3.4) Organizing a workshop on "GRC Induction for New VPs (GRC: Governance, Risk Management, Internal Control, and Compliance)" for new

executives with a focus on the significance of CG&BE and the responsibility of the executives in being “CG Leaders”. The workshop also offered an opportunity for the participants to exchange their thoughts and experience concerning good governance.

- 3.5) Organizing the “CG&BE in Myanmar” activity for the Company’s executives overseeing the project in Yangon, Myanmar. The activity was aimed at promoting CG&BE in an international market. The Corporate Governance Committee also took part in this activity in order to underline the importance of CG&BE, while the executives were given an opportunity to discuss CG&BE and exchange their thoughts on the matter. The results from this activity were used as a reference in establishing the development plan for 2016 which includes translating CG&BE into Burmese.
- 3.6) Organizing the “CG&BE Workshop 2015” for offshore staff. This workshop was held for the second consecutive year for the Company’s executives and staff of all the units at the headquarters and S1 Project. It was aimed at encouraging an exchange of opinions and knowledge transfer on CG&BE and promoting *EP SPIRIT* and Integrity & Ethics in order to improve work efficiency and promote bonding within the Company. This year the workshop’s format and content were revised to better suit our offshore staff for a higher operational efficiency. Four of the executives and 60 staff members took part in the workshop.
- 3.7) Organizing the GRC Course 2015 (GRC: Governance, Risk Management, Internal Control, Compliance) which was a full-day course for the Company’s new employees. The course was held twice with the aim to create a better understanding of CG&BE. The course also highlighted the importance of CG&BE and encouraged the participants to put CG&BE into practice.

- 3.8) Organizing the GRC Specific Communication 2015 program to enable the Company’s executives and employees to learn about good governance through “Educational E-Mail”. The program also included electronic tests available on the website, accessible via computers, smartphones and tablets. This program was an extension of “GRC E-Learning” held in the previous year, aiming at developing the employees’ understanding of Business Ethics (BE). For 2015, the program focused on the following four issues found to be the least understood by the employees in order to reduce the risks of our ethics code being violated: (1) Conflicts of Interest (2) Use of Internal Data (3) Procurement (4) Accepting Gifts, Hospitality and Other Favors
- 3.9) Revising PTTEP’s Supplier Code of Conduct for the Procurement and Contract Department to conform with the policies of regulatory bodies such as the Securities and Exchange Commission and the Stock Exchange of Thailand. The revised code, which has become more proactive in expanding anti-corruption efforts, now requires the suppliers to accept and comply with PTTEP’s Business Ethics (BE) policy as well as join in the efforts with the Company to counter corruption. This effort underlines PTTEP’s commitment to encourage our suppliers to seriously adopt the policies and practices which are corruption-free as well as to create a good culture in the business sector and society.
- 3.10) Organizing the PTT Group CG Day annually the Other Companies under PTT Group (PTT, PTTEP, PTT Global Chemical, Thaioil, IRPC, and Global Power Synergy). The event was held for the seventh time under the title “Shade of Sharing... Passing the Power Forward”. The event was aimed at raising awareness and consciousness among all levels of PTT Group’s personnel of our efforts to fight corruption so that they can put what they learned into

practice for benefits of all the stakeholders. A total of 633 people took part in the event. This included vendors outside of PTT Group who took part for the first time to learn of the Group's anti-corruption efforts and guidelines relating to vendors as well.

The Corporate Secretary is in charge of reporting to the Corporate Governance Committee and, on a quarterly basis, the Board of the Company's effort to promote CG&BE to ensure them that substantial results are achieved. Currently, the Corporate Governance Committee is reviewing the 2016 operation plan, while taking into account the 2015 evaluation results, in order to ensure continuity and efficiency for the development of the operation plan.

## Internal Controls

PTTEP Group has placed particular emphasis on an efficient system of internal controls as it is one of the key foundations for the Group to achieve the three objectives, namely, 1) efficient and effective operations, prudent use of resources and safeguarding of assets, 2) accurate, reliable, timely and transparent disclosure of financial and non-financial reporting, and 3) be in compliance with laws, rules and regulations as well as PTTEP Group's policy and procedure.

Our system of internal controls is based on the updated COSO (The Committee of Sponsoring Organizations of the Treadway Commission) framework of 2013 which is a guidance of the Office of Securities and Exchange Commission and the State Audit Commission. The framework comprises the following five components.

### Control Environment

PTTEP performs the businesses under the standards of good corporate governance in order to meet our corporate objectives, of "Growth, Prosperity, Stability, Sustainability and Dignity". The Company has designed the organization structure and reporting lines as well as delegated the authority

within PTTEP Group in such manner where appropriate and distinct roles and responsibilities between the Board and the management are established in balance to enhance the effectiveness of our system of internal control system.

Meanwhile, we also give importance to human resources management by developing our processes to attract, develop and retain competency individuals in alignment with the Company's objectives, in addition to holding individuals from both the management and employees accountable for their internal control responsibilities in the pursuit of our objectives.

### Risk Assessment

PTTEP acknowledges importance of the risk management by appointing the Risk Management Committee to be responsible for regulating and overseeing the effectiveness of the risk management. The Company has implemented ISO31000 Risk Management Process which is applied throughout the organization, including strategic planning, investment and divestment, capital project management, and all business processes. Risks from internal and external factors as well as potential of fraud risks impacting PTTEP Group's objectives are identified, while their impacts and likelihood are assessed. The risks then are mitigated by appropriate action plans and continuously monitored. We also identify and assess changes which can significantly impact our businesses in order to ensure that the system of internal controls will be adapted in a timely manner. This year, we have conducted control self-assessment in the areas of fraud risks and change management in order to be in line with new COSO framework.

### Control Activities

PTTEP has efficient control activities that mitigate risks to the acceptable levels which are appropriate for our business and environment. Control activities include variety of controls which may include a balance or a mix of approaches to mitigate risks such as deployment through regulations, policies, and working procedures which are reviewed and improved consistently. The Company also selects and develops several general controls over technology to ensure

that the controls are associated and effectively applicable to our objectives. Meanwhile, we also encourage the employees to be aware of the importance of strictly performing control activities and following related laws and regulations to ensure that our control system is effective as designed.

### Information and Communication

PTTEP realizes the importance of information and communication by providing accurate, complete, timely, accessible, protected, verifiable, and sufficient reporting of financial and non-financial information to support effective decision making and the efficiency of internal controls. In addition, the Company has excelled at both the internal and external communications by establishing specific departments to effectively communicate required information, including objectives and responsibilities for internal controls, necessary to support the functioning of internal controls to all of the stakeholders. The Company has also set up a special channel for communication to allow the stakeholders to report concerns or pressing issues with confidentiality.

### Monitoring Activities

PTTEP continually monitors and evaluates whether controls are presented and followed every year at both organization and process levels to ensure that the Company's internal controls continue to be adequate for the current environment and changing risk factors. Where there are areas for improvement, action plans and suitable personnel are established for timely resolution. In addition, the Internal Audit Department evaluates the internal control compliance regularly to ensure that each of the operations is still in line with the Group's objectives, whereas the evaluation results are reported to the Audit Committee on a regular basis.

More details on the results of the 2015 internal control adequacy evaluation are disclosed in the "Internal Controls and Risk Management" section (page 138).

## Risk Management

PTTEP's Board and management recognize the importance of strong and effective risk management as changes in business environment are uncontrollable and may impact business of the Company. PTTEP therefore established the Risk Appetite Statement and Metrics to be the framework for conducting the business. Risk management is considered a responsibility of all personnel. The Company has a Risk Management Policy that requires the directors, management, employees, suppliers and contractors to manage risk thoroughly and systematically to assure our target achievement.

PTTEP has applied the guidelines of risk management of ISO 31000, an international standards for risk management, throughout the Company. Risk management practices are taken into account within the organization at all levels, including corporate, function groups, divisions, departments, working units, project management, and assets management, as well as processes such as investment and divestment decision making.

The Risk Management Department is responsible for ensuring the adequacy of the risk management system and its effectiveness across the organization. In addition, the Department is responsible for systematically and effectively mitigating PTTEP's exposure to risks, as well as monitoring the results and continuously reporting them to the management, the Risk Management Committee, and the Board. The Risk Management Department is also responsible for the cultivation of a positive risk management culture all over the organization.

## Remuneration of Auditor

### Remuneration of Auditor

#### Audit Fee

For the year 2015, PTTEP and its subsidiaries, both domestic and overseas, had audit fees with the Office of the Auditor General of Thailand (OAG) and other auditing firms for a total of USD 1.2 million.

#### Non-Audit fee\*

For the year 2015, the Company did not pay non-audit fee to the OAG.

\* Remarks: "Non-Audit Fee" - This terminology is commonly used by Securities and Exchange Commission of Thailand (SEC reporting requirement).

### Summary of the Auditors' Report for the Past Three Years (2013-2015)

The OAG expressed an unqualified opinion in the Auditors' Report on the PTTEP consolidated financial statements for the past three years.



## Other Good Corporate Governance Practices

PTTEP places importance on governing our business operations with CG&BE as well as most of the best practices followed internationally by integrating them with our existing practices, while also taking into account the appropriateness, current business environment, and the benefits for the Company, and our shareholders and stakeholders. Some of the practices are resulted from our continuous effort to surpass the requirements of CG 2012 established by SET such as follows:

- 1) For an election of a director, each candidate must receive a vote of more than half of the total number of shareholders attending the shareholders' meeting and casting their votes (majority vote) even if the number of candidates is equal to the number of director positions required from the election at the time.
- 2) A director, who turns 70 years of age, is immediately disqualified to serve as a director of PTTEP.
- 3) A director's serving term cannot be more than three consecutive terms or nine years, without any exceptions.
- 4) The total number of independent directors must not be less than half of the total number of directors.
- 5) The right to attend a shareholder meeting must be carefully examined to ensure that granting of a proxy is conducted properly to not interfere with rights of the shareholders who attend the meeting.
- 6) Performance appraisals of the Board and the sub-committees are conducted with integrity using the Performance Evaluation Form and the Board Performance Target. Appraisals include an individual self-appraisal and individual cross-appraisal by other directors, an appraisal of the Chairman, and an appraisal of the Board and each sub-committee. Results of the appraisals are then translated into plans for further performance improvements of the directors.
- 7) In 2015, the Independence Directors Committee had four meetings to discuss and exchange opinions on significant and beneficial matters related to the



Company and our shareholders. More details are disclosed in the “The Independent Directors Committee Report” part (page 135).

- 8) Effective and tailored activities were organized to promote the understanding of CG&BE for the Company’s directors, members of specific committees, executives and employees. The activities had clear planning and performance indicators for evaluating knowledge and a system for keeping track of the results. The Corporate Governance Committee was in charge of planning the activities and designing performance indicators, and also took part in the activities along with executives and employees in order to underline the importance of the activities. The Corporate Governance Committee was also responsible for monitoring to ensure that substantial results were achieved. The activities were also extended to vendors in order to foster a good culture in the business sector and society. Details of the activities are disclosed in the “Business Ethics” part (page 118).

PTTEP has also implemented the following practices.

- 1) PTTEP has always placed importance on independency of the Chairman by setting it as the first priority for the Chairman nomination. If there are other reasonable and appropriate factors, the Company however will also consider other fundamental attributes such as business-related knowledge and expertise, working experience, and leadership characteristics as well as the performance appraisal results to ensure that the Chairman governs the Company with full independency. Currently, the Company’s Chairman is an independent director. More details are disclosed in the “Independence of Chairman” part (page 117).
- 2) PTTEP’s Articles of Association (AoA) stipulates that the number of PTTEP directors shall not be less than five but not greater than 15. As of December 31, 2015, the Company has 15 directors. This is in line

with the Company’s AoA and the business environment of the petroleum exploration and production where experts from numerous disciplines are required in order for the directors to adequately and effectively monitor various areas of the business operations. Currently, PTTEP has five sub-committees which are responsible for specific tasks as described in their respective regulations. All of the Company’s five committees’ performance are assessed on a yearly basis.

- 3) The Board comprises directors representing a mix of balanced skills in several fields which are beneficial for the petroleum development and production business. The Nomination Committee also places importance on candidates with diverse skills, experiences, expertise, and other qualifications during the nomination process to ensure that the Board’s composition is complete and most suitable to PTTEP Group. In addition, we also have a policy against gender and racial discrimination.
- 4) PTTEP determines that at least one member of the Audit Committee must possess adequate experience in or knowledge of finance and accounting to audit with reasonable assurance of the Company’s financial statements. Currently, all members of the Audit Committee possess all the aforementioned qualifications.
- 5) According to the Budget Procedure Act B.E. 2502, PTTEP, a state-owned entity, is required to assign the independent and reliable Office of the Auditor General of Thailand (OAG) to be the Company’s external auditor.
- 6) Although PTTEP has free float ratio of less than 40 percent of the total paid-up shares, the Company always places a great importance on protecting the rights of the minority shareholders by organizing several activities to periodically communicate information beneficial to the shareholders as well as to gain acceptance from other external agencies. For example, we were recognized as an exemplary corporate in organizing the Annual General Shareholders’

Meeting (AGM) for 2015 by successfully scoring 100 percent for four times in the AGM Checklist Assessment conducted by the Thai Investors Association.

- 7) PTTEP has specified that a quorum at the time of the of Board passing a resolution must comprise of at least two-thirds of Board members who present at the meeting. The Company stipulates that if a director fails to attend a Board meeting three times consecutively, he or she will automatically be disqualified from being a director. The Company also uses attendance as a performance indicator for the Board Performance Target evaluation. In addition, PTTEP schedules meetings in advance throughout the year and always makes sure the directors will be available to attend the meetings. These measures altogether are already deemed sufficient as evidenced by the attendance of the Board meetings in 2015 when the ratio always exceeded the two-thirds. Before voting at the meetings, the Chairman allows all directors to ask questions and discuss various issues in detail in order to ensure that the Board's resolutions have unanimous consent.
- 8) PTTEP does not have the Employee Stock Option Program (ESOP) for the management. The Company however has established the Employee Joint Investment Program (EJIP) to allow the Company's management and employees to voluntarily purchase PTTEP stock every month throughout the five-year period, while the Company shall contribute an addition amount equal to the amount deducted from the payroll of the eligible candidates on a monthly basis. All shares purchased each month are suspended from trading for three years from the date of acquiring. The objective of EJIP is to encourage the management and employees to dedicate and be loyal to the organization as well as to create the sense of ownership in the long run.
- 9) PTTEP does not have a policy requiring directors and senior management to report to the Board on their PTTEP stock trading activities at least one day in advance due to the fluctuation of the share price in the market. The Company however has established a policy regarding prevention of the use of internal information to prevent our directors, management and employees from making use of such information for personal or others' gains. All directors and senior management are required to report to the Board on their PTTEP stock trading activities. In addition, the Company also has a silent period that prohibits directors and senior executives from trading PTTEP stock during specified periods which are usually around those prior to disclosures of the Company's significant information to the public.
- 10) PTTEP does not implement the cumulative voting system as our AoA prescribes that a director is elected through the use of majority vote. The Company however has provided other mechanisms to protect the rights of our minority shareholders such as allowing them to propose a director candidate in advance during the nomination process.
- 11) PTTEP places high importance on distributing the invitation letter of the AGM prior to the meeting date to provide the Company's shareholders with adequate time to appropriately review the agenda. To ensure that our shareholders receive full benefits such as rights to receive dividend payment from the Company in a timely manner, the meeting is usually held in March every year. For the best interest of the shareholders, the audit of PTTEP's financial statements however takes relatively more time than Other Companies due to the complexity of having international operations across various countries. Currently, the Company is able to distribute the invitation letter 16 days and publish it on in the Company's website at least 30 days in advance prior to the date of the meeting.

## Awards and Recognitions for Good Corporate Governance

In 2015, PTTEP was given the following four Board of the Year Awards, i.e. Hall of Fame Award (fourth consecutive year) Consistent Best Practices Award (fourth consecutive year) Exemplary Practices Award (fourth consecutive year) Audit Committee of the Year (third consecutive year). The “Board of the Year 2015” awards were given to companies with outstanding boards of directors in several categories. The awards were presented by the Thai Institute of Directors Association (IOD) in cooperation with the Stock Exchange of Thailand (SET), the Board of Trade of Thailand, the Federation of Thai Industries, the Thai Bankers’ Association, the Thai Listed Companies Association, and the Federation of Thai Capital Market Organizations.



PTTEP was named one of Thailand's Top Three Domestic PLCs and was also chosen as one of the Top 50 ASEAN PLCs at the ASEAN Capital Market Forum (ACMF). The awards were given by the securities and capital market regulatory bodies in AEC jurisdictions to publically listed companies that received the best Corporate Governance (CG) scores based on the ASEAN CG Scorecard which measures ASEAN listed companies' efforts in promoting good corporate governance. The Scorecard is an initiative of the ASEAN Capital Markets Forum (ACMF), aiming to raise the CG standards and practices of ASEAN publicly listed companies (PLCs) as well as to give a greater international visibility to well-governed ASEAN PLCs and showcase them as investable companies.

In addition, PTTEP was rated in the project of Corporate Governance Report of Thai Listed Companies (CGR) 2015 as Excellence, or total scores at 96, by the Thai Institute of Directors Association (IOD), and received 5 National Corporate Governance Committee's logos. The survey criteria were in line with ASEAN CG Scorecard Standard.

PTTEP won the Best Investor Relations Award in the category of listed companies with market capitalization of over THB 100 billion at the SET Awards 2015. The awards were given to listed companies with outstanding achievements in building investor relations. A panel of distinguished judges from the Stock Exchange of Thailand (SET) chose the winners. The judging criteria included the involvement of all parties within the company in investor relations efforts, accurate and complete disclosure of information in a transparent and timely manner, the variety and effectiveness of investor communication channels, evaluations from analysts and institutional investors, and other requirements. Strict criteria were established for the purpose of selecting the most suitable candidates for the Best Investor Relations Award. Previously, PTTEP won the Outstanding Investor Relations Award from the SET for two consecutive years in 2013 and 2014.

PTTEP was added to the Climate A List by the Carbon Disclosure Project (CDP). PTTEP was the first and only company out of 113 Southeast Asian companies to be added to the Climate A List. Every year, more than 1,000 companies worldwide apply to be listed.

PTTEP was given an award at the “Thai Corporate Moving toward Sustainable Growth” seminar held by the Stock Exchange of Thailand in recognition of PTTEP’s being included in the Dow Jones Sustainability Index (DJSI). PTTEP was one of the ten listed companies from Thailand to be included in the DJSI in which the Company was also included in the prestigious DJSI World Oil and Gas Industry.

In 2015, PTTEP was also a listed company in the “Thailand Sustainability Investment 2015” by the Stock Exchange of Thailand (SET) in recognition for being a SET listed company with an outstanding performance on Environmental, Social and Governance (ESG) as well as excellent operating results. PTTEP has also been a member of the Dow Jones Sustainability Index World Oil and Gas Industry for its second consecutive year, 2014 and 2015 respectively.

PTTEP received an Honorary Member Award from the Thailand Business Council for Sustainable Development (TBCSD) for being an outstanding corporation that has operated the business while implementing policies on environmental conservation and social responsibility throughout 22 years of our membership with TBCSD.

PTTEP received the Thailand Quality Class Award (TQC) for S1 Project under PTTEP Siam Limited, a subsidiary of PTTEP. The award was given to the Company by the Thailand Quality Award National Committee of the Thailand Productivity Institute for the second consecutive year in recognition of our dedication in exploring, developing and producing petroleum at S1 Project or Sirikit Oil Field.





## Awards and Recognitions for Good Corporate Governance

PTTEP won the SHE Award for Excellent Management at two of our projects: Arthit Project and S1 Project. The SHE Award recognizes petroleum companies with excellent health, safety and environment management. The Department of Mineral Fuels gave out the SHE Awards for the first time with the aim to encourage companies to develop an excellent health, safety and environment management in exploration and production of petroleum.

PTTEP received a "Certificate of ESG100 Company" from the Thaipat Institute. The Company was chosen as one of 100 companies with an outstanding performance in operating a business in a suitable manner as well as excellent operating results and outstanding achievements in the areas of environment, society, and good governance.

The Thaipat Institute published the ESG100 Rating list for the first time. The rankings evaluated the sustainability of 567 companies listed on the Stock Exchange of Thailand.



PTTEP won a Thailand's Top Corporate Brands 2015 Award for the third time. The award was given to the Company for being the one with the highest brand value in the energy and utilities sector of Thailand. This award was given based on research by the Faculty of Commerce and Accountancy, Chulalongkorn University, who assessed brand values based on their financial, accounting, and marketing performance.

PTTEP received the Best Regional Cash Management Solution Award from The Asset magazine. The award honored the Company for continuously undertaking the efforts to improve and transform our financial management in order to become a "World Class Finance" organization as well as for successfully moving towards centralized treasury activities which has placed PTTEP at the forefront of Asian corporations.



PTTEP received the following three awards at the “IAA Awards for Listed Companies 2014” ceremony held by the Investment Analysts Association (IAA), i.e., Best CEO Award won by PTTEP President and CEO Mr. Tevin Vongvanich for the third consecutive year Best CFO Award won by Ms. Penchun Jarikasem, Executive Vice President for Finance and Accounting Group, for the fourth consecutive year Best Investor Relations Officer (IRO) Award won by Ms. Nuchanong Sangkeaw, Investor Relations Manager, for the first time. The IAA Awards for listed companies were given to the CEOs, CFOs and IROs of listed companies in eight industries. They were nominated and voted for by analysts and fund managers based on their demonstration of management excellence comprising consistency, timeliness, insight, accuracy and concise communication, while possessing good corporate governance, business ethics, and industrial knowledge and expertise.

PTTEP received the following three awards, i.e., Best Corporate Hybrid Best Deal of Thailand from The Asset magazine Best Investment Grade Bond from FinanceAsia. The three awards recognized PTTEP for successfully selling USD 1 billion subordinated perpetual bond or hybrid bond overseas. PTTEP was the first company from Thailand to offer hybrid bond in the US dollars. The bond received an overwhelming interest from investors and was five times oversubscribed.

PTTEP received the following four awards, i.e., Asia's Best CEO (Investor Relations) Award Asia's Best CFO (Investor Relations) Award Best Environmental Responsibility Award Best Investor Relations Company Award from The Corporate Governance Asia magazine. The Asia's Best CEO (Investor Relations) Award and Asia's Best CFO (Investor Relations) Award were given to the CEOs and Presidents, and CFOs with excellent management performance and ability to create the shareholder value through upholding the highest standards of corporate governance and business ethics. Meanwhile, the Best Environmental Responsibility Award was given to the companies which has exhibited an outstanding environmental responsibility, while the Best Investor Relations Company Award was presented to listed companies with outstanding performance in Investor Relations.

PTTEP received the Charta Peduli 2014 Award for TOP CSR Free Medical Services from Zaim Uchrowi, Corporate Secretary and co-founder of Dompot Dhuafa Foundation which is Indonesia's leading non-profit organization. PTTEP was honored for establishing Gerai Sehat PTTEP-Layanan Kesehatan Cuma-Cuma Dompot Dhuafa (PTTEP-LKC DD), a free healthcare center, to serve the poor or underprivileged Indonesian communities in Northern Jakarta. The CSR Free Medical Services Award was presented to the companies which contribute to the Indonesian society through their Corporate Social Responsibility (CSR) projects. The Charta Peduli award is divided into four categories, e.g., Education, Health, Economy, and Charity and Disaster Relief. The award was also presented to the companies which contribute to the Indonesian society through their Corporate Social Responsibility (CSR) projects.





## Reports of the Sub-Committees

### The Corporate Governance Committee Report

PTTEP places great importance on the adherence of the Good Corporate Governance and Business Ethics of PTTEP Group (CG&BE), which has continuously been improved, for the Company's business operation. The Board of Directors (Board) has assigned the Corporate Governance Committee, which consists of at least three independent directors, to govern and ensure that CG&BE is in compliance with across the organization.

In 2015, the Committee held six meetings, while all of the incumbent members attended every meeting. The results of the meetings in 2015 can be summarized as follows:

- 1) Assessed and reviewed CG&BE to be in compliance with the laws, practices of international standards and other leading companies, as well as recommendations from well-recognized institutions. All of the results were submitted for the Board's approval.
- 2) Promoted business operations of PTTEP Group and performance of the Board, management and employees to be in line with CG&BE by monitoring and providing recommendations on CG&BE-related activities to enhance knowledge and understanding of CG&BE, as well as on the complaints received through the CG Hotline channels on a quarterly basis. The Committee also regularly participated in and emphasized on the significance of CG&BE to the management and our employees.
- 3) Governed PTTEP to have efficient and adequate system in place to appropriately support the anti-corruption policy, practices, and internal control systems. The Committee also acted as a role model to strictly carry out CG&BE practices to ensure that everyone in the organization understands the importance of the Company's anti-corruption mechanism and collectively cultivates it as the PTTEP's culture.

- 4) Considered and provided recommendations on the revision of the Procurement Regulations 2013 by putting an emphasis on the procurement strategy, criteria and consideration process relevant to the decision-makings involved. The Committee also reviewed the procurement plan of PTTEP Group for 2015 before presenting it, together with the annual procurement budget, to the Board for an approval to ensure that the procurement process is efficient, transparent and in line with the Company's CG&BE.
- 5) Provided recommendations on and monitored PTTEP's Corporate Social Responsibility (CSR) performance and work plan to enhance CSR activities of the Company to create values to the communities and societies in the long-run.
- 6) Established Corporate Governance reporting guidelines according to the principles of SET with the objective to incorporate the CG Report as a part of PTTEP Annual Report for viewing of all the stakeholders.
- 7) Provided recommendations on the direction of CG&BE for future implementation, including expansion of the scope to include partners and other relevant stakeholders to further raise the Company's CG standard.

The Corporate Governance Committee reported minutes of all meetings to the Board on a regular basis. In 2015, the Committee abided by its assigned tasks according to the Charter for the Corporate Governance Committee B.E. 2548 and its amendments with prudence, competence and independence. The Committee properly provided straightforward opinions for optimal benefits of PTTEP, the Company's shareholders as well as stakeholders.

*(Signed) Admiral Tanarat Ubol*  
(Tanarat Ubol)

Chairman of the Corporate Governance Committee

## The Risk Management Committee Report

PTTEP has realized the importance of effective risk management as petroleum exploration and production business is relatively more complicated in terms of technical and operation procedures. Coupled with changes of external environment factors which are uncontrollable, risk management in Safety, Security, Health and Environment (SSHE) has been taken into consideration at all times. In addition, as investment in petroleum exploration and development of projects is extremely high, the Risk Management Committee (RMC) therefore plays a significant role in considering the impacts from various factors particularly those related to market risks, financial risks, and investment risks. The Board of Directors assigned the Risk Management Committee, comprising of 6 directors of which three are independent, to be responsible for overseeing and supporting the efficient risk management throughout the organization.

In 2015, the Committee held 11 meetings and 2 informal meetings which can be summarized as follows:

- 1) Advised and promoted the development of effective and efficient enterprise risk management by driving to establish concrete PTTEP Risk Appetite Statement and a clearer Risk Governance Framework. The Committee also recommended and approved Risk Metrics & Limits framework necessary for decision making within PTTEP operation.
- 2) Governed the management of key risk factors that impacted corporate strategy and objectives. PTTEP conducted extensive qualitative and quantitative evaluation of the Company's Corporate Risk Profile, both short term and long term, as well as emerging risks. The Risk Management Committee provided constructive insight and direction on how to mitigate the risks and oversight continuously on the progress such as oil price and financial risk management which substantially reduced the adverse impacts on the Company's bottom-line.

Apart from risk management in specific areas and at the project level where PTTEP has managed efficiently, the Committee advised to integrate risk management by viewing all the risks from a more holistic perspective and more as a portfolio management and by focusing more on critical factors, which affect the Company's net income, such as oil price, foreign exchange rate, operational cost, impairment and major project development. In addition, the Committee's recommendation to hire an external consultant to study the Company's portfolio improvement has stimulated fruitful discussions among the directors and management.

- 3) Considered and screened new investments, including new exploration projects, mergers and acquisitions, extensions of concession, entries of new phases, and divestments by evaluated and authorized appropriate measures to mitigate critical risks as well as capture opportunities for PTTEP such as seeking partners for joint investment, conducting analysis on competitor and counterparty risks, and withdrawing from high risk investment opportunities.
- 4) Considered the corporate strategic plan, five-year investment plan (2016 - 2020), 2016 annual budget, key performance indicators and relevant risks. The Committee has advised to adjust strategic plan and budget to be in line with the low oil price situation as well as to include the Company's growth work plan in the package before proposing it to the Board for approval.

The Risk Management Committee reported its findings to the Board on a monthly basis. In 2015, the Committee had performed its duties prudently, competently and independently with knowledge and capability in consistent with PTTEP Risk Management Committee Charter, while providing candid views to all parties for the benefits of PTTEP, and the Company's shareholders and stakeholders.

*(Signed) Sethaput Suthiwart-Narueput*

(Mr. Sethaput Suthiwart-Narueput)

Chairman of the Risk Management Committee

## Reports of the Sub-Committees

### The Audit Committee Report

The Audit Committee at PTTEP consists of three independent directors, all of whom have a considerable amount of knowledge, expertise and experience in economics, finance, and the laws. This Audit Committee is chaired by Mr. Ampon Kittiampon, with Mr. Achporn Charuchinda and Mr. Sethaput Suthiwart-Narueput as the other two members of the Committee. , all of whom are knowledgeable and experienced in reviewing financial statements.

In 2015, the Audit Committee performed its duties as assigned by the Board of Directors according to the Company's regulations, the Audit Committee Charter, and the regulations of the Stock Exchange of Thailand. During the year, the Audit Committee conducted 11 meetings with the Company's management, internal and external auditors. Duties performed during 2015 by the Audit Committee are summarized as follows:

#### Reviewing of Financial Reports

The Audit Committee reviewed the Company's quarterly and annual financial statements together with the management and the external auditor, namely, the Office of the Auditor General. The Committee inquired, commented and provided recommendations to the management on the financial statements to ensure that these statements were complete, accurate, and in compliance with accounting standards, including the International Financial Reporting Standards (IFRS), as well as ensuring that these statements were sufficient and followed through with timely disclosure of all significant matters for investors and users of the financial statements.

In addition, the Audit Committee provided recommendations on the Company's Management Discussion and Analysis (MD&A) regarding clear information, explanation for specific items that significantly impacted financial statements, analysis of financial performance and potential risks regarding the Company's operation and identification of operational plans to cope with the domestic and international business environment.

#### Reviewing of the Internal Control System

The Audit Committee reviewed the Company's internal control and internal audit system to ensure their adequacy,

appropriateness and efficiency. In addition, the Committee encouraged the Company to implement preventive controls to ensure that the operations are sufficiently effective to support the Company's ongoing business.

The Committee performed ongoing monitoring of the Company's operation by requesting the management to perform a post-project review of the Company's major investments, starting from due diligence process through the current performance of the projects, in order to gather lessons learnt for future investment. The Committee also summarized the directions for the management when proposing new investments to the Board of Directors. The Committee also recommended the implementation of a monitoring process to track the actual performance (post investment) against the business plan, so that potential problems from unanticipated differences could be resolved beforehand.

In addition, the Committee requested the management to provide analysis and report on the proportion of procurement procedures between bidding and direct negotiation and then summarized the rationale underlying the direct negotiation cases. The requests were made to assist the procurement team in their planning and help them reduce the number of direct negotiation transactions which can potentially jeopardize the transparency in the procurement process. Based on these analyses, the proportion of direct negotiation transactions appeared to be decreasing significantly.

#### Reviewing of Connected Transactions or transactions with Potential Conflict of Interest

The Audit Committee reviewed connected transactions or transactions with potential conflict of interest to ensure their rationality and optimal benefits for the Company and the shareholders particularly the minority.

The Committee also reviewed the disclosure of such information to ensure their accuracy and completeness.

#### Examining Compliance with Laws and Related Regulations

The Audit Committee reviewed the Company's performance and that of the subsidiaries in terms of their compliance with the securities and exchange laws, SET regulations, and other laws related to the business as well as of their compliance

with the laws relating to their day-to-day business operation. The Committee acknowledged the compliance report relating to the Company's and the subsidiaries' business operations as reported by the Compliance Department as well as other compliance audit results as reported by the Internal Audit Department. The Committee also provided support to the Compliance Department through recommendations intended to increase the effectiveness of the Company's compliance process.

### Conducting Oversight of Internal Auditing

The Audit Committee conducted the oversight of Internal Auditing as follows:

- Approved the annual audit plan of the Internal Audit Department which aligns with the company's key risks and direction.
- Reviewed audit results for both in-house audits and joint venture audits
- Considered major audit issues, provided recommendations for audit findings to improve efficiency of the operations processes, regularly monitored the Company's management's follow-up action plans to resolve issues originating from both internal operations (for in-house audits) and external operators (for joint venture audits), and urged the management to regularly organize a workshop session with the operator to discuss the audit issues and find the solutions together.
- Supported the implementation of a Continuous Control Monitoring System-CCMS which introduces an information system to monitor and detect irregularities in a given process on a continuous basis. This helps to alert the management, users, and the internal auditors and provides them with an opportunity to address and resolve the issues immediately.
- Considered a revision of the Audit Committee Charter and approved the Audit Charter
- Appraised the annual performance of the Chief of the Internal Audit Department
- Endorsed the budget and workforce requirements of the Internal Audit Department

### Nominating of/Meeting with the External Auditor

The Audit Committee considered the issues with care and ultimately nominated the Office of the Auditor General to

continue to serve as the Company's external auditor. The audit fees for the 2015 were subsequently discussed and decided. The Committee then participated in meetings with the external auditor and the Company's Internal Audit Department, in the absence of PTTEP management, to acknowledge the parties involved of the external auditor's approach and audit plan as well as the potential problems or obstacles faced during the auditing process in order to find the solutions for future improvements. In 2015, two of such meetings took place.

### Fulfilling Other Oversight Roles

#### Economic forecast review

The Audit Committee suggested that the Company's management should closely monitor the global and domestic economy, which have highly affected the risks of the Company's overall investment and strategy, and that the management must also take into account others important variables, for example, the Fed's interest rate which could exacerbate the capital flows and currency turmoil. Meanwhile, the Audit Committee also recommended the management keep track of the factors which can have a direct and indirect impacts on oil prices to ensure the optimal benefits for the Company.

The Audit Committee performed its duties with prudence. The Committee made practical recommendations and suggestions to promote the Company's Good Corporate Governance for the protection and optimization of interests of the Company's shareholders and stakeholders. The Audit Committee's 2015 performance was assessed by completing a self-appraisal as well as some additional assessments by the Board of Directors and related units. The Audit Committee was graded "Very Good" for its performance.

The Audit Committee's opinions regarding the results of the duties performed in 2015 as detailed above are summarized as follows:

- The Company's accounting system and financial reports were accurate and reliable and were disclosed in a complete, sufficient and timely manner.
- The Company's internal control systems appeared to be adequate and suitable; they have also been continuously improved to suit the Company's businesses at the present and in the future and in compliance with the securities and exchange laws, SET regulations, and other laws related to the main business.

## Reports of the Sub-Committees

- The Office of the Auditor General, who is PTTEP's external auditor, was an independent entity, being held in high regard in auditing of financial reports to ensure accuracy and reliability. These reports were also complete, adequate, and timely disclosed with essential information.
- Based on reviews of the Company's connected transactions or transactions with potential conflict of interest, the Audit Committee regarded the Company's disclosure of such information as being accurate and complete. The conditions and prices related to the transactions were fair as well as appropriate and approved by the management and the Board prior to the execution.

*(Signed) Ampon Kittiampon*  
*(Mr. Ampon Kittiampon)*

Chairman of the Audit Committee

sub-committee as well as the President and Chief Executive Officer (CEO)

- 3) Revision of the Board's Skill Mix elements
- 4) Reviewed of the Board Performance Target and performance appraisal form of the Board, sub-committees, Chairman, and CEO
- 5) Revision of the Nominating Committee Charter

The Nominating Committee has reported results of the meetings to the Board of Directors for acknowledgement. PTTEP has also disclosed the Company's detailed principles and procedures for nomination of directors as well as the President and CEO in the annual report.

*(Signed) Ampon Kittiampon*  
*(Mr. Ampon Kittiampon)*

Chairman of the Nominating Committee

### The Nominating Committee Report

PTTEP's Good Corporate Governance requires the Nominating Committee to consist of at least three directors where most of the Committee members are independent directors. They are obligated with responsibilities as specified in the Nominating Committee Charter during their three-year service term.

In 2015, the Nominating Committee convened seven times, where those members with vested interests were accordingly abstained on relevant agendas. The Committee has performed its duties as assigned by the Board of Directors in the Nominating Committee Charter with prudence, full competence, and independence. The duties and responsibilities of the Committee during 2015 involved the followings:

- 1) Preparation of candidate lists when there is a vacancy due to retirement by rotation or other reasons, where the proposals were presented to the Board of Directors or in the Annual General Shareholders' Meeting
- 2) Responsible for considering and nominating of a qualified director to be the Chairman or a member of each

### The Remuneration Committee Report

The Board appointed the Remuneration Committee which mainly consists of independent directors. The Remuneration Committee is chaired by an independent director. The Committee's responsibility is to evaluate an appropriate remuneration for the Board, sub-committees, President and Chief Executive Officer, as well as the salary structure of the Company's senior executives. The underlying principles, procedures, and structure are fair and reasonable.

In 2015, the Remuneration Committee convened one time to perform its duties and achieve its role and responsibility, with prudence and independence as designated by the Board in the Remuneration Committee Charter. All members of the Remuneration Committee attended the meeting, and results of all the meetings were reported to the Board, including the following issues.

- 1) Reviewing the remuneration of the newly appointed President and Chief Executive Officer based on fair and reasonable principles, and procedures and structure based on the duties and responsibilities of the President and Chief Executive Officer as well as benchmarking with other companies in PTT Group

- 2) Reviewing the salary structure of top executives based on the newly adjusted Job Grade Structure, Job Grade, as well as reviewing the salary range to contend with the new Job Grade

The Remuneration Committee performed its role in a transparent, fair and reasonable manner. For the Company's stakeholders' confidence, details of the remuneration of the Committee are disclosed in the Annual Report.

*(Signed) Achporn Charuchinda*

*(Mr. Achporn Charuchinda)*

Chairman of the Remuneration Committee

## The Independent Directors Committee Report

The policy and qualification of the independent directors are stated in the Good Corporate Governance and Business Ethics of PTTEP Group and the Independent Committee Charter which define the duties and responsibilities of the Committee. Roles of the Committee are to oversee and make recommendations independently on the corporate management to ensure and protect the overall interests and benefits of the Company's major and minority shareholders. The Committee also reviews PTTEP's compliance as well as the independent directors' own definition to be appropriately and completely in line with related laws, while regularly updating the Charter.

The Independent Directors Committee consists of eight independent directors out of 15 directors from the Board, a selection ratio which is more stringent than the Securities and Exchange Commission's requirement. Below is the list of the current Committee members.

- |                             |               |
|-----------------------------|---------------|
| 1) Mr. Prajya Phinyawat     | Chairman      |
| 2) Admiral Tanarat Ubol     | Vice Chairman |
| 3) Mr. Ampon Kittiampon     | Member        |
| 4) Mr. Achporn Charuchinda  | Member        |
| 5) Colonel Nimit Suwannarat | Member        |

- |                                    |        |
|------------------------------------|--------|
| 6) Mr. Piti Tantakasem             | Member |
| 7) Mr. Sethaput Suthiwart-Narueput | Member |
| 8) Mr. Songsak Saicheua            | Member |

In 2015, the Committee convened four times, in February, June, September, and December. The results of the meetings can be summarized as follows:

- 1) Reviewed the principles of the Independent Directors Committee of PTTEP to be in line with rules, regulations, and international practices of leading companies, by ensuring that it is completed and updated
- 2) Reviewed the Board's and sub-committees' roles in the Annual General Shareholders' Meeting in interest of the Company and shareholders
- 3) Followed up on the comments from each sub-committee meeting, while providing additional recommendations regarding the implementation to the management where the results are reported to the Board
- 4) Recommended on PTTEP's appropriate practice adjustments according to PTT's, as the major shareholder, guidelines relative to the Office of the Prime Minister and the Cabinet's resolutions
- 5) Reviewed and disclosed the performance of the Independent Directors Committee in the annual report

The Independent Directors Committee has performed its duties by providing recommendations and views on significant matters which are beneficial to the Company, investors and minority shareholders with independence, transparency, and without any hidden interests in order to assist the Board to perform with highest efficiency and effectiveness.

*(Signed) Prajya Phinyawat*

*(Mr. Prajya Phinyawat)*

Chairman of the Independent Directors Committee





### Operational Policy towards Responsibility for the Society and the Stakeholders

PTTEP commits to the vision to become a leading Asian E&P company, driven by technology and green practices, creating sustainable values for all of the stakeholders.

The Company has developed the Sustainable Development policy, also known as the G.R.O.W.T.H policy, to be adopted across the entire organization. The purpose is to demonstrate the Company's definite objective and determination to overcome all of the challenges towards developing and becoming a sustainable organization (For the Sustainable Development Policy, see the Company's website).

The Company has also developed the Sustainable Development guideline underlying various aspects which are important to sustainability of the organization, in an effort to establish understanding to ensure that all the functions are in line with one another. Harmony in respect to social responsibility among all the divisions is also established by having them operate with policy accordingly to international standard policies such as ISO 26000, Safety, Security, Health, and Environment (SSHE) Policy adhering to the International Association of Oil & Gas Producers (IOGP), and the Universal Declaration of Human Rights (UDHR).

As for the Company's responsibility towards the stakeholders, PTTEP has designated each division to have its own separate responsibility and participation programs as they are involved with different groups of the stakeholders.

For more details, please see the PTTEP 2015 Sustainability Report.

## Operation and Reporting

PTTEP has adopted the Global Reporting Initiative (GRI) which is one of the world's most prevalent standards for sustainability reporting to provide information regarding the Company's economic, environmental, and social and governance performance. Information about the Company's capability to reduce greenhouse gas emission, for example, is included in the report. The high standard allows the Company to monitor our sustainability effectively and comparably to those of our financial management. The report and its indices have also reflected and been incorporated into the other parts of the Company's business. This ranges from business planning, corporate risk assessment, internal control process, internal auditing, monitoring and reporting of the Company's performance. In 2015, all of the indices have been on the targets.

PTTEP has another report dedicating specifically to sustainability. The report is of a standard comparable to the GRI's sustainability reporting, and the report required in auxiliary of the oil and gas industry. The Company's sustainability reporting demonstrates our continuous effort in fulfilling the ten principles of the United Nations Global Compact (UNGC) as well as other respectable reporting standards of the oil and gas industry. The Company fully discloses the information regarding sustainability as it is vital for stakeholders to decide for themselves of the Company's future.

For more details, please see the PTTEP 2015 Sustainability Report.

## Impacts of Business Operation on Social Responsibility

None

## Projects and Activities for Benefits of the Society and the Environment (After Process)

PTTEP believes that, for our business to be sustainable, the society and the environment in which the Company situates and operates must also be sustainable. Therefore, in addition to the general management of our business, the Company also implements projects and activities which lead to sustainable development of the society and the environment.

The Company has divided our projects and activities into four themes, namely, basic needs, education, environment, and culture & sports. We learn from our experience how to initiate new projects and organize activities effectively for further development.

For more details, please see the PTTEP 2015 Sustainability Report.



## Internal Controls and Risk Management



### Board of Directors' Evaluation on PTTEP Group's Internal Controls

PTTEP's Board of Directors and management recognize the importance and the efficiency of internal control. The management appoints the Internal Control Section to assess the adequacy and effectiveness of internal control annually, whereas the Board of Directors appoints the Audit Committee to provide oversight to ensure that the internal control supports the achievement of business operations, accurate and reliable reporting, and compliance according to laws and regulations.

In the Board of Directors Meeting No. 3/2016/405 on February 25, 2016, the Board endorsed the Audit Committee's report on the adequacy of internal control system of the Company. The report states that PTTEP and our subsidiaries designed and followed the internal control system adequately in order to minimize key risks potentially harmful to the Company's operations. If control deficiencies are detected, they will be corrected and continuously improved to suit the current and future businesses as well as to comply with related laws and regulations. The Audit Committee also provides recommendations as disclosed in the "The Audit Committee Report" part under the "Reports of the Sub-Committees" (page 132).

The assessment result of the internal control covers five key components according to the Committee of Sponsoring Organizations of the Treadway Commission (COSO) by using The Internal Control Self-Assessment Form provided by the Office of the Securities and Exchange Commission of Thailand (SEC). The details can be summarized as follows:

#### Control Environment

PTTEP Group has an efficient and adequate control environment which can be summarized as follows:

- PTTEP Group operates business under the Good Corporate Governance and Business Ethics of PTTEP Group (CG&BE) which is considered as the highest internal regulation. All management and staff are required to sign as evidence of acknowledgement and to act accordingly. In addition, CG&BE is communicated to the directors, management, and employees on a

regular basis through various training courses and activities. In 2015, PTTEP emphasizes on Conflict of Interest and Anti-Corruption Program.

- PTTEP Group has established a clear segregation of duties between the Board of Directors and the management. The Board's task is to oversight, provide directions and goals, but not involved with day-to-day operations which are the management's responsibility. The Board of Directors delegates their powers to the management through the group's regulations, appropriately ensuring flexibility and efficiency in the operation.
- The organization structure is appropriately designed with high flexibility and efficient collaboration and suitable for internal control principle, e.g., segregation of duties, and check and balance. Meanwhile, reporting lines, authorities and responsibilities are also clearly defined. In 2015, PTTEP has announced a new organization structure which is suitable for the main activities in exploration and production business including re-organization of the Production Asset and Operations Support Group. The Company has revised Delegation of Authority & Signatures (DAS) which clearly defines power and authorities of Head Office, Domestic and International Assets as well as allows budget for each item to ease the management. This is in order to standardize, provide flexibility for business requirement, and be in line with the segregation of duties under good internal control principle.
- There are clear human resource management policies in place. PTTEP aims to attract, develop, retain competent individuals by providing the Individual Competency Development Plan (ICDP) suitably for each of the roles and responsibilities, and consistently review and revise the plan including defining level of competency for manpower to support our business growth and expansion plan in the future. In addition, PTTEP conducts employee competency development plan, management succession plan, job rotation, and promotion. The Company also annually conducts employee engagement surveys in order to develop improvement plan to increase employee satisfaction and engagement.

- Management and staff are ensured to acknowledge and understand rules, roles and responsibilities which are relevant to internal control by having policies and standards, including communication to all employees on a regular basis through various training courses and activities.

## Risk Assessment

PTTEP Group promotes international standard of risk management which can be summarized as follows:

- PTTEP Group has established Risk Appetite Statement and Risk Metrics (Tolerance & Appetite) to clarify and establish exact roles and responsibilities, and the line of authority in the management of risk within designated boundaries for PTTEP's Board of Directors, the Company's Risk Management Committee, executive management, management level, and units and operations.
- Risk management policy, standard and guideline are put in place, emphasizing that risk management is the responsibility of the directors, management, and all employees, including PTTEP Group's contractors, which all of whom must follow to achieve the Company's business objectives.
- Risk management is applied throughout the organization including 1) Strategic Planning and Management which assesses risk profiles at every corporate level, i.e., corporate, function groups, divisions, departments, and assets/projects, 2) Investment and Divestment, 3) Capital Project Management, and 4) Business Process Management. The Company assesses the risks from both external and internal factors as well as evaluates the impact and likelihood of those risks. Mitigation plans are developed and then executed to reduce the level of risk through different measures. PTTEP also assesses and closely monitors the Key Risk Indicator (KRI) which is thoughtfully designed to provide an early warning of risks that can potentially prevent the Company from achieving our business objectives. In addition, PTTEP also emphasizes on Counterparty Risk Management to minimize the risk of default by the Company's counterparties and ensure that all contractual obligations are fulfilled.



## Internal Controls and Risk Management

- PTTEP has established the Operational Risk Committee to specifically manage technical and safety risks. The Operational Risk Committee also provides support to different projects in order to enhance their operational efficiency. In 2015, the Operational Risk Committee convened 11 meetings. Meanwhile, PTTEP also has established the Business Continuity Management Committee to provide strategic direction and assist in obtaining resources as required to support the Business Continuity Management program. In 2015, the Business Continuity Management Committee convened 3 meetings.
- There is fraud risk assessment which considers the historical information and opportunities of fraud for high-risk activities. PTTEP considers potential for fraud by assessing probabilities and likelihood of fraud of different types which can potentially arise in the process to reach a given objective. Incentive/pressure, opportunities, and attitudes/rationalization of fraud are assessed and analyzed to justify the inappropriate actions and seek for a prevention plan to mitigate those risks.

Details of risk management are disclosed in the “Risk Factors” section (page 38).

### Control Activities

PTTEP Group has adequate and efficient control activities which help to appropriately manage and mitigate risks. PTTEP Group's control activities are as follows:

- PTTEP Group has an explicit and extensive set of written regulations and policies as well as implementation plans. In 2015, PTTEP has announced policies such as Finance and Accounting Policy, Insurance Policy, Tax Policy, Corporate Communication Policy, PTTEP Corporate Social Responsibility Policy, and Knowledge Management. These policies are the frameworks that define the scope, roles and responsibilities and authority of PTTEP's management and employees. The Company's management and supervisors meanwhile are responsible to monitor and ensure that our employees strictly follow all policies and regulations.
- PTTEP Group closely monitors the Key Risk Indicator (KRI) and mitigation plan such as oil price hedging

which are followed up closely on a monthly basis by the Company's Risk Management Committee and Management Committee.

- The Investment Committee's roles and responsibilities are to ensure that investment expansion is aligned with PTTEP Strategic Direction and Investment Policy, while the Development Committee reviews and provides recommendations of the Company's Development Project.
- SAVE to be SAFE Project Working Team's roles and responsibilities are to ensure business operations effectiveness by emphasizing spending reduction without compromising our Safety, Security, Health and Environment (SSHE) standards.
- Materials Management Improvement Project's roles and responsibilities are to oversee and ensure a proper implementation and improvement of materials management and to gain effectiveness and efficiency, and to continue to be in line with international best practice as well as in compliance with laws and regulations according to a good internal control system.
- PTTEP has established and announced GRC Management System which is the integration of assurance processes which improves business efficiency and effectiveness, combining corporate governance, risk management, compliance and internal controls activities together to go hand in hand and become transparent to all of the Company's stakeholders.
- PTTEP has developed general control activities over technology consisting of infrastructure and security management by announcing policy and procedure to align with IT Governance (COBIT5) and ISO 27001 frameworks. The Company is certified by ISO 27001 for information security in exchange server of internal emails. The Company also emphasizes on other IT security policies such as IT Governance, Limit Access Right, Segregation of Duties (SoD) guideline and firewalls.
- PTTEP appropriately manages subsidiaries, associated companies and joint venture by appointing both management and employees to jointly work the parts in these entities. There are standards and procedures such as International Asset Policy & Procedure and Joint

Venture Management working model and procedure. The Internal Audit Department also has responsibility to conduct audits on the projects which the Company has invested.

## Information & Communication

PTTEP Group has set up an efficient and effective information and communication channels for both internal and external communication as follows:

- PTTEP identifies data and information required for supporting the operations, both internal and external, including preparation of IT System to store the data and information as well as the accessibility to ensure timely technology adjustment. In addition, the Company imposes the use and protection of information and assets as described in the Business Ethics of PTTEP Group. The Company also established the Document Control Policy to ensure that documents are properly managed and categorised. Confidential information is considered to be intended for PTTEP Group's internal use only and solely for the duties and responsibilities assigned.
- Effective and efficient internal communication channels are firmly put in place to ensure that managements and employees can access proper information to achieve their work objective as planned. PTTEP also established special communication channel for employees or external individuals to discretely report violation of laws and regulations, rules, and other wrongdoings. This channel was established with an explicit written document within the Company's Reporting and Whistleblowing Regulation.
- For external communication, PTTEP has business units, e.g., Investor Relations, Corporate Communication, Corporate Governance, and Shareholder Engagement to disclose to all stakeholders of accurate, complete, sufficient, and timely information. In 2015, the Company provided accurate information of assets impairment to investment analysts, of the industry's related issues to investors, and of our SSHE standards and practices to contractors.

## Monitoring Activities

PTTEP Group monitors and evaluates internal control activities efficiently and effectively. The key activities are as follows:

- Internal control assessments at organizational level are performed based on the Securities and Exchange Commission's guidelines and focus groups for useful suggestions and further improvements.
- Internal control assessments at process level are performed to assess the adequacy and effectiveness of the Company's internal control in Merger and Acquisition (M&A) Process, Work Program and Budget Process, and Gift Acceptance Policy, including reviewing of control activities of stock management process to ensure that current control activities are suitable and adequate under the acceptable risk level.
- The Audit Committee assigns the Internal Audit Department to audit and suggest improvements required in order to ensure the adequacy and effectiveness of internal control system. The improvement plans are also developed to resolve all possible concerns found and subsequently communicated them to all parties responsible. The Internal Audit Department reports results found continuously with the Audit Committee.

**Head of the Internal Audit Department and Head of the Compliance Department**

## Roles and Responsibilities of Head of the Internal Audit Department

PTTEP has established the Internal Audit Department which has a functional and direct reporting line to the Audit Committee and administratively (dotted-line reporting) reports to the President and Chief Executive Officer regarding our internal administration. Key roles, responsibilities and scopes of work of the Internal Audit Department include:

- 1) In-house and Subsidiary Audits: To assure that the operations achieve the Company's target, the auditors evaluate and improve the effectiveness of risk management, internal control, and corporate governance process.



## Internal Controls and Risk Management

- 2) Joint Venture Audit: The auditors conduct audits on the operators for projects that PTTEP has invested in to ensure that the operators comply with the Joint Venture Agreements and other related contractual arrangements and that the expenditures charged are fair, equitable and reasonably incurred for the benefits of all partners.
- 3) Consulting Services: The auditors pre-determine all scopes of their services with requestors before starting the engagement. Consulting engagements are designed to improve the efficiency and effectiveness of existing processes or propose additional recommendations on risk management, internal control and governance. Such recommendations may also include sets of advices on design, aiming to improve the Company's control processes.
- 4) Fraud Investigation: The Head of the Internal Audit Department is responsible for undertaking the investigation of all reported or suspected frauds, following the Reporting and Whistleblowing Regulation B.E. 2556. The auditors should be alert to deceptive schemes with potential for frauds or schemes which are likely to lead to other illegal actions. It is also important that the auditor identifies control weaknesses which could potentially create opportunities for frauds in the future. Meanwhile, the actions regarding prevention, detection, further investigation, and prosecution of fraud offenders are clearly set forth, all under the responsibility of management.
- 5) Special Audit Requests: Special audit requests are not included in the annual audit plan. The Internal Audit Department performs special audits as requested by the Company's management and/or Audit Committee to prevent and mitigate risks which may arise.

Referring to the Audit Committee Charter B.E. 2542 (Combined Charter), the Audit Committee has the duty to determine an internal audit unit's independence as well as approve the nomination, transfer, and reward or punishment of the Head of the Internal Audit.

Ms. Chaveeporn Chamsang has been appointed as the Vice President of the Internal Audit Department, having already functioned in this position since October 1, 2013.

The Audit Committee deems that this Head of the Internal Audit Department is qualified under the aforementioned title to undertake the responsibility based on her educational background, necessary knowledge, skills, and work experience. She has also remained up-to-date in terms of professional knowledge and expertise, primarily through extensive training on internal auditing methodologies and internal auditor competency development. Such stringent attention to the person holding the title and the regular supports provided to the entire team highlight the importance which PTTEP places on the efficiency and effectiveness of our Internal Audit Department and the excellence achievement of our Audit Committee.

More details of the Head of the Internal Audit Department are disclosed in the "Details of Head of the Internal Audit Department and Head of the Compliance Department" part (page 143).

### Roles and Responsibilities of Head of the Compliance Department

PTTEP has established the Compliance Department which has a direct reporting line to Senior Vice President, Legal Division, and the President and Chief Executive Officer. The key responsibilities are to encourage the PTTEP Group to fully comply with applicable laws and support management in managing compliance risk efficiently through various compliance programs, including providing of communication and training programs, developing and maintaining of the Legislation Database and Compliance Monitoring System, identifying and conducting compliance risk assessment, providing advice upon the new issuance or amendment of the PTTEP Group internal regulations, coordinating with regulators, and reporting the performance of the compliance programs to the Audit Committee and management.

Mr. Verasak Manchuwong has been appointed as the Vice President of the Compliance Department, having already functioned in this position since October 1, 2013. More details of the Head of the Compliance Department are disclosed in the "Details of Head of the Internal Audit Department and Head of the Compliance Department" part (page 143).

## Details of Head of the Internal Audit Department

**Ms. Chaveeporn Chamsang**

**Vice President, Internal Audit Department**



### Education

- Bachelor's Degree in Business Administration (Banking and Finance), Chulalongkorn University

### Trainings

- Basic Compliance and Ethics Academies, Society of Corporate Compliance and Ethics
- Risk Management and Fraud Investigation Master class, UNI Strategic
- Anti-corruption: The Practical Guide, Thai Institute of Directors (IOD)
- Forensic Accounting, Accounting Alumni, Chulalongkorn University
- Internal Audit Conference, The Institute of Internal Auditors, Australia
- Due Diligence for M&A Master class, Asia Business Forum
- The IIA Internal Audit Conference, The Institute of Internal Auditors, U.S.A.
- 2007 Asian Conference on Internal Audit, The Institute of Internal Auditors, China
- Construction Project Cost Management and Control, Asia Business Forum

- Construction Project Risk Management, Asia Business Forum
- Risk Management in Drilling Activities, Asia Business Forum
- Strategising Approaches for Operational Risk, Marcus Evans (Thailand) Ltd.
- Internal Audit Asia Conference, Asia Business Forum
- Auditing Mergers and Acquisitions, MIS Training Institute, Hong Kong
- IIA International Conference, The Institute of Internal Auditors, London
- 5<sup>th</sup> National Conference on Collective Action Against Corruption
- Continuous Auditing P2P Process
- 2015 IIA Conference by Asia Confederation of Institute of Internal Auditors

### Working Experience in the Past 5 Years

- 2013 - Present Vice President, Internal Audit Department, PTTEP
- 2012 - 2013 Vice President, Compliance Department, PTTEP
- 2005 - 2012 Senior Internal Auditor, PTTEP

## Details of Head of the Compliance Department

**Mr. Verasak Manchuwong**

**Vice President, Compliance Department**



### Education

- Bachelor's Degree in Accounting, Thammasat University

### Trainings

- 2014 ACFE Asia-Pacific Fraud Conference
- 2014 European Compliance & Ethics Institute Conference
- SCCE's 12<sup>th</sup> Annual Compliance & Ethics Institute, Society of Corporate Compliance and Ethics
- Fraud and Corruption
- Super Strategies The Audit Best Practices

- Chief Audit Executive Summit
- FCPA Investigations
- Thailand 6<sup>th</sup> National Conference on Collective Action Against Corruption

### Working Experience in the Past 5 Years

- 2013 - Present Vice President, Compliance Department, PTTEP
- 2003 - 2013 Vice President, Internal Audit Department, PTTEP

## Board of Directors

As of December 31, 2015, PTTEP's Board of Directors consists of 15 directors. Details of 15 current directors and 3 directors who resigned during the year 2015 are as below.

### Mr. Prajya Phinyawat

Age: 64 years

- Chairman
- Chairman of the Independent Directors Committee



<b>Starting Date of the Position</b>	March 28, 2012	● 2009 - 2011	Director,
<b>Education/Training</b>			Thai Oil Public Company Limited
● Ph.D. Civil Engineering,		● 2008 - 2011	Chief Operating Officer,
University of Texas at Austin, U.S.A.			Downstream Petroleum Business
● M.S. Civil Engineering, Stanford University, U.S.A.			Group and Senior Executive Vice
● B.E. Civil Engineering,			President, Oil Business Unit,
Chulalongkorn University, Thailand			PTT Public Company Limited
<b>Training of Thai Institute of Directors Association</b>		● 2007 - 2011	Director,
● Chairman Forum: Clean Business:			PTT Aromatics and Refining
What is the Chairman Role? 1/2014			Public Company Limited
● Role of the Chairman Program (RCP) 35/2014		● 2006 - 2011	Director,
● Director Certification Program (DCP) 14/2002			IRPC Public Company Limited
<b>Other Trainings</b>		● 2005 - 2011	Director,
● The 1 <sup>st</sup> PLATTS-PTT Day Academic Seminar by			PTT Chemical Public
PTT and Platts McGraw Hill Financial			Company Limited
● The Joint State - Private Sector Course (Class 15),		<b>Other Companies</b>	
National Defence College		● 2011 - Present	Chairman,
● Capital Market Academy Leadership Program (Class 7),			PTT Asahi Chemical
Capital Market Academy			Company Limited
● Energy Literacy for a Sustainable Future Program		● 2006 - 2012	Director,
(Class 1/2012), Thailand Energy Academy			Thai Paraxylene
<b>Working Experiences in the Past 5 Years</b>			Company Limited
<b>Other Listed Companies</b>		● 2004 - 2012	Chairman,
● 2011 - 2014	Director,		PTT Polyethylene
	PTT Global Chemical Public		Company Limited
	Company Limited	<b>Other Organizations</b>	None
● 2005 - 2013	Director,	<b>% of Shareholding</b>	0.00038 (15,000 shares)
	Bangkok Polyethylene Public	<b>Family Relationship among Directors and Management</b>	
	Company Limited	● None	
● 2004 - 2013	Director,		
	Thai Lube Base Public		
	Company Limited		



**Starting Date of the Position** November 30, 2009

**Education/Training**

- M.Sc. (Petroleum Engineering),  
University of Houston, U.S.A.
- M.Sc. (Chemical Engineering), Rice University, U.S.A.
- B.E. (Chemical Engineering),  
Chulalongkorn University, Thailand

**Training of Thai Institute of Directors Association**

- Anti-Corruption for Executive Program (ACEP) 15/2015
- Role of the Compensation Committee (RCC) 12/2011
- Financial Statements for Directors Program (FSD)  
6/2009
- Director Certification Program (DCP) 21/2002

**Other Trainings**

- Senior Executive Program (S.E.P. 7),  
Sasin Graduate Institution of Business Administration  
of Chulalongkorn University
- Program for Global Leadership (PGL),  
Harvard Business School, U.S.A.
- Advanced Certificate Course in Politics and Governance  
in Democratic System for Executives (Class 10),  
Political and Governance College,  
King Prajadhipok's Institute
- Capital Market Academy Leadership Program (Class 6),  
Capital Market Academy
- The Joint State - Private Sector Course (Class 2009),  
National Defence College
- Energy Literacy for a Sustainable Future Program  
(Class 3), Thailand Energy Academy

**Working Experiences in the Past 5 Years**

**Other Listed Companies**

- Oct 2015 - Present Chairman,  
IRPC Public Company Limited
- Sep 2015 - Present President and  
Chief Executive Officer and  
Director,  
PTT Public Company Limited
- 2012 - Sep 2015 President and  
Chief Executive Officer,  
PTT Exploration and Production  
Public Company Limited

● 2014 - Aug 2015

● 2010 - 2012

● 2009 - 2012

● 2009 - 2011

● 2009 - 2011

● 2009 - 2010

● 2007 - 2010

**Other Companies**

● 2009 - 2011

● 2008 - 2011

**Other Organizations**

● May 2015 - Present

● May 2015 - Present

● 2014 - Present

Chairman and  
Independent Director,  
MCOT Public Company Limited  
Director,  
Thai Oil Public Company Limited  
Chief Financial Officer,  
PTT Public Company Limited  
Director,  
PTT Aromatics and Refining  
Public Company Limited  
Director,  
PTT Chemical Public  
Company Limited  
Director,  
Bangkok Aviation Fuel Services  
Public Company Limited  
Director,  
Bangchak Petroleum Public  
Company Limited

Chairman,  
PTT ICT Solutions Company Limited  
Director,  
PTT International Company Limited

Chairman,  
Chulalongkorn University Alumni  
Association under the Patronage  
of His Majesty the King

Chairman, Information and  
Public Communication  
Management Sub-committee,  
National Committee on  
Competitive Advantage (NCC),  
National Economic and Social  
Development Board (NESDB)  
Chairman,  
TMA Center for Competitiveness  
Thailand Management Association

## Information of the Board of Directors, Management, Controlling Persons, and Corporate Secretary

- 2014 - Present Board of Trustees, Thailand Management Association
- 2014 - Present Honorary Advisor, Energy Committee, The National Legislative Assembly
- 2014 - Present Advisor, The Board of Investment of Thailand

- 2013 - Present Honorary Board Member, National Science and Technology Development Agency

% of Shareholding 0.00369 (146,543 shares)

Family Relationship among Directors and Management

- None

**Mr. Chakkrit Parapuntakul**

Age: 56 years

● Director

● Member of the Remuneration Committee



**Starting Date of the Position** January 1, 2011

### Education/Training

- M.B.A., Angelo State University, Texas, U.S.A.
- Bachelor of Accounting, Thammasat University, Thailand

### Training of Thai Institute of Directors Association

- Audit Committee Program (ACP) 5/2005
- Director Accreditation Program (DAP) 8/2004

### Other Trainings

- The Program for Senior Executives on Justice Administration (Class 19), Office of the Judiciary
- Capital Market Academy Leadership Program (Class 11), Capital Market Academy
- The Joint State - Private Sector Course (Class 52), National Defence College
- The Civil Service Executive Program for Senior Civil Servants (Class 46), Office of the Civil Service Commission
- Executive Development Program (EDP) (Class 66), Kellogg School of Management, Chicago, U.S.A.
- Training Course on Administrative Justice for Executives (Class 5), Institute for Administrative Justice, The Administrative Court

### Working Experiences in the Past 5 Years

#### Other Listed Companies

- Nov 2015 - Present Director, Siam Commercial Bank Public Company Limited
- 2012 - Present Chairman of the Board of Directors, ASEAN Potash Mining Public Company Limited

- 2014 - Sep 2015 Chairman of the Risk Management Committee, Krunghthai Bank Public Company Limited

- 2014 - Sep 2015 Director and Member of the Board of Executive Directors, Krunghthai Bank Public Company Limited

- 2008 - 2014 Advisor to the Audit Committee, Eastern Water Resource Development and Management Public Company Limited

### Other Companies

- 2013 - 2014 Director, Thai Smile Airways Company Limited
- 2010 - 2011 Chairman, Thailand Post Company Limited

### Other Organizations

- Jan 2015 - Present Director General, The Treasury Department, Ministry of Finance
- 2012 - Jan 2015 Deputy Permanent Secretary, Ministry of Finance

- 2009 - 2012 Director General, Public Debt Management Office

% of Shareholding None

Family Relationship among Directors and Management

- None



## Mr. Ampon Kittiampon

Age: 60 years

- Independent Director
- Chairman of the Audit Committee
- Chairman of the Nominating Committee



**Starting Date of the Position** March 30, 2011

### Education/Training

- Ph.D. Applied Economics, Clemson University, South Carolina, U.S.A.
- M.S. Economics, Northeastern University, Massachusetts, U.S.A.
- B.A. Social Sciences, Kasetsart University, Thailand

### Training of Thai Institute of Directors Association

- Director Certification Program (DCP) 80/2006

### Other Trainings

- Chief Information Officer (CIO) (Class 3), The Office of the Civil Service Commission (OCSC) and National Science and Technology Development Agency
- The National Defence Course (Class 45), National Defence College
- Innovation for Economic Development (IFED), Harvard Kennedy School, U.S.A.
- Senior Executive Program on Industrial Business Development and Investment (Class 1), Institute of Business and Industrial Development

### Working Experiences in the Past 5 Years

#### Other Listed Companies

- Mar - Jul 2014 Independent Director, Thai Airways International Public Company Limited
- 2009 - 2014 Chairman, Thai Airways International Public Company Limited
- 2005 - 2011 Director, PTT Public Company Limited
- 2005 - 2011 Director, PTT Aromatics and Refining Public Company Limited

#### Other Companies

- 2013 - 2014 Chairman, Thai Smile Airways Company Limited

### Other Organizations

- 2014 - Present Member, The National Legislative Assembly
- 2013 - Present Chairman, The Bank of Thailand
- 2013 - Present Board Member, The National Economic and Social Development Board
- 2013 - Present Honorary Board Member, National Science and Technology Development Agency
- 2012 - Present Committee, The Council of Chulalongkorn University
- 2012 - Present Board Member, Property Management Office, Chulalongkorn University
- 2012 - Present Chairman of the Board of Directors, Highland Research and Development Institute (Public Organization)
- 2011 - Present The Expert Judicial Administration Commissioner, The Office of Judiciary
- 2011 - Present Honorary Committee, The Council of Walailak University
- 2011 - Present Civil Service Commissioner, The Office of the Civil Service Commission
- 2010 - Present Secretary General, The Cabinet
- 2010 - Present President, Research and Development Institute of Sufficiency Economy Philosophy Foundation

## Information of the Board of Directors, Management, Controlling Persons, and Corporate Secretary

- 2010 - Present Board Member, His Royal Highness Crown Prince Maha Vajiralongkorn Scholarship Foundation
- 2008 - Present Chairman, State Resources Preparation
- 2006 - Present Member, The Office of the Council of State
- 2004 - 2013 Member, Monetary Policy Committee, Bank of Thailand

- 2004 - 2013 Board Member, The Bank of Thailand
- 2005 - 2010 Committee, Thailand Board of Investment
- 2004 - 2010 Secretary General, The Office of the National Economic and Social Development Board

% of Shareholding None

Family Relationship among Directors and Management

- None

**Mr. Manas Jamveha**

Age: 59 years

● Director ● Member of the Nominating Committee



**Starting Date of the Position** January 1, 2012

### Education/Training

- Master of Business Administration, Sukhothai Thammathirat Open University, Thailand
- Master of Political Sciences, Thammasat University, Thailand
- Bachelor of Laws, Thammasat University, Thailand

### Training of Thai Institute of Directors Association

- Director Certification Program (DCP) 71/2008
- Audit Committee Program (ACP) 41/2012
- The Role of Chairman Program (RCP) 32/2013

### Other Trainings

- The National Defence Course (Class 50), National Defence College
- Certificate from Public Director Institute (PDI) (Class 1)
- The Program for Senior Executives on Justice Administration (Class 11), Office of the Judiciary
- The Civil Service Executive Program for Senior Civil Servants (Class 46), Office of the Civil Service Commission
- Executive Development Program, Kellogg School of Management, Northwestern University, U.S.A.
- Middle Management Professional, Revenue, Canada
- Energy Literacy for a Sustainable Future Program (Class 5), Thailand Energy Academy

- Good Governance for Medical Executive Certification Program, Joint Program between The Medical Council of Thailand and King Prajadhipok's Institute (Class 2)
- Top Executive Program in Commerce and Trade (TEPCoT) (Class 7), University of Thai Chamber of Commerce

### Working Experiences in the Past 5 Years

**Other Listed Companies** None

### Other Companies

- 2010 - 2011 Director, Dhanarak Asset Development Company Limited
- 2009 - 2010 Director, Thailand Post Company Limited

### Other Organizations

- Nov 2015 - Present Chairman, Export-Import Bank of Thailand
- 2012 - Present Comptroller General, Comptroller General's Department, Ministry of Finance
- 2013 - Oct 2015 Director, Bank for Agriculture and Agricultural Co-Operatives
- 2009 - Oct 2015 Director, The Metropolitan Waterworks Authority
- 2011 - 2013 Director, Islamic Bank of Thailand

- 2011 - 2012 Deputy Permanent Secretary,  
Ministry of Finance
- 2010 - 2011 Inspector General,  
Ministry of Finance
- 2009 - 2010 Chairman,  
The Government Lottery Office,  
Ministry of Finance

- 2008 - 2010 Advisor on Fiscal System  
Development,  
The Comptroller General's  
Department

% of Shareholding

None

Family Relationship among Directors and Management

- None

Mr. Achporn Charuchinda

Age: 62 years

- Director
- Chairman of the Remuneration Committee
- Member of the Audit Committee



Starting Date of the Position January 1, 2013

Education/Training

- L.L.B., Faculty of Law, Thammasat University, Thailand
- Thai Barrister-at-Law, Institute of Legal Education  
of the Thai Bar Association

Training of Thai Institute of Directors Association None

Other Trainings

- Law Drafting Certificate, India
- The National Defence Course (Class 46),  
National Defence College

Working Experiences in the Past 5 Years

Other Listed Companies

- 2012 - Present Member of the Legal Committee  
Thai Airways International  
Public Company Limited
- 2008 - 2010 Executive Director,  
Siam City Bank  
Public Company Limited

Other Companies

- 2013 - Present Director,  
Thai Smile Airways  
Company Limited

Other Organizations

- Oct 2015 - Present Member,  
Constitution Drafting Committee
- 2014 - Present Board Member,  
Highland Research and  
Development Institution
- 2014 - Present Board Member,  
Office of Insurance Commission
- 2013 - Present Board Member,  
Office of the National Economic  
and Social Development

- 2013 - Present

Board Member,

The Bank of Thailand

- 2003 - Present

Member of the Council of State,

The Office of the Council of State

- 2013 - 2015

Chairman of the Securities and

Exchange Commission Board,

The Securities and Exchange

Commission Board

- 2012 - 2014

Member of the Board of Directors,

The Metropolitan Waterworks

Authority

- 2011 - 2014

Member of the Institutions

Policy Committee,

The Bank of Thailand

- 2011 - 2014

Member of the Office of the

Teacher Civil Service and

Educational Personnel Commission,

The Office of the Teacher

Civil Service and Educational

Personnel Commission,

Ministry of Education

- 2011 - 2013

Member of the National

Water and Flood

Management Committee,

The Office of the National Water

and Flood Management Policy

- 2011 - 2013

Member of the National

Energy Policy Council,

Energy Policy and Planning

Office, Ministry of Energy

## Information of the Board of Directors, Management, Controlling Persons, and Corporate Secretary

- 2010 - 2013 Member of the Administrative Courts Officials Commission, The Office of the Administrative Courts
- 2010 - 2013 Member of the Decentralization to Local Government Organization Committee, The Office of the Permanent Secretary, The Prime Minister's Office
- 2010 - 2013 Secretary - General of the Office of the Council of state, The Office of the Council of State

- 2010 - 2013 Board Member, The Energy Conservation Promotion Fund
- 2010 - 2013 Member, The Government Pension Fund
- 2007 - 2013 Chairman of the Audit Committee for the Financial Institutions Development Fund, The Bank of Thailand
- 2007 - 2013 Member of the Financial Institutions Development Fund, The Bank of Thailand

% of Shareholding

None

Family Relationship among Directors and Management

- Uncle of Mr. Nuttachat Charuchinda

### Admiral Tanarat Ubol

Age: 61 years

- Vice Chairman of the Independent Directors Committee
- Chairman of the Corporate Governance Committee
- Member of the Remuneration Committee



Starting Date of the Position September 1, 2014

#### Education/Training

- Master of Public and Private Management, National Institute of Development Administration (NIDA), Thailand
- Bachelor of Science in Electrical Engineering, The National Defense Academy of Japan, Japan

#### Training of Thai Institute of Directors Association

- Ethical Leadership Program (ELP) 1/2015
- Director Certification Program (DCP) 204/2015

#### Other Trainings

- Maritime Joint Force Commander Course (Admiral Level), Hawaii, U.S.A.
- Advanced Security for Senior Executive, APCSS, Hawaii, U.S.A.
- National Institute for Defense Studies (Japan) (Class 45)
- National Institute for Defense College (Class 51)
- Thailand CG Forum: Governance as a Driving Force for Business Sustainability by The Stock Exchange of Thailand

#### Working Experiences in the Past 5 Years

Other Listed Companies None

#### Other Companies

- Apr - Sep 2015 Director, Thai Aviation Industries Company Limited
- 2014 - Mar 2015 Chairman, Bangkok Dock Company Limited

#### Other Organizations

- Oct 2015 - Present Royal Thai Navy Retired
- Apr - Sep 2015 Deputy Chief of Joint Staff, Royal Thai Armed Forces Headquarters
- Apr - Sep 2015 Director, Equipment Control and Industry Development Committee, Defence Industry Department, Ministry of Defence
- 2014 - Mar 2015 Chairman, Frigate Squadron Project, Royal Thai Navy

- 2014 - Mar 2015 Chief of Staff,  
Royal Thai Navy
- 2013 - 2014 Chairman,  
Transport Helicopter  
Procurement Project,  
Royal Thai Navy
- 2013 - 2014 Chairman,  
HTMS Naresuan Frigate  
Squadron Improvement Project,  
Royal Thai Navy

- 2012 - 2013 Deputy Chief of Staff,  
Royal Thai Navy
- 2011 - 2012 Assistant Chief of  
Staff for Operations,  
Royal Thai Navy
- 2009 - 2010 Director General,  
Naval War College

% of Shareholding

None

Family Relationship among Directors and Management

- None

**Mr. Sethaput Suthiwart-Narueput**

Age: 50 years

- Independent Director
- Chairman of the Risk Management Committee
- Member of the Audit Committee



**Starting Date of the Position** September 1, 2014

**Education/Training**

- Ph.D. Economics, Yale University, U.S.A.
- M.Phil. Economics, Yale University, U.S.A.
- B.A. (Highest Honors) Economics,  
Swarthmore College, U.S.A.

**Training of Thai Institute of Directors Association**

- Advanced Audit Committee Program (AACP) 18/2015
- Risk Management Committee Program (RMP) 6/2015
- Director Accreditation Program (DAP) 94/2012

**Other Trainings** None

**Working Experiences in the Past 5 Years**

**Other Listed Companies**

- 2011 - 2012 Director,  
TMB Bank Public Company Limited
- 2009 - 2011 Executive Vice President  
and Chief Economist,  
Siam Commercial Bank (SCB)  
Group

**Other Companies**

- 2011 - Present Managing Partner,  
The Advisor Company Limited

**Other Organizations**

- Feb 2015 - Present Director,  
Puey Ungphakorn Institute for  
Economic Research,  
Bank of Thailand
- 2014 - Present Member,  
Monetary Policy Committee,  
The Bank of Thailand
- 2012 - Present Executive Chairman,  
Thailand Future Foundation
- 2000 - Present Advisor on Academic Affairs  
and Visiting Professor  
of Economics,  
Sasin Graduate Institute of  
Business Administration

% of Shareholding

None

Family Relationship among Directors and Management

- None

## Information of the Board of Directors, Management, Controlling Persons, and Corporate Secretary

### Colonel Nimit Suwannarat

Age: 44 years

- Independent Director
- Member of the Nominating Committee
- Member of the Risk Management Committee



**Starting Date of the Position** September 1, 2014

#### Education/Training

- Master of Science in Electrical Engineering (Communications and Signal Processing), University of Minnesota, Minnesota, U.S.A.
- Bachelor of Science in Electrical Engineering, Virginia Military Institute, Virginia, U.S.A.

**Training of Thai Institute of Directors Association** None

#### Other Trainings

- Public Key Infrastructure (Certification Authority, Digital Signature) Course, Canada
- Electronic Commerce Course, Florida, U.S.A.
- Computer Emergency Response Team, Carnegie Mellon, Pennsylvania, U.S.A.
- National Crisis Management Course, APCSS, Hawaii, U.S.A.
- Command and General Staff College (Class 83), Royal Thai Army
- Joint Staff Course, Joint Staff College
- Intermediate Certificate Course in Political Leadership

in the New Era (Class 2), King Prajadhipok's Institute

#### Working Experiences in the Past 5 Years

**Other Listed Companies** None

**Other Companies** None

#### Other Organizations

- Oct 2015 - Present Commanding Officer of the 1<sup>st</sup> Field Artillery Regiment King's Guard, Royal Thai Army
- 2010 - Sep 2015 Executive Officer of the 1<sup>st</sup> Field Artillery Regiment King's Guard, Royal Thai Army
- 2009 - 2010 Chief of Staff of the 1<sup>st</sup> Field Artillery Regiment King's Guard, Royal Thai Army

**% of Shareholding** None

#### Family Relationship among Directors and Management

- None

### Mr. Piti Tantakasem

Age: 45 years

- Independent Director
- Member of the Corporate Governance Committee
- Member of the Risk Management Committee



**Starting Date of the Position** October 1, 2014

#### Education/Training

- Ph.D. in Strategic Management (Joint with University of Nebraska, U.S.A.), Bangkok University, Thailand
- Master of Business Administration (Finance and Real Estates), University of North Carolina at Chapel Hill, U.S.A.
- Bachelor of Engineering (Industrial Engineering), Chulalongkorn University, Thailand

**Training of Thai Institute of Directors Association**

- Director Certification Program (DCP) 202/2015
- Anti-Corruption for Executive Program (ACEP) 15/2015

#### Other Trainings

- Energy Literacy for a Sustainable Future Program (Class 6), Thailand Energy Academy
- Financial Derivatives, Euromoney Training, Hong Kong, China
- Chartered Financial Analyst, CFA Institute
- Executive Education: Building Leading Customer-Centric Organization, Harvard Business School

#### Working Experiences in the Past 5 Years

**Other Listed Companies**

- 2008 - Present Chief Wholesale Banking Officer, TMB Bank Public Company Limited



#### Other Companies

- 2009 - Present Director,  
National ITMX Company Limited
- 1996 - Present Director,  
Tiyana Company Limited
- 2011 - Apr 2015 Director,  
TRIS Corporation Limited and  
TRIS Rating Company Limited

% of Shareholding None

#### Other Organizations

- Sep 2015 - Present Member of the Working  
Group on Supporting  
Digital Economy Drive,  
The Joint Standing Committee  
on Commerce, Industry,  
and Banking
- 2014 - Present Project Sub-Committee,  
Thailand Board of Investment (BOI)

#### Family Relationship among Directors and Management

- None

**Mr. Wirat Uanarumit**

Age: 53 years

● Director

● Member of the Risk Management Committee



**Starting Date of the Position** February 23, 2015

#### Education/Training

- Master of Business Administration  
(Financial Management), Pennsylvania State  
University, U.S.A.
- Bachelor of Engineering (Electrical Engineering),  
Chulalongkorn University, Thailand

#### Training of Thai Institute of Directors Association

- Director Certification Program Update (DCPU) 5/2015
- Audit Committee Program (ACP) 38/2012
- Director Certification Program (DCP) 8/2001

#### Other Trainings

- Advanced Management Program,  
INSEAD Business School, France
- Advanced Management Program 184,  
Harvard Business School, U.S.A.
- Capital Market Academy Leadership Program  
(Class 4), Capital Market Academy
- The Program for Senior Executives on Justice  
Administration (Class 16), Office of the Judiciary
- Advanced Security Management Program (Class 2),  
The National Defence College Association of Thailand
- Thailand CG Forum: Governance as a Driving Force  
for Business Sustainability
- TLCA Executive Development Program (Class 1),  
Thai Listed Companies Association, Stock Exchange  
of Thailand

- The Joint State - Private Sector Course (Class 2013),  
National Defence College
- Executive Management with Business Development  
and Investment (Class 2), Institute of Business and  
Industrial Development (IBID)

#### Working Experiences in the Past 5 Years

##### Other Listed Companies

- 2014 - Present Chief Financial Officer,  
PTT Public Company Limited
- 2012 - Present Director,  
Star Petroleum Refining Public  
Company Limited (SPRC)
- 2014 - May 2015 Director,  
Bangchak Petroleum Public  
Company Limited
- 2012 - 2014 Executive Vice  
President - Corporate Finance,  
PTT Public Company Limited
- Feb - Oct 2011 Senior Executive Vice  
President - Corporate  
Accounting and Finance,  
IRPC Public Company Limited
- 2005 - 2011 Deputy Managing  
Director - Finance,  
Thai Oil Public Company Limited

## Information of the Board of Directors, Management, Controlling Persons, and Corporate Secretary

### Other Companies

- 2014 - Feb 2015 Director, PTT International Trading Private Limited

### Other Organizations

- Nov 2015 - Present Director, The Joint Standing Committee on Commerce, Industry and Banking
- Aug 2015 - Present Chairman, Thailand - Malaysia Business Council, The Federation of Thai Industries
- Jun 2015 - Present Director, Chulalongkorn University Alumni Association (CUAA) (2015-2017)

% of Shareholding None

- Jan 2015 - Present Advisory Committee, Promoting and Supporting Office of Industries, The Federation of Thai Industries
- Jan 2015 - Present Director under Thai-Chinese Railway Finance and Investment Sub-Committee, Thai-Chinese Railway Development Committee
- 2014 - Present Director, Kamnoetvidya Science Academy School (KVIS) & Vidyasirimedhi Institute of Science and Technology (VISTEC)
- 2013 - Present Director & Audit Committee, Thailand Management Association (TMA)

### Family Relationship among Directors and Management

- None

**Mr. Songsak Saicheua**

Age: 57 years

● Independent Director

● Member of the Corporate Governance Committee



**Starting Date of the Position** March 26, 2015

### Education/Training

- M.A. Industrial Location and Development, Vuje Universiteit Brussels, Belgium
- B.A. Economics, Thammasat University, Thailand

### Training of Thai Institute of Directors Association

- Anti-Corruption for Executive Program (ACEP) 15/2015

### Other Trainings

- Top Executive Program in Commerce and Trade (TEPCoT) (Class 3), University of Thai Chamber of Commerce
- The Civil Service Executive Program for Senior Civil Servants (Class 66), Office of the Civil Service Commission

### Working Experiences in the Past 5 Years

**Other Listed Companies** None

**Other Companies** None

### Other Organizations

- 2013 - Present Director General, Department of American and South Pacific Affairs, Ministry of Foreign Affairs
- 2011 - 2013 Minister, Royal Thai Embassy, Kuala Lumpur, Malaysia
- 2010 - 2011 Deputy Director General, Department of American and South Pacific Affairs, Ministry of Foreign Affairs

% of Shareholding None

### Family Relationship among Directors and Management

- None

**Mr. Twarath Sutabutr**

Age: 46 years

- Director
- Member of the Risk Management Committee

**Starting Date of the Position** October 1, 2015**Education/Training**

- Ph.D. Civil & Environmental Engineering, Massachusetts Institute of Technology (MIT), U.S.A.
- M.S. Soil Mechanics, Asian Institute of Technology (AIT), Thailand
- B.E. Civil Engineering, Chulalongkorn University, Thailand

**Training of Thai Institute of Directors Association**

- Director Certification Program (DCP) 115/2009
- Financial Statements for Directors Program (FSD) 4/2009

**Other Trainings**

- e-Government Executive Program (e-GEP) (Class 5), Electronics Government Agency (Public Organization)
- Advance Management Program (AMP) INSEAD, France (Government Officials Development Scholarship, Office of the Civil Service Commission)
- Top Executive Program in Commerce and Trade (TEPCoT) (Class 6), University of Thai Chamber of Commerce
- TLCA Executive Development Program (EDP) (Class 9), Capital Market Academy
- The Civil Service Executive Program for Senior Civil Servants (Class 61), Office of the Civil Service Commission
- New Wave Leadership Development (Class 3), Office of the Civil Service Commission
- Energy Executive Program (Class 2), Ministry of Energy
- Infrastructure in a Market Economics, Harvard University, U.S.A.

**% of Shareholding** None**Working Experiences in the Past 5 Years****Other Listed Companies**

- Apr - Jul 2015 Director, PTT Public Company Limited
- 2014 - Feb 2015 Director, Thai Oil Public Company Limited
- Feb - Oct 2011 Independent Director, PTT Aromatics and Refining Public Company Limited

**Other Companies**

None

**Other Organizations**

- Jul 2015 - Present Director-General, Energy Policy and Planning Office, Ministry of Energy
- 2014 - Present Chairman, Department of Alternative Energy Development and Efficiency Co-Operative
- 2014 - Present Advisor to the Board of Directors, Thai Green Building Institute
- 2014 - Jul 2015 Deputy Director General, Ministry of Energy
- 2014 - Jul 2015 Spokesperson, Ministry of Energy
- 2009 - 2014 Deputy Director General, Department of Alternative Energy Development and Efficiency

**Family Relationship among Directors and Management**

- None

**Mr. Pitipan Tepartimargorn**

Age: 59 years

- Director
- Member of the Risk Management Committee

**Starting Date of the Position** November 1, 2015**Education/Training**

- M.A. Political Science (Public Administration), Thammasat University, Thailand
- B.E. Electrical Engineering (Second Class Honor), King Mongkut's Institute of Technology Ladkrabang, Thailand

**Training of Thai Institute of Directors Association**

- Director Certification Program (DCP) 138/2010
- Anti-Corruption for Executive Program (ACEP) 4/2012

**Other Trainings**

- Strategic Human Resource Management, Harvard University, U.S.A.

## Information of the Board of Directors, Management, Controlling Persons, and Corporate Secretary

- NIDA - Wharton Executive Leadership Program, The Wharton School, University of Pennsylvania, U.S.A.
- Senior Executive Program (SEP), Sasin Graduate Institute of Business Administration
- Advance Political and Electoral Development Program (Class 3), Office of The Election Commission of Thailand
- PTT Executive Leadership Program, General Electrics, New York, U.S.A.
- Capital Market Academy Leadership Program (Class 19), Capital Market Academy

### Working Experiences in the Past 5 Years

#### Other Listed Companies

- Sep 2015 - Present Chief Operation Officer, Upstream Petroleum and Gas Business Group and Acting Senior Executive Vice President, Human Resources & Organization Excellence, PTT Public Company Limited

- 2010 - Sep 2015

Senior Executive Vice President, Human Resources & Organization Excellence, PTT Public Company Limited

#### Other Companies

- 2014 - Present

Director, Sakari Resources Limited

- 2012 - Present

Chairman, PTT Polymer Logistics Company Limited

- 2010 - Present

Chairman, PTT ICT Solutions Company Limited

- 2012 - 2014

Chairman, PTT Polymer Marketing Company Limited

- 2010 - 2012

Chairman, Energy Complex Company Limited

#### Other Organizations

None

#### % of Shareholding

None

#### Family Relationship among Directors and Management

- None

**Mr. Somporn Vongvuthipornchai**

Age: 57 years

● Director ● President and Chief Executive Officer



**Starting Date of the Position** October 22, 2015

#### Education/Training

- Ph.D. (Petroleum Engineering), University of Tulsa, Oklahoma, U.S.A.
- Master of Sciences (Petroleum Engineering), University of Tulsa, Oklahoma, U.S.A.
- Bachelor of Sciences (Petroleum Engineering), University of Tulsa, Oklahoma, U.S.A.

**Training of Thai Institute of Directors Association** None

#### Other Trainings

- Advanced Management Program 2006 (Executive Education Program), Harvard Business School, U.S.A.
- Energy Literacy for a Sustainable Future (Class 2), Thailand Energy Academy
- GE Energy Customer Executive Leadership Program (2012), GE Global Learning, New York, U.S.A.

- Leadership Development Program III (2013), PTT Leading and Learning Institute (PLLI)

- Strategic Anti-Corruption for High-Level Executives (Class 6), Office of the National Anti-Corruption Commission

### Working Experiences in the Past 5 Years

#### Other Listed Companies

- Oct 2015 - Present

President and Chief Executive Officer, PTT Exploration and Production Public Company Limited

- Jan - Oct 2015

Executive Vice President, Strategy and Business Development Group, PTT Exploration and Production Public Company Limited

- 2010 - 2014 Executive Vice President, International Asset Group, PTT Exploration and Production Public Company Limited

#### Other Companies

- 2014 - Oct 2015 Director, PTT FLNG Limited
- 2012 - Oct 2015 Director, PTTEP FLNG Holding Company Limited
- 2008 - Oct 2015 Director, PTTEP Southwest Vietnam Company Limited

- 2008 - Oct 2015 Director, PTTEP Hoan-Vu Company Limited
- 2007 - Oct 2015 Director, PTTEP Africa Investment Limited

#### Other Organizations

None

#### % of Shareholding

Director: 0.00521 (206,927 shares)

Spouse: 0.00009 (3,500 shares)

Total: 0.00530 (210,427 shares)

#### Family Relationship among Directors and Management

- None

### Director Who Resigned During the Year 2015\*

#### Mr. Pailin Chuchottaworn

Age: 59 years

#### Education/Training

- Ph.D. of Engineering (Chemical Engineering), Tokyo Institution of Technology, Japan
- Master of Engineering (Chemical Engineering), Tokyo Institution of Technology, Japan
- Bachelor of Engineering (Chemical Engineering) (Hons.), Chulalongkorn University, Thailand

#### Training of Thai Institute of Directors Association

- Director Certification Program (DCP) 51/2004
- Director Accreditation Program (DAP) 24/2004
- Finance for Non-Finance Director Program (FND) 14/2004

#### Other Trainings

- PTT Executive Leadership Program, GE Crotonville, U.S.A.
- NIDA Executive Leadership Program 2007, Wharton University of Pennsylvania, U.S.A.
- Industrial Liaison Program (ILP), Massachusetts Institute of Technology, U.S.A.
- Top Executive Program in Commerce and Trade (TEPCoT) (Class 1), University of Thai Chamber of Commerce

- Capital Market Academy Leadership Program (Class 8), Capital Market Academy
- The Joint State - Private Sector Course (Class 22), National Defence College
- The 7<sup>th</sup> "Corporate Governance for Director and Top Executives of State Enterprises and Public Organizations", Year 2011, King Prajadhipok's Institute
- Energy Literacy for a Sustainable Future (Class 1/2012), Thailand Energy Academy

#### Working Experiences in the Past 5 Years

#### Other Listed Companies

- 2014 - Sep 2015 Chairman, IRPC Public Company Limited
- 2011 - Sep 2015 President and Chief Executive Officer, PTT Public Company Limited
- 2009 - Sep 2015 Director, IRPC Public Company Limited
- 2013 - 2014 Director, PTT Global Chemical Public Company Limited

\* Mr. Nuttavudh Photisarso resigned from directorship, chairmanship of the Nominating Committee, and directorship of the Corporate Governance Committee on January 1, 2015.

## Information of the Board of Directors, Management, Controlling Persons, and Corporate Secretary

● Jun - Sep 2011	Chief Operations Officer, Upstream Petroleum and Gas Business Group, Acting Chief Executive Officer, IRPC Public Company Limited	● 2014 - Present	Advisor, Alternative Energy Institution of Thailand Foundation
● 2009 - 2011	Senior Executive Vice President, PTT, working as Chief Executive Officer, IRPC Public Company Limited	● 2013 - Present	Advisor, Thailand Industrial Biomedical Engineering Consortium (TIBEC) Committee, Ministry of Science and Technology
<b>Other Companies</b>		● 2012 - Present	Honory Board Member, University Council, Mahidol University
● Jun - Sep 2011	Chairman, PTT Polymer Marketing Company Limited	● 2011 - Present	Vice Chairman, Chulalongkorn University Alumni Association
● May - Sep 2011	Chairman, PTT Asahi Chemical Company Limited	● 2011 - Present	Director, Thai Listed Companies Association
● 2009 - 2011	Director, PTT Polymer Marketing Company Limited	● 2010 - Present	Advisor, Thai - Japanese Association
● 2006 - 2011	Director, PTT Asahi Chemical Company Limited	● 2010 - Present	Advisor, Faculty of Engineering Alumni Association of Chulalongkorn University
<b>Other Organizations</b>		● 2010 - Present	Director, Businessmen for Thai Environment Thailand Environment Institute
● May 2015 - Present	Director, Thai Institute of Directors Association (IOD)	<b>% of Shareholding</b> None	
● 2014 - Present	Director, Social Coordination Support Committee, Princess Maha Chakri Award Foundation	<b>Family Relationship among Directors and Management</b>	
		● None	

Mr. Chavalit Pichalai

Age: 60 years

### Education/Training

- Master of Public Administration, Carleton University, Canada
- Master of Economics Program in Development Economics, National Institute of Development Administration (NIDA), Thailand
- Bachelor of Arts in Economics, Thammasat University, Thailand

### Training of Thai Institute of Directors Association

- Director Certification Program (DCP) 192/2014

### Other Trainings

- The Civil Service Executive Program for Senior Civil Servants (Visionary Leadership; Class 39), Office of the Civil Service Commission
- The Joint State - Private Sector Course (Class 2008), National Defence College
- The Columbia Senior Executive Programme (CSEP 131), Columbia University, U.S.A.



- Chief Information Officer (CIO), National Electronics and Computer Technology Center (NECTEC)

#### Working Experiences in the Past 5 Years

##### Other Listed Companies

- 2014 - Present Independent Director and Audit Committee Member, Ratchaburi Electricity Generating Holding Public Company Limited

##### Other Companies

None

##### Other Organizations

- Jul 2015 - Present Deputy Permanent Secretary, Office of the Permanent Secretary, Ministry of Energy
- 2014 - Present Director, National Research Council of Thailand; Committee Member of Physical Science and Mathematics Academic Discipline

- 2013 - Present Director, Energy Vocabulary (Nuclear) Dictionary Publication, The Royal Institute
- 2009 - Present Director, The Sirindhorn International Environmental Park
- 2014 - Jul 2015 Director-General, Energy Policy and Planning Office, Ministry of Energy
- 2012 - 2014 Inspector-General, Ministry of Energy
- 2011 - 2012 Deputy Director General, Department of Mineral Fuels, Ministry of Energy
- 2006 - 2011 Deputy Director General, Energy Policy and Planning Office, Ministry of Energy

##### % of Shareholding

None

##### Family Relationship among Directors and Management

- None

Mr. Nuttachat Charuchinda

Age: 60 years

#### Education/Training

- Master of Business Administration, Thammasat University, Thailand
- Bachelor of Engineering in Civil Engineering, Chiang Mai University, Thailand

#### Training of Thai Institute of Directors Association

- Director Certification Program (DCP) 129/2010

#### Other Trainings

- Program for Global Leadership (PGL), Harvard Business School, U.S.A.
- Oxford Energy Seminar, UK
- Break Through Program for Senior Executives (BPSE), IMD Institute, Switzerland
- The Joint State - Private Sector Course (Class 20), National Defence College
- Capital Market Academy Leadership Program (Class 15), Capital Market Academy

- Energy Literacy for a Sustainable Future Program (Class 3), Thailand Energy Academy

#### Working Experiences in the Past 5 Years

##### Other Listed Companies

- 2012 - Present Director, Thai Oil Public Company Limited
- 2013 - Sep 2015 Chief Operating Officer, Upstream Petroleum Business Group, PTT Public Company Limited
- 2011 - 2013 Chief Operating Officer, Downstream Petroleum Business Group, PTT Public Company Limited
- 2010 - 2011 Senior Executive Vice President, Corporate Strategy, PTT Public Company Limited

## Information of the Board of Directors, Management, Controlling Persons, and Corporate Secretary

### Other Companies

- 2014 - Present Chairman,  
PTT Energy Resources  
Company Limited

% of Shareholding None

- 2013 - Present

Director,  
PTT Energy Resources  
Company Limited

### Other Organizations

None

### Family Relationship among Directors and Management

- Nephew of Mr. Achporn Charuchinda

## A Criminal Offense Record During the Past 10 Years

- Being adjudged of convicting a crime or being on trial for convicting a crime No
- Being adjudged bankrupt or a receiver is appointed No
- Being a management in the company or partnership which is adjudged bankrupt or a receiver is appointed No

Remarks: The name and number(s) of the authorized directors who may sign to bind the Company from November 10, 2015 are Mr. Manas Jamveha, Mr. Wirat Uanarumit, Mr. Twarath Sutabutr, and Mr. Pitipan Tepartimargorn. Two of the above four directors can sign jointly and affix the Company's seal, or Mr. Somporn Vongvuthipornchai, the President, can sign singly.

## Management

As of January 1, 2016, PTTEP management team had 16 personnel as defined by the Capital Market Supervisory Board. Details are shown below.

### Mr. Somporn Vongvuthipornchai

Age: 57 years

- President and Chief Executive Officer



Please see part Information of the Board of Directors on page 156.

### Mr. Phongsthorn Thavisin

Age 56 years

- Chief Operating Officer<sup>1</sup>,  
Production Asset and Operations Support Group



### Education/Training

- B.Sc. (Petroleum and Natural Gas Engineering),  
The Pennsylvania State University, U.S.A.

### Working Experiences in the Past 5 Years

- 2016 - Present Chief Operating Officer,  
Production Asset and  
Operations Support Group  
PTTEP

- 2015 Executive Vice President,  
Technology and Sustainability  
Development Group  
PTTEP

- 2012 - 2014

Executive Vice President,  
Engineering and  
Development Group  
PTTEP

- 2010 - 2012

Senior Vice President,  
Engineering and  
Construction Division  
PTTEP

### % of Shareholding

0.00087 (34,362 shares)

### Family Relationship among Directors and Management

- None

<sup>1</sup> This position is equivalent to Executive Vice President.

**Mr. Thiti Mekavichai**

Age: 54 years

- Executive Vice President,  
Human Resources and Business Services Group

**Education/Training**

- B.Sc. (Geography), Srinakharinwirot (Prasammitr) University

**Working Experiences in the Past 5 Years**

- 2012 - Present      Executive Vice President,  
Human Resources and  
Business Services Group  
PTTEP

- 2011 - 2012      Senior Vice President,  
Human Resources Division  
PTTEP

**% of Shareholding**      0.00121(47,914 shares)

**Family Relationship among Directors and Management**

- None

**Mr. Kanit Sangwongwanich**

Age: 58 years

- Executive Vice President,  
Engineering and Development Group

**Education/Training**

- B.Sc. (Petroleum Engineering),  
University of Wyoming, U.S.A.

**Working Experiences in the Past 5 Years**

- 2015 - Present      Executive Vice President,  
Engineering and  
Development Group  
PTTEP
- 2014      Executive Vice President,  
Operations Support Group  
PTTEP

- 2013 - 2014      Senior Vice President  
Well Technology Division  
PTTEP

- 2009 - 2012      Senior Vice President,  
seconded as General Manager,  
Carigali-PTTEPI  
Operating Company  
SDN. BHD. (CPOC), Malaysia  
PTTEP

**% of Shareholding**      0.00245 (97,247 shares)

**Family Relationship among Directors and Management**

- None

**Mr. Kitisak Nualchanchai**

Age: 59 years

- Executive Vice President,  
Technology and Sustainability Development Group  
Acting Executive Vice President,  
Operations Support Group

**Education/Training**

- M.PA (Public Administration),  
National Institute of Development Administration

**Working Experiences in the Past 5 Years**

- 2016 - Present      Executive Vice President,  
Technology and Sustainability  
Development Group  
PTTEP

- 2016 - Present      Acting Executive Vice President,  
Operations Support Group  
PTTEP

- 2015      Executive Vice President,  
Operations Support Group  
PTTEP

- 2013 - 2014      Senior Vice President,  
Bongkot Asset  
PTTEP

## Information of the Board of Directors, Management, Controlling Persons, and Corporate Secretary

● 2011 - 2013	Senior Vice President, Safety, Security, Health and Environment Division PTTEP	% of Shareholding	0.00139 (54,992 shares)
		Family Relationship among Directors and Management	
		● None	

### Mr. Prapat Soponpongpiat

Age: 57 years

● Executive Vice President,  
Geosciences and Exploration Group



#### Education/Training

- M.Sc. (Geology) New Mexico Institute of Mining and Technology, U.S.A.

#### Working Experiences in the Past 5 Years

- 2016 - Present Executive Vice President, Geosciences and Exploration Group  
PTTEP

% of Shareholding 0.00076 (30,049 shares)

- 2015 Senior Vice President, Geosciences and Technology Division  
PTTEP

- 2011 - 2014 Senior Vice President, International Asset  
PTTEP

#### Family Relationship among Directors and Management

- None

### Mrs. Suchitra Suwansinpan

Age: 55 years

● Executive Vice President,  
Strategy and Business Development Group



#### Education/Training

- M.E. (Energy Technology), Asian Institute of Technology

#### Working Experiences in the Past 5 Years

- 2015 - Present Executive Vice President, Strategy and Business Development Group  
PTTEP
- 2011 - 2015 Senior Vice President, Corporate Strategy Division  
PTTEP

- 2007 - 2010 Vice President, Petroleum Economic and Commercial Department  
PTTEP

#### % of Shareholding

Director: 0.00192 (76,054 shares)

Spouse: 0.00020 (8,000 shares)

Total: 0.00212 (84,054 shares)

#### Family Relationship among Directors and Management

- None

### Ms. Pannalin Mahawongtikul

Age: 51 years

● Executive Vice President, Finance and Accounting Group



#### Education/Training

- M.Sc. (Business Administration), Thammasat University

#### Working Experiences in the Past 5 Years

- 2016 - Present Executive Vice President, Finance and Accounting Group  
PTTEP

- 2014 - 2015 Executive Vice President, Corporate Finance  
PTT

- 2012 - 2014 Vice President, Strategy and Financial Policy  
PTT

% of Shareholding 0.00012 (4,783 shares)

#### Family Relationship among Directors and Management

- None

**Mr. Chatchawal Eimsiri**

Age: 56 years

- Executive Vice President, seconded to PTT Natural Gas Distribution Company Limited

**Education/Training**

- M.Sc. (Operation Research), London School of Economics and Political Science, University of London, United Kingdom IOD: DCP 91 (2007)

**Working Experiences in the Past 5 Years**

- 2015 - Present Executive Vice President, seconded to PTT Natural Gas Distribution Company Limited (PTT NGD)

- 2014 - 2015 Executive Vice President, attached to President and Chief Executive Officer PTTEP

- 2011 - 2014 Executive Vice President, seconded to PTT Public Company Limited

% of Shareholding 0.00089 (35,415 shares)

**Family Relationship among Directors and Management**

- None

**Mr. Yongyos Krongphanich**

Age: 55 years

- Senior Vice President, Finance Division

**Education/Training**

- M.Sc. (Accounting), Thammasat University

**Working Experiences in the Past 5 Years**

- 2014 - Present Senior Vice President, Finance Division PTTEP
- 2014 - 2015 Acting Senior Vice President, Accounting Division PTTEP
- 2013 - 2014 Senior Vice President, Finance and Strategic Information Technology Division PTTEP

- 2011 - 2012 Senior Vice President, Accounting Division PTTEP

- 2010 - 2011 Vice President, Joint Venture Myanmar Asset PTTEP

% of Shareholding 0.00204 (80,831 shares)

**Family Relationship among Directors and Management**

- None

**Ms. Jaroonsri Wankertphon**

Age: 50 years

- Vice President, Accounting Policy and Solutions Department  
Acting Senior Vice President, Accounting Division

**Education/Training**

- M. Sc. (Financial Accounting); Thammasat University

**Working Experiences in the Past 5 Years**

- 2015 - Present Acting Senior Vice President, Accounting Division PTTEP
- 2014 - Present Vice President, Accounting Policy and Solutions Department PTTEP

- 2013 Vice President, Managerial Accounting Department PTTEP

- 2010 - 2013 Vice President, Corporate Accounting Department PTTEP

% of Shareholding 0.00134 (53,171 shares)

**Family Relationship among Directors and Management**

- None

## Information of the Board of Directors, Management, Controlling Persons, and Corporate Secretary

### Mrs. Chanamas Sasnanand

Age: 46 years

● Vice President, Capital and Investor Relations Department



#### Education/Training

- M.Sc. (Business Administration), University of South Carolina, U.S.A.

● 2010 - 2014

Vice President,  
Finance Department  
PTTEP

#### Working Experiences in the Past 5 Years

- 2014 - Present Vice President,  
Capital and Investor  
Relations Department  
PTTEP

● 2010

Acting Manager,  
Finance Department  
PTTEP

% of Shareholding 0.00064 (25,564 shares)

Family Relationship among Directors and Management

- None

### Ms. Porntip Jansuksri

Age: 53 years

● Vice President, Treasury Department



#### Education/Training

- M.Sc. (Business Administration), Kasetsart University

● 2011 - 2013

Vice President,  
Project Accounting Department  
PTTEP

#### Working Experiences in the Past 5 Years

- 2014 - Present Vice President,  
Treasury Department  
PTTEP
- 2013 Vice President,  
Financial Accounting Department  
PTTEP

● 2010 - 2011

Senior Analyst,  
Finance and Accounting  
PTTEP

% of Shareholding 0.00044 (17,317 shares)

Family Relationship among Directors and Management

- None

### Mrs. Sirirat Sararattanakul

Age: 54 years

● Vice President, Financial Accounting Department



#### Education/Training

- M.Sc. (Accounting), Thammasat University

● 2008 - 2013

Vice President, Office Facility  
Management Department  
PTTEP

#### Working Experiences in the Past 5 Years

- 2014 - Present Vice President,  
Financial Accounting Department  
PTTEP

% of Shareholding 0.00506 (200,887 shares)

Family Relationship among Directors and Management

- None



**Ms. Kanchanan Panananda**

Age: 45 years

● Vice President, Managerial Accounting Department

**Education/Training**

- M.Sc. (Business Administration), Thammasat University

**Working Experiences in the Past 5 Years**

- 2015 - Present Vice President, Managerial Accounting Department PTTEP
- 2014 - 2015 Manager, Accounting Policy PTTEP

- 2010 - 2013

Manager seconded as Finance Manager, Indonesia Asset PTTEP

**% of Shareholding**

0.00108 (43,007 shares)

**Family Relationship among Directors and Management**

- None

**Mrs. Maneeya Srisukhumbowornchai**

Age: 41 years

● Vice President, Tax Department

**Education/Training**

- M.Sc. (Business Administration), Thammasat University

**Working Experiences in the Past 5 Years**

- 2015 - Present Vice President, Tax Department PTTEP

- 2014 - 2015

Manager, Tax Compliance PTTEP

**% of Shareholding**

None

**Family Relationship among Directors and Management**

- None

**Management Who Retired or Ended Secondment During the Year 2015****Mr. Tevin Vongvanich**

Age: 57 years

● President and Chief Executive Officer



Please see part Information of the Board of Directors on page 145.

**Ms. Penchun Jarikasem**

Age: 60 years

● Executive Vice President, Finance and Accounting Group

**Education/Training**

- M.Sc. (Business Administration), Thammasat University IOD: DCP 113 (2009)

**Working Experiences in the Past 5 Years**

- 2011 - 2015 Executive Vice President, Finance and Accounting Group PTTEP

- 2006 - 2011

Executive Vice President, Corporate Finance PTT

**% of Shareholding**

0.00091 (35,988 shares)

**Family Relationship among Directors and Management**

- None

## Information of the Board of Directors, Management, Controlling Persons, and Corporate Secretary

### Mr. Pairoj Rangponsumrit

Age: 60 years

● Executive Vice President, Production Asset Group



#### Education/Training

- M.Sc. (Mathematics), Mahidol University

#### Working Experiences in the Past 5 Years

- 2015 Executive Vice President, Production Asset Group PTTEP
- 2013 - 2014 Executive Vice President, Domestic Asset Group PTTEP
- 2011 - 2013 Senior Vice President, S1 Asset PTTEP

- 2010 - 2011 Senior Vice President, Bongkot Asset PTTEP

#### % of Shareholding

Director: 0.00412 (163,442 shares)

Spouse: 0.00009 (3,500 shares)

Total: 0.00421 (166,942 shares)

#### Family Relationship among Directors and Management

- None

### Mr. Nawee Anantraksakul

Age: 60 years

● Executive Vice President, Geosciences and Exploration Group



#### Education/Training

- M.Sc. (Geology), Chulalongkorn University

#### Working Experiences in the Past 5 Years

- 2014 - 2015 Executive Vice President, Geosciences and Exploration Group, PTTEP
- 2013 - 2014 Quality Assurance Champion, PTTEP

- 2011 - 2013 Senior Vice President, Bongkot Asset, PTTEP

- 2009 - 2011 Senior Vice President, Arthit Asset, PTTEP

% of Shareholding 0.00083 (33,072 shares)

#### Family Relationship among Directors and Management

- None

## Corporate Secretary

### Mrs. Pranot Tirasai

Age: 57 years

● Senior Vice President, Corporate Secretary Division



#### Education/Training

- LL.B (Laws), Thammasat University
- IOD: DCPU 5 (2015), CSP (2014), DCP 185 (2014)

#### Working Experiences in the Past 5 Years

- 2013 - Present Senior Vice President, Corporate Secretary Division, PTTEP

● 2010 - 2013 Senior Vice President,  
Legal Division,  
PTTEP

● 2000 - 2010 Vice President,  
Legal Department,  
PTTEP

% of Shareholding 0.00335 (133,158 shares)

#### Family Relationship among Directors and Management

● None

## **A** Roles and Responsibilities of Corporate Secretary

The Corporate Secretary must perform roles with fiduciary duties by having responsibility, and duties of care and loyalty, in accordance to Section 89/15 and 89/16 of the Securities and Exchange Act (Volume 4) B.E. 2551 which came into effect on August 31, 2008. The Corporate Secretary must also strictly comply with relevant laws and regulations, along with the Company's objectives and Articles of Association (AoA) as well as resolutions from the Board's and shareholders' meetings. Responsibilities of Corporate Secretary required by law are as follows:

- 1) Preparing and safeguarding the Company's documents, namely,
  - directors registry
  - agenda, minutes of the Board meetings, and Annual Reports
  - notice and minutes of the Shareholders' meetings
- 2) Safeguarding the Conflicts of Interests Report submitted by the directors and management as well as sending a copy of the report to Chairman of the Board and the Audit Committee within seven working days after receiving the report to be in compliance with Section 89/14
- 3) Performing other duties as required by the Capital Market Supervisory Board

Moreover, the Corporate Secretary is responsible for the following duties as required by the Board of the Company. These duties are as follows:

- Overseeing and advising the Board to ensure that the directors perform roles in compliance with relevant applicable laws, rules and regulations as well as the Company's objectives, AoA, resolutions from the Board's and shareholders' meetings
- Organizing meetings of the Board, sub-committees, and shareholders
- Arranging orientation for and providing advices to new directors
- Recommending necessary and appropriate training programs to directors
- Monitoring the Company's business operations of each function to ensure alignment with directions set by the Board and shareholders and within the conditions set forth by external regulatory bodies overseeing listed companies
- Governing of subsidiaries, including preparing and safeguarding of their important documents
- Promoting and educating the directors, management, and employees about the Good Corporate Governance and Business Ethics of PTTEP Group, which is regularly being revised to be in compliance with related laws and in line with international practices of leading organizations
- Ensuring all shareholders of the Company are being treated fairly, ethically and lawfully as well as promoting good relationship with minority shareholders
- Acting as a Case Coordinator, which is responsible for managing reports submitted through the Case Management System of the company performing other duties as appointed by the Company
- Performing other duties as appointed by the Company

# Directors of Subsidiaries and Associated Companies

## Directors of Subsidiaries

Subsidiary: As of December 31, 2015, there were 63 subsidiaries.

Name (Only director designated by PTTEP Group)	Subsidiaries																			
	PTTEP AU	PTTEP AP	PTTEP AO	PTTEP AIF	PTTEP AB	PTTEP AA	PTTEP AT	PTTEP AAF	PTTEP AAP	PTTEP AAT	PTTEP AAO	PTTEP AAA	PTTEP AAS	PTTEP BL	PTTEP CA	PTTEP CIF	CEEAL	CEMROL	PTTEP MZA1	PTTEP FH
Mr. Sakchai Sarawek	●	●	●	●	●	●	●	●	●	●	●	●	●							
Mrs. Pranot Tirasai	●	●	●	●	●	●	●	●	●	●	●	●	●							
Mr. Montri Rawanchaikul	●	●	●	●	●	●	●	●	●	●	●	●	●							
Ms. Penchun Jarikasem				●												●				
Mr. Somkiat Thaepunkulngam														●						
Mr. Niradorn Rojanasomsith															●	●				
Mr. Kanit Sangwongwanich															●	●				
Mr. R. William Thornton															●	●				
Mr. Don Greenfield															●	●				
Mr. Direk Wangudomsuk																	●	●	●	
Ms. Stella Kattashi																	●	●	●	
Mr. Asdakorn Limpiti																			●	
Mr. Kanok Intharawijitr																			●	
Mr. Preecha Peomwattanachai																			●	
Mrs. Chanamas Sasnanand																			●	
Ms. Jaroonsri Wankertphon																			●	
Mr. Chalongrut Ya-anan																			●	
Mr. Sumate Laksitanonta																			●	
Mrs. Suchitra Suwansinpan																			●	
Mr. Suksant Ongvises																				●
Mr. Terapol Phoosiri																				●
Mr. Chayong Borisuitsawat																				
Mr. Nopasit Chaiwanakupt																				
Mr. Waranon Laprabang																				
Mr. Kitisak Nualchanchai																				
Mr. Komson Tachapanich																				
Mr. Vinit Hansamuit																				
Mr. Piya Oungpasuk																				
Mr. Anun Chonchawalit																				
Mr. Titi Thongjen																				
Mr. Vuthiphon Thuampoomngam																				
Mr. Monton Santivongskul																				
Mr. Nawee Anantraksakul																				
Mr. Wanchai Mahasuwannachai																				
Mr. Tawee Limsoontorn																				
Orangefield (Netherlands) B.V.																				
Mrs. T.S.M. Van Dijk																				
Mr. Yongyos Krongphanich																				
Mrs. Yupawadee Valayapetre																				
Mrs. Sarabhorn Maneesaengsakorn																				
Ms. Pornip Jansuksri																				
Mrs. Sirirat Sararattanakul																				
Mr. Mana Rojipibulstit																				
Mr. Kittisak Hiranyapraphip																				
Mr. Supakorn Krisadasima																				



# Directors of Subsidiaries and Associated Companies

## Directors of Associated Companies

Associated Company: As of December 31, 2015, there were 17 associated companies.

Name (Only director designated by PTTEP Group)	Associated Companies											
	EnCo	PTT ICT	B 8/32 Partner	CPOC	MGTC	Mangalalu	Troughton Island	Erawan FSO 2 Bahamas	PTT FLNG	LAL	UAQ	Natuna 2 B.V.
Mr. Thiti Mekavichai	Director	Director										
Mrs. Kesara Limmeechokchai	Director											
Mr. Yongyos Krongphanich			Director									
Mr. Monton Santivongskul			Director					Director				
Mr. Andy Jacob						Director	Director					
Mr. Gavin Ryan						Director	Director					
Mr. Phongstorn Thavisin									Director			
Mr. Asdakorn Limpiti									Director			
Mr. Preecha Peomwattanachai									Director			
Mr. Nirandorn Rojanasomsith										Director		
Mr. Chaiwat Sorntirux										Director		
Mr. Vinit Hansamuit				Director								
Mr. Kanit Sangwongwanich				Director								
Mr. Prapat Soponpongpiat											Director	
Mr. Kanok Intharawijitr											Director	
Mr. Titi Thongjen												Director
Mr. Waranon Laprabang					Director							
Mr. Nopasit Chaiwanakupt *					Director							

\* Alternate Director

Remarks :



Director



Chairman

Five associated companies which do not have any directors from PTTEP are:

- 1) TPC and Asia Pacific Marine Service are governed by shareholders' meetings.
- 2) HV JOC, HL JOC and GBRS are governed by Management Committee.



# Connected Transactions

## Connected Transactions between Related Companies

Connected transactions of PTTEP and/or our subsidiaries with other entities that may result in conflicts of interest in the fiscal year ending December 31, 2015 are as follows:

### PTT Plc. (PTT)

#### Relationship

- PTT, the Company's major shareholder, holds 65.29% of the Company's registered and paid-up capital.
- Co-director is Mr. Tevin Vongvanich.
- PTT's executives who serve as PTTEP's directors are:
  - 1) Mr. Tevin Vongvanich
  - 2) Mr. Wirat Uanarumit
  - 3) Mr. Pitipan Teparitimgorn
  - 4) Mr. Somporn Vongvuthipornchai

#### Transaction

Petroleum product sales: crude oil; natural gas; liquefied petroleum gas; and condensate

- Total income 4,643.81 Million USD
- Accounts receivable 448.33 Million USD

#### Pricing Policy and/or Reason

- Condition and price setting follows normal business operations at the arm's length basis conditions for non-related persons or operations.

#### Transaction

Other income includes:

- Income from design, equipment procurement, construction, and natural gas pipeline test from central processing platform of South Bongkot Field to PTT's third gas transmission pipeline for PTT
- Income from infrastructure services to support the petroleum development such as warehouse, helicopter, and accommodation for PTT personnel at Arthit and Bongkot projects
- Income from the jetty and warehouse charges at Songkhla base
- Income from maintenance of natural gas meters

- Income from charges to PTT for working area on platform of Arthit Project according to the Arthit Project's natural gas purchase/sale contract

- Total income 2.41 Million USD
- Accounts receivable 0.61 Million USD

- Sharing cost for IPA Exhibition in Indonesia

- Total income - Million USD
- Accounts receivable 0.01 Million USD

#### Pricing Policy and/or Reason

- The condition and price setting follows normal business operations at the arm's length basis conditions for non-related persons or operations.

#### Transaction

Accounts receivable from construction of gas transmission pipelines

- Accounts receivable 27.50 Million USD

#### Pricing Policy and/or Reason

- Such amount arises mostly from additional scope of work on gas-pipeline construction. The actual cost of the additional work is under negotiation with PTT. The condition and price setting for construction of gas transmission pipelines follows normal business operations at the arm's length basis conditions for non-related persons or operations.

#### Transaction

Petroleum product purchase, other related expenses, and expense for PTT personnel seconded to PTTEP

- Expense for the purchase of petroleum products, related equipment, related services and others 38.79 Million USD
- Personnel expense 0.93 Million USD
- Accounts payables 1.55 Million USD

## Connected Transactions

### Pricing Policy and/or Reason

- The condition and price setting for the purchase of petroleum product, related equipment, related services, and others follows normal business operations at the arm's length basis conditions for non-related persons or operations.
- Personnel expense rates follow the actual rates PTT pays for employees seconded to the Company.

### Transaction

The deferred payment which is the Company's obligation according to the Arthit Project's natural gas purchase/sale contract

1.76 Million USD

### Pricing Policy and/or Reason

- Condition and price setting follows normal business operations at the arm's length basis conditions for non-related persons or operations.

## Star Petroleum Refining Plc. (SPRC)

### Relationship

- PTT, the Company's major shareholder, holds 36% of SPRC's registered and paid-up capital.

### Transaction

Crude oil sales

- Total income 74.68 Million USD
- Accounts receivable - Million USD

### Pricing Policy and/or Reason

- Condition and price setting follows normal business operations at the arm's length basis conditions for non-related persons or operations.

## Energy Complex Co., Ltd. (Energy Complex)

### Relationship

- PTT, the Company's major shareholder, holds 50% of Energy Complex's registered and paid-up capital.
- PTTEP, Energy Complex's major shareholder, holds 50% of Energy Complex's registered and paid-up capital.

- The Company's executives who serve as Energy Complex's directors are:

- 1) Ms. Penchun Jarikasem,
- 2) Mr. Thiti Mekavichai
- 3) Ms. Kesara Limmeechokchai
- 4) Mr. Kitinan Manlekha

### Transaction

The Company has signed a three-year lease with Energy Complex to rent the 47,000 square meters building for office, storage and multipurpose areas at the Energy Complex Center (EnCo). The Company is eligible to extend its lease period for another three years.

- Total lease and service paying amount 17.88 Million USD
- Accounts payable (1.96) Million USD

### Pricing Policy and/or Reason

- The leasing rate is referred to the rate appraised by independent evaluators, based on the market rate of office building lease.

### Transaction

The Company signed a loan contract with Energy Complex under the following conditions:

- Contract period of 13 years and six months
- Expiration date on October 2, 2022
- Reference interest rate follows a loan contract between Energy Complex and Krung Thai Bank Plc. dated April 2, 2009 (contract amendment is included). The interest rate is FDR+2% per year for the period of December 31, 2015.

- Accrued loans 16.07 Million USD
- Interest receivable 0.58 Million USD

### Pricing Policy and/or Reason

- The mentioned contract follows the conditions of the loan contract signed by Energy Complex and Krung Thai Bank Plc., dated April 2, 2009 (contract amendment is included) with the financial support of all Energy Complex's shareholders proportionately

### Transaction

Income from the Company's personnel seconded to Energy Complex

- Total income - Million USD
- Accounts receivable 0.01 Million USD

#### Pricing Policy and/or Reason

- Salary rates based on the actual rates the Company pays for our employees seconded to Energy Complex.

### PTT ICT Solutions Co., Ltd. (PTT ICT)

#### Relationship

- PTT, the Company's major shareholder, holds 20% of PTT ICT's registered and paid-up capital.
- Mr. Thiti Mekavichai, the Company's executive, serves as PTT ICT's director.

#### Transaction

The Company has signed a contract with PTT ICT for IT services and communications.

- Total expenses 18.27 Million USD
- Accounts payable 0.47 Million USD

#### Pricing Policy and/or Reason

- Condition and price setting follows normal business operations at the arm's length basis conditions for non-related persons or operations.

#### Transaction

Income from the Company's personnel seconded

- Total income - Million USD
- Accounts receivable 0.73 Million USD

#### Pricing Policy and/or Reason

- Salary rates based on the actual rates the Company pays for our employees seconded to PTT ICT.

### PTT Energy Resources Co., Ltd.

#### Relationship

- PTT, the Company's major shareholder, holds 100% of PTT Energy Resources' registered and paid-up capital.

#### Transaction

Support staff expenses

- Total expenses 0.02 Million USD

#### Pricing Policy and/or Reason

- Condition and price setting follows normal business operations at the arm's length basis conditions for non-related persons or operations.

#### Transaction

Income from the Company's personnel seconded to PTT Energy Resources

- Total income - Million USD
- Accounts receivable 0.02 Million USD

#### Pricing Policy and/or Reason

- Salary rates based on the actual rates the Company pays for our employees seconded to PTT Energy Resources.

### IRPC Plc. (IRPC)

#### Relationship

- PTT, the Company's major shareholder, holds 38.51% of IRPC's registered and paid-up capital.
- Co-director is Mr. Tevin Vongvanich.

#### Transaction

Expense for IT services from IRPC for real time analyst meetings.

- Total expenses 0.01 Million USD
- Accounts payable - Million USD

#### Pricing Policy and/or Reason

- Condition and price setting follows normal business operations at the arm's length basis conditions for non-related persons or operations.

### PTT Maintenance and Engineering Co., Ltd. (PTT Maintenance)

#### Relationship

- PTT, the Company's major shareholder, holds 40% of PTT Maintenance's registered and paid-up capital.

#### Transaction

The Company and our subsidiaries signed the contracts with PTT Maintenance for the following services:

- Rail tank wagons maintenance and repair
- General maintenance, equipment inspection and other services
- Total expenses 1.46 Million USD
- Accounts payable - Million USD

#### Pricing Policy and/or Reason

- Condition and price setting follows normal business operations at the arm's length basis conditions for non-related persons or operations.

## Connected Transactions

### Dhipaya Insurance Plc. (TIP)

#### Relationship

- PTT, the Company's major shareholder, holds 13.33% of TIP's registered and paid-up capital.

#### Transaction

Expense for the Company's assets insurance, and our employees' health and life insurance

- Total expenses 14.07 Million USD
- Accounts payable - Million USD

#### Pricing Policy and/or Reason

- Condition and price setting follows normal business operations at the arm's length basis conditions for non-related persons or operations.

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#### Transaction

Income recognized from the excess of premium insurance payment in 2014.

- Total income 1.13 Million USD
- Accounts receivable - Million USD

#### Pricing Policy and/or Reason

- Condition and price setting follows normal business operations at the arm's length basis conditions for non-related persons or operations.

### PTT International Trading Pte. Ltd. (PTT International Trading)

#### Relationship

- PTT, the Company's major shareholder, holds 100% of PTT International Trading's registered and paid-up capital.

#### Transaction

Expense for fuel hedging contracts

- Total expenses 1.86 Million USD
- Total income 23.97 Million USD
- Accounts receivable 6.02 Million USD

#### Pricing Policy and/or Reason

- Condition and price setting follows normal business operations at the arm's length basis conditions for non-related persons or operations.

### Trans Thai-Malaysia (Thailand) Limited

#### Relationship

- PTT, the Company's major shareholder, holds > 10% of Trans Thai-Malaysia (Thailand)'s registered and paid-up capital.

#### Transaction

Income from warehousing service provided at Songkhla

- Total income 0.01 Million USD
- Accounts receivable - Million USD

#### Pricing Policy and/or Reason

- Condition and price setting follows normal business operations at the arm's length basis conditions for non-related persons or operations.

### Mr. Kanit Sangwongwanich

#### Relationship

- Management of PTTEP

#### Transaction

Income from asset disposal (car)

- Total income 0.04 Million USD
- Accounts receivable - Million USD

#### Pricing Policy and/or Reason

- Condition and price setting follows normal business operations, fair and at arm's length basis conditions for non-related persons or operations.

### Mr. Tevin Vongvanich

#### Relationship

- Director and Management of PTT
- Director of PTTEP

#### Transaction

Income from asset disposal (car)

- Total income 0.09 Million USD
- Accounts receivable - Million USD

#### Pricing Policy and/or Reason

- Condition and price setting follows normal business operations, fair and at arm's length basis conditions for non-related persons or operations.

## Preconditions and Reasons for Connected Transactions

PTTEP's Audit Committee reviewed the connected transactions which were recorded during the fiscal year ending December 31, 2015 as summarized above and considered them to be indispensable, fair and justifiable in terms of conditions and price, and/or within the arm's length basis. The transactions were also approved by the management or the PTTEP's Board of Directors (Board) prior to execution.

## Measures and Procedure of Connected Transactions

The Board reviews the transactions potentially leading to conflicts of interest, or those which are connected or related, under proper ethical standards, however only after they are initially screened and examined by the Company's Audit Committee. The transactions are particularly of those falling within the criteria as set forth by the Stock Exchange of Thailand, the Capital Market Supervisory Board, and the Securities and Exchange Commission. The Board's responsibility also includes, when deemed appropriate, public disclosure of accurate and correct information of the transactions which might be questionable. The Company meanwhile has conducted a clear set of policies regarding conflict of interest for our directors and employees to follow and act accordingly, as well as a reporting procedure in presence of the conflict.

Shall any of the directors, employees, or related persons have a vested interest in a transaction that the Company is involved in, he or she will not be allowed to take part in making of any of the decisions or approvals related to the transaction. The transaction, in this case, also remains to be treated under an arm's length basis, fair and justifiable in terms of both price and conditions.

## Policy for and Future Possibility of Connected Transactions

### Policy for Connected Transactions

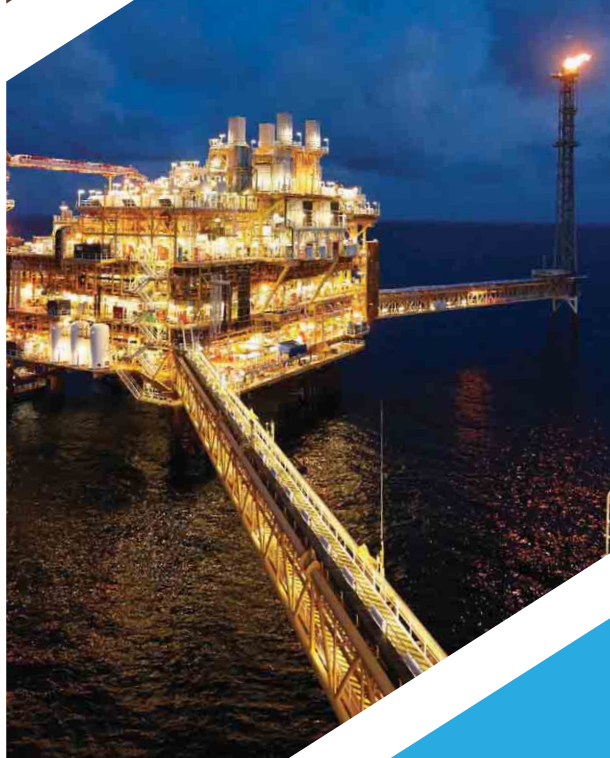
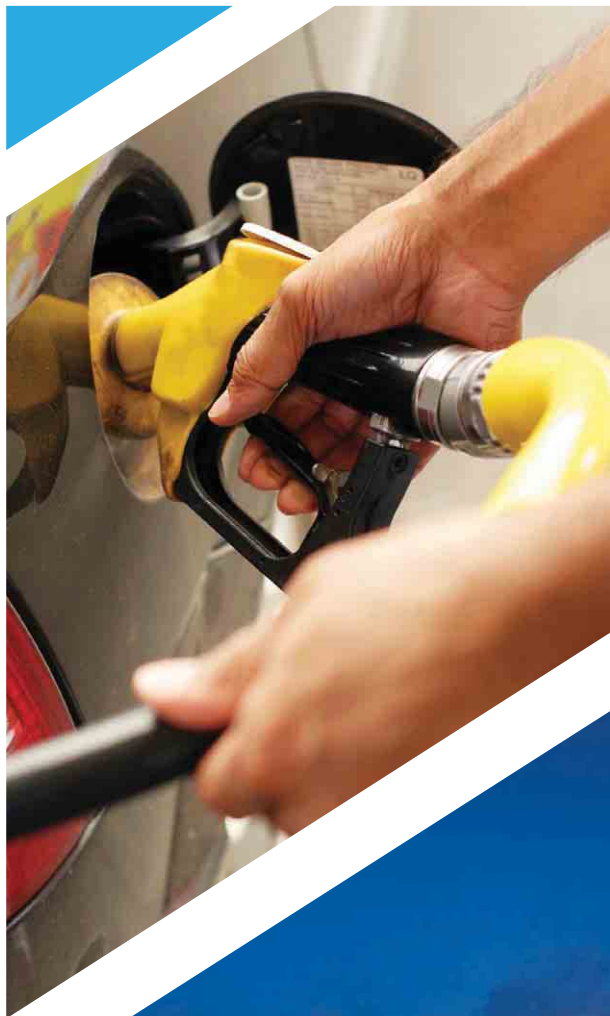
PTTEP treats connected transactions as normal business transactions without any intentions to transfer of benefits between or among the Company and related companies, or persons. The Company strictly adheres to securities and exchange laws and regulations, including those imposed by the Capital Market Supervisory Board, the Stock Exchange of Thailand, or other related supervisory agencies, regarding connected transactions to ensure that, with reasonable business terms and conditions, and use of the market reference prices for instance, the Company's shareholders and stakeholders will continued to be treated equally and in their interests, according to the Company's good corporate governance Policy.

### Future Possibility of Connected Transactions Potentially Leading to Conflicts of Interest

PTTEP will continue to have connected transactions with related entities in the future. Most of the transactions include normal business, office building-leasing, and supporting business transactions, which can be summarized as follows:

- 1) Sales of petroleum products and purchase of fuel: Since the transactions are a normal part of the Company's business and are executed under conditions and requirements as stated in the contracts, they will continue due to their necessity to the operations.
- 2) Lease of office buildings: Since leasing of office buildings is reasonable and necessary for the Company's business operations, the transactions will be continued.
- 3) Hiring of information and technology services: Since it remains reasonable and necessary for the Company to be supported with information and technology services to operate our business, the transactions will continue.

# Management Discussion and Analysis of Operating Results



## Executive Summary

Crude oil prices have continuously dropped in 2015 with Dubai crude oil price moved in the range of 45-65 USD/BBL in the first half of 2015. Despite a short-term recovery with Dubai hitting an annual high of 65 USD/BBL in the second quarter as geopolitical tensions broke out in the Middle East and US production beginning to signal decline, concerns of an oversupplied crude oil market dominated the oil price movement in the second half of the year. OPEC production stood at record high at more than 31.5 million barrels per day in the fourth quarter and the US production, which stood at 9.3 million barrels per day in the second half of 2015 or 0.2 million barrels per day lower compared to the first half, proved more resilient than expected. Furthermore, weaker global economy outlook especially that of China, the decision by OPEC not to lower production level, the US interest rate increase and the lifting of its crude oil export ban drove crude oil prices to below 40 USD/BBL, the lowest level in 11 years. The aforementioned factors put average Dubai crude oil price at 40.7 USD/BBL in the fourth quarter of 2015, considerably lower when compared to the average of 49.7 USD/BBL in the third quarter. Full-year average Dubai crude oil price in 2015 stood at 50.9 USD/BBL, nearly halved when compared to 96.6 USD/BBL in 2014.

On the Thai economy front, the Bank of Thailand projected a 2.8% year-on-year growth in 2015 as government spending and private sector consumption, especially tourism, pick up the pace in the second half of the year. The Monetary Policy Committee of the Bank of Thailand maintained the interest rate at 1.50% whilst the US Federal Open Market Committee (FOMC) increased the interest rate from 0.25% to 0.50% in December. This drove the THB to USD exchange rate to 36.09 THB/USD at the end of 2015, a large depreciation compared to 32.96 THB/USD at the end of 2014 despite having slightly strengthened compared to 36.37 THB/USD at the end of the third quarter in 2015. The impact of THB depreciation on PTTEP is primarily through tax expense as a result of the difference between PTTEP's tax filing currency (THB) and functional currency (USD). More details are disclosed in the "Financial Performance" section (page 178).



The decline in crude oil prices had significant impact to PTTEP's financial performance as the company recorded asset impairment losses of USD 1,385 million in the third quarter. The Company's performance was also affected by deferred tax expense amounted USD 279 million that arise from the difference between the functional currency and the tax filing currency. These factors were made according to the accounting standards and have no impact to the Company's cash flow. As a result, PTTEP reported a net loss of USD 854 million in 2015. Moreover, oil and gas companies globally have recorded asset impairment losses in the low oil price environment.

In 2015, PTTEP reported total revenue of USD 5,654 million, a decline compared to the amount of USD 7,834 million in 2014 mainly from the drop in average selling price, which followed the drop in crude oil prices, to 45.29 USD/BOE from 63.71 USD/BOE in the prior year. The Company did, however, record a 3% growth in sales volume, which averaged at 322,167 barrels of oil equivalent per day (BOED) in 2015 compared to 312,569 BOED in 2014 and in-line with expectation, whilst achieving milestone cost savings target. Total expenses excluding impairment in 2015 amounted USD 4,642 million,

a decrease compared to USD 5,087 million in 2014, is primarily attributed to the cost reduction initiatives under the SAVE to be SAFE program, resulting in a 30% reduction of capital and operating expenditures in 2015 against the original plan. This brought the overall unit cost, which includes operating, general and administrative, exploration and financing costs, down from 43.45 USD/BOE in 2014 to 38.88 USD/BOE in 2015, or down by approximately 11%. The initiatives lead to increased efficiencies, includes shortening drilling days especially in the Gulf of Thailand operations, as a result of which well cost was brought down by more than 20%. Other cost reduction activities include logistics optimization (i.e., reducing number of vessels), better inventory management, renegotiation of major equipment rental and service contracts and maintaining a robust capital structure throughout.

Nonetheless, the lower oil prices and recovering economy have encouraged domestic energy demand for the first eleven months of 2015 amounting to 2.08 million BOED, an increase of 1.2% year-on-year, according to the Energy Policy and Planning Office, the Ministry of Energy of Thailand.

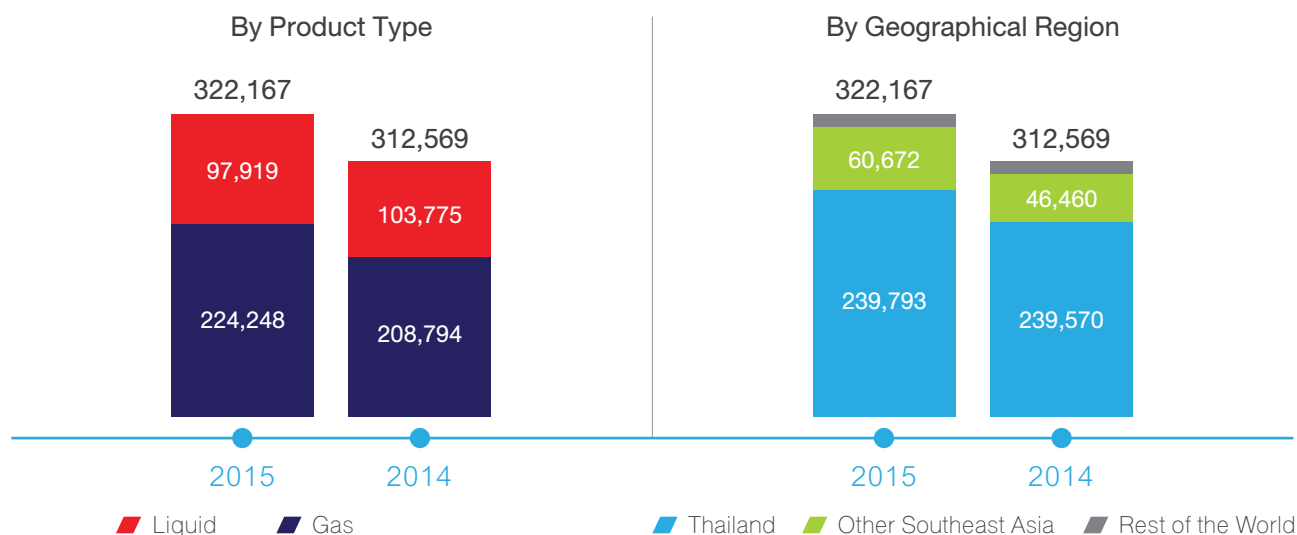
Summary of Key Financial Results			
(Unit : MMUSD)	2015	2014 (Restated)	% Inc. (Dec.) YTD
Total Revenue	5,654	7,834	(28)
Sales Revenue	5,326	7,319	(27)
EBITDA	3,844	5,282	(27)
Profit (loss) for the period	(854)	677	>(100)
Basic earning per share (USD)	(0.22)	0.16	>(100)
Profit (loss) from normal operation	718	1,538	(53)
Gain (loss) from non-recurring items	(1,572)	(861)	(83)

# Management Discussion and Analysis of Operating Results

## Financial Performance

### Average Sales Volume

Unit: BOED



### Summary of Operating Results segregated by segments

Average selling price and Dubai crude oil price (Unit : USD)	2015	2014 (Restated)	% Inc. (Dec.) YTD
Average selling price (/BOE)	45.29	63.71	(29)
Average Dubai crude (/BBL)	50.91	96.60	(47)

Net income (loss) (Unit : MMUSD)	2015	2014 (Restated)	% Inc. (Dec.) YTD
Exploration and production	(1,072)	331	>(100)
Thailand	373	1,441	(74)
Overseas	(1,445)	(1,110)	(30)
• Other Southeast Asia	(101)	252	>(100)
• Australia	(630)	(645)	2
• America	(653)	(657)	1
• Africa	(28)	(82)	66
• Middle East	(33)	22	>(100)
Pipeline transportation	356	276	29
Head office and others	(138)	70	>(100)
Total	(854)	677	>(100)

## Year to Year Comparison of the Results of Operations

### Overall Results of Operation

For the results of operation for year ended 2015, PTTEP and our subsidiaries had a net loss of USD 854 million, a decrease in operating results of USD 1,531 million or more than 100% when compared with the net profit for the year ended 2014 of USD 677 million. The decrease was primarily due to a decrease in sales revenue from a reduction in the average selling price to USD 45.29 per BOE (2014 : USD 63.71 per BOE), even though sales volume increased to 322,167 BOED (2014 : 312,569 BOED). The increase in the sales volume was mainly derived from the Zawtika Project, which commenced its gas sales in Myanmar in March 2014 and reached its full production capacity in August 2014. In addition, impairment loss of assets recognized increased USD 388 million when compared with last year. However, a decrease in income tax expenses of USD 606 million was consistent with a decrease in profit.

For the year ended 2015, PTTEP Group reported loss from non-recurring items in the amount of USD 1,572 million, an increase in loss of USD 711 million when compared with the year ended 2014 that reported loss from non-recurring items in the amount of USD 861 million. The increase in loss from non-recurring items was primarily due to the increase in impairment loss of assets. The amount also increased from increases in income tax expenses affected by the functional currency and income tax expenses affected by revaluation of foreign currency transactions to THB in accordance with the Revenue Code which resulted from the depreciation of THB against USD.

### Results of Operation by Segments

For the year ended 2015, PTTEP Group reported a net loss of USD 854 million, a decreased of USD 1,531 million or more than 100% when compared with the net profit for the year ended 2014 of USD 677 million. The decrease in operating result was primarily from the exploration and production segment which decreased of USD 1,403 million or more than 100% and from the head office and other segments which decreased of USD 208 million or more than 100%.

## Exploration and Production Segment

### Thailand

Net profit for the year ended 2015 decreased in the amount of USD 1,068 million or 74% to net income of USD 373 million when compared with the net profit for the year ended 2014 of USD 1,441 million. The decrease in net profit was primarily due to a decrease in sales revenue resulted from a decrease in selling prices of the products. In addition, the segment also reported an increase in depreciation expenses which was mainly from the Arthit and S1 projects due to increases in completed assets of these projects. However, the segment's income tax expenses were decreased consistent with a decrease in profit.

### Overseas

PTTEP Group reported net loss for the year ended 2015 of USD 1,445 million, an increase of net loss of USD 335 million or 30% when compared with the net loss for the year ended 2014 of USD 1,110 million. The increase in net loss was primarily due to an increase in net loss from other Southeast Asia segment.

Other Southeast Asia segment reported a net loss for the year ended 2015 of USD 101 million, a decrease in operating results of USD 353 million or more than 100% when compared with the net profit for the year ended 2014 of USD 252 million. The decrease was primarily due to the recognition of impairment loss of assets. Moreover, the depreciation expenses also increased from the Zawtika Project which commenced its gas sale in Myanmar in March 2014 and reached its full production capacity in August 2014.

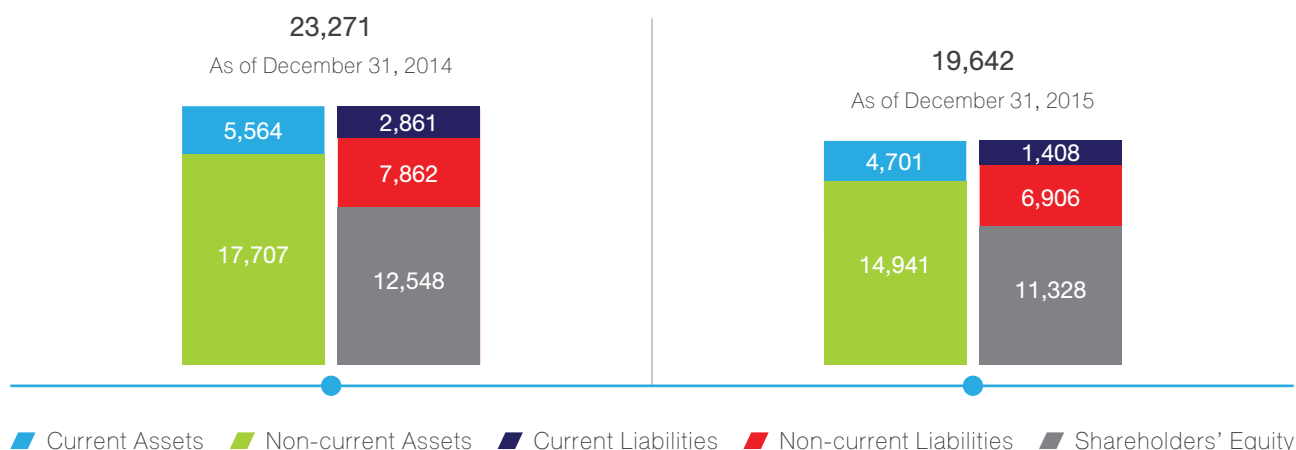
## Head office and Others Segment

Head office and others segment reported a net loss for the year ended 2015 of USD 138 million, a decrease in operating results of USD 208 million or more than 100% when compared with the net profit for the year ended 2014 of USD 70 million. The decrease of operating results was primarily resulted from an increase in income tax expenses affected by revaluation of foreign currency transactions to THB in accordance with the Revenue Code and a decrease in the amount of gain on financial derivatives.

# Management Discussion and Analysis of Operating Results

## Financial Position

Unit: MMUSD



### Assets

As at December 31, 2015, PTTEP and our subsidiaries had total assets in the amount of USD 19,642 million (equivalent to THB 708,864 million), a decrease of USD 3,629 million when compared with the total assets as of December 31, 2014 of USD 23,271 million (equivalent to THB 767,073 million), primarily due to;

- 1) Current assets, which were primarily comprised of cash and cash equivalents, short-term investments, account receivable - parent company, and materials and supplies, decreased USD 863 million mainly from a decrease of USD 670 million in cash and cash equivalents offset with short-term investments. In addition, account receivable - parent company also decreased USD 155 million.
- 2) Non-current assets, which were primarily comprised of exploration and production assets in joint venture projects that are recognized as part of the property, plant and equipment net, intangible assets - net and goodwill, decreased USD 2,766 million mainly due to a recognition of impairment assets and depreciation expenses even though PTTEP Group has additional investment in exploration and production assets during the period.

### Liabilities

As at December 31, 2015, PTTEP and our subsidiaries had total liabilities of USD 8,314 million (equivalent to THB 300,053 million) which include interest bearing debt of USD 3,005 million, a decrease of USD 2,409 million when compared with total liabilities as at December 31, 2014 of USD 10,723 million (equivalent to THB 353,453 million), primarily due to;

- 1) Current liabilities, which were primarily comprised of trade accounts payable, accrued expenses and income tax payable, decreased USD 1,453 million mainly due to a decrease in current portion of long-term debts of USD 749 million from the repayment of debentures and loans from financial institution. In addition, the income tax payable and accrued expenses also decreased in the amount of USD 660 million.
- 2) Non-current liabilities, which primarily comprise debentures and loans from financial institution, deferred tax liabilities, provision for decommissioning costs, and provision for remuneration for the renewal of petroleum production decreased USD 956 million mainly from repayment of long-term loan in Canadian Dollar (CAD) (CAD 475 million). In addition, the deferred tax liabilities and provision for remuneration for the renewal of petroleum production also decreased in the amount of USD 427 million.

## Capital Structure

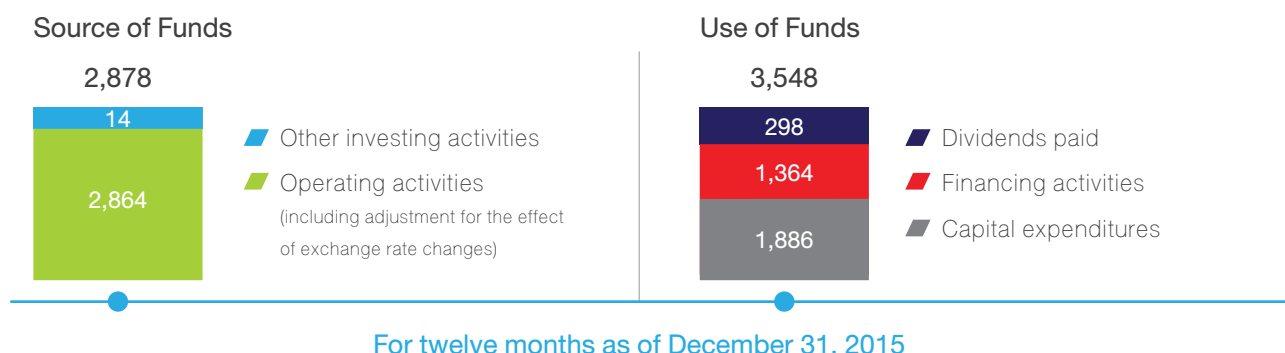
As of December 31, 2015, the capital structure of PTTEP Group comprises shareholders' equity in the amount of USD 11,328 million and total liabilities of USD 8,314 million, comprising of interest bearing debts of USD 3,005 million with a weighted average cost of debt of 4.32% and the average maturity of 8.17 years. All of these interest bearing debts were in USD. The proportion of the fixed and floating interest rate debts is 82:18.

In 2015, PTTEP completed the following financial activities;

- 1) On July 19, 2015 and August 4, 2015, PTTEP Australia International Finance Pty Ltd (PTTEP AIF) has redeemed unsecured and unsubordinated debentures on the maturity date as amount of USD 500 million and USD 200 million respectively.
- 2) On September 21, 2015, PTTEP Canada International Finance Limited (PTTEP CIF) has transferred cash to prepay the long-term loan with JPMorgan Chase Bank, N. A., (Toronto Branch) for the amount of CAD 100 million.
- 3) On September 30, 2015, PTTEP has transferred cash to prepay the long-term loan with Thanachart Bank Public Company Limited for the amount of USD 50 million.
- 4) On November 20, 2015 and November 26, 2015, PTTEP CIF has executed the loan prepayment with CITIBANK, N.A., Canadian Branch for the total aggregate amount of CAD 75 million and with Bank of Tokyo-Mitsubishi UFJ (Canada), Mizuho Corporate Bank, Ltd., and Sumitomo Mitsui Banking Corporation of Canada for the total aggregate amount of CAD 300 million respectively.

## Cash Flows

Unit: MMUSD



As of December 31, 2015, PTTEP and our subsidiaries had cash and cash equivalents, including short-term investment which was deposit with banks and financial institution with a maturity of more than three months, but less than twelve months of USD 3,260 million, a decrease of USD 670 million when compared to cash and cash equivalents as at December 31, 2014 of USD 3,930 million.

- 1) Sources of funds in amount of USD 2,878 million primarily came from;

- 1.1) Net cash received from operating activities as a result of net positive cash flows from revenue from sales, which offset with cash payments for expenditures and income tax expenses.
- 1.2) Cash received from other investing activities which came from the dividend received from related parties and interest received from short-term investments and from loans.

# Management Discussion and Analysis of Operating Results

2) Uses of funds in the amount of USD 3,548 million were primarily for;

2.1) Cash used for additional investment activities for exploration and production assets, and intangible assets, primarily in Arthit, Zawtika and Contract 4 projects.

2.2) Cash used for financing activities, primarily for repayments of debentures and long-term loan from financial institution as well as interest payments.

2.3) Dividend paid for the operating result for the second half of 2014 and the first half of 2015.

## Key Financial Ratios

	2015	2014 (Restated)
<b>Profitability Ratios (%)</b>		
EBITDA to revenue from sales	70.60	70.84
Return on equity	(7.15)	5.58
Net profit margin	(14.95)	8.61
<b>Leverage Ratios (times)</b>		
Debt to equity	0.27	0.34
Debt to EBITDA	0.78	0.80

Remark:

EBITDA to revenue from sales	=	Profit before deduction of interest, tax, and depreciation to revenue from sales including revenue from pipeline transportation
Net profits margin	=	Last 12 months net profits to total revenue
Return on equity	=	Last 12 months net profits to weighted average shareholders' equity
Debt to equity	=	Interest Bearing Debt to total shareholders' equity
Debt to EBITDA	=	Interest Bearing Debt to last 12 months profit before deduction of interest, tax, and depreciation

## Operational Highlights

In 2015, PTTEP's domestic and international operations altogether sum to 38 projects in 11 countries. The following are key project highlights.

### Projects in Thailand

PTTEP has 16 projects in Thailand, and the majority of projects are in the producing phase, located both in the Gulf of Thailand and onshore; including the Bongkot Project, the Arthit Project, and S1 Project and the Contract 4 Project. During the quarter, production operations were carried out continuously to maintain the production plateau. Sales volume from the projects in Thailand amounted to 239,793 BOED in 2015, which accounted for 74% of PTTEP's total sales volume.

### Projects in Southeast Asia

PTTEP has 13 projects in this region which are located in the Republic of the Union of Myanmar (Myanmar), the Socialist Republic of Vietnam (Vietnam) and the Republic of Indonesia (Indonesia). Sales volume from the projects in the Southeast Asia region amounted to 60,672 BOED in 2015, which accounted for 19% of PTTEP's total sales volume.

Highlights of projects in the producing phase within this region include activities at the Zawtika Project and the Vietnam 16-1 Project. The Zawtika Project, located offshore in the Gulf of Moattama, Myanmar, carried out and maintained production level as planned. The project completed the construction of one wellhead platform and is in the process of constructing three more wellhead platforms for the development



phase 1B to maintain current production level. The project also completed the drilling of 10 appraisal wells, which began during the third quarter of 2014, and is currently in the process of results evaluation. In 2015, sales volume from the Zawtika Project averaged 314 MMSCFD (approximately 47,541 BOED).

The Vietnam 16-1 Project, located offshore in the southeast of Vietnam, successfully commenced production from the H5 area, which is situated in the south of Te Glac Trang Field (TGT), in August. Crude oil production from the H5 area approximately stood at 11,000 BPD. In 2015, sales volume from the Vietnam 16-1 Project averaged 31,294 BPD of crude oil and 16 MMSCFD of natural gas (approximately 3,981 BOED).

For projects in the exploration phase, important highlights include the drilling campaign in the Myanmar M3 Project which is located offshore in the Gulf of Moattama, Myanmar. The project completed the appraisal drilling campaign with four out of five wells drilled showed no commercial potential. The project is currently assessing the field's resource potential and its prospects for commerciality.

The exploration campaign of the Myanmar PSC G and EP 2 Project, which is located onshore in the Central Myanmar Basin, Myanmar, completed the drilling of four planned exploration wells in accordance with the work commitment during the first exploration period. The wells showed no commercial potential. The project is currently in the process of extending the exploration period with the government of Myanmar to further assess the petroleum potential.

## Projects in Australasia

PTTEP has one project in this region which is located in the Commonwealth of Australia (Australia) and comprises 14 concession permits.

Fields in the producing phase include the Montara Field, which produced at an average rate of 16,288 BPD, which accounted for 5% of PTTEP's total sales volume and in-line with its production target. Fields in the exploration phase include

the Cash / Maple Field, which in 2015 the Company is in the process of studying and evaluating development options. PTTEP is also in the process of assessing the petroleum potential in the other exploration concessions.

## Projects in the American Continent

PTTEP has three projects in this region located in Canada and the Federal Republic of Brazil (Brazil).

Projects in the exploration phase include the Mariana Oil Sands Project, the Barreirinhas AP1 Project, and the BM-ES-23 Project.

The Mariana Oil Sands Project, located in Alberta, Canada, submitted the development proposal for Thornbury Phase 1 to the government of Alberta in May. The project is re-assessing the investment strategy going forward to reduce costs and mitigate development risks in response to the low oil price environment.

PTTEP has two projects in Brazil. The Barreirinhas AP1 Project is located in the Barreirinhas Basin, offshore to the northeast of Brazil. The project is preparing for 3D seismic acquisition after receiving approval from the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) on its environmental impact assessment (EIA) report. The seismic activities are expected to begin in the first quarter of 2016. The BM-ES-23 Project is located in the Espirito Santo Basin, offshore, east of Brazil. In the fourth quarter of 2015, the project completed the drilling of one appraisal well, which did not encounter commercial petroleum potential and was subsequently written off, and one exploration well, which discovered petroleum and is currently in the process of evaluating the result.

## Projects in Africa and the Middle East

PTTEP has 5 projects in this region, located in the Sultanate of Oman (Oman), the People's Democratic Republic of Algeria (Algeria), the Republic of Mozambique (Mozambique) and the Republic of Kenya (Kenya).

# Management Discussion and Analysis of Operating Results

The Algeria 433a & 416b Project, which is in the producing phase and located onshore in the eastern part of Algeria, successfully marked its first crude oil production at the level of around 20,000 BPD. First sales from the project were made in the fourth quarter of 2015.

The Algeria Hassi Bir Rekaiz Project, which is in the exploration phase located onshore in the eastern part of Algeria, is making progress under the Third Exploration Phase. In 2015, the project completed the drilling of five out of six planned exploration and appraisal wells.

The Mozambique Rovuma Offshore Area 1 Project, which is also in the exploration phase, is a large gas project located offshore Mozambique. The project completed the drilling of six appraisal wells and, with respect to LNG development, selected the contractor for the onshore LNG Engineering Procurement and Construction Contract. In addition, the Decree Law to support the project operations has been approved by the government and ratified by the congress of the Republic of Mozambique. The project is currently in the process of selecting contractors for the installation of offshore facilities and preparing for project finance.

## Portfolio Management

PTTEP continues to undertake portfolio management activities to achieve an optimal balance between project value-added and risk management, as well as to ensure that the Company's long term strategic objectives can be achieved. PTTEP consistently studies and analyses pertinent investment factors to keep abreast of the constant changes in the social, economic, and political landscape, and to incorporate these variables into investment considerations and decisions. The Company also reviews its list of target countries for expanding its investments (Focused Countries) by grouping the countries according to petroleum potential and suitability with the Company's strategic directions and goals. The analysis covers factors such as geography, petroleum fiscal policy, operational and political risks, as well as PTTEP's competitive advantage.

Significant portfolio management activities in 2015 include the divestment of 20% participating interest in the Myanmar PSC G and EP 2 Project to a subsidiary of Mitsui Oil Exploration Co., Ltd. (MOECO) and Palang Sophon Offshore Pte. Ltd. PTTEP also divested 10% of participating interest in the Myanmar MOGE 3 Project to a subsidiary of MOECO. In addition, PTTEP submitted the notices of relinquishment from the Indonesia Malunda Project and Indonesia South Mandar Project, as well as from the Mozambique Rovuma Onshore Project, which are subject to the approval from the governments of the respective countries. Furthermore, PTTEP completed the relinquishments of the Kenya L10A Project, the Indonesia Sadang Project and the A4 & A5/48 Project in Thailand after receiving approvals from the governments of respective countries.

Moreover, PTTEP has plans to selectively develop projects which have petroleum discoveries, as well as actively seek out opportunities to acquire additional projects, with a particular focus on projects in the producing phase or those which are in the final stages of development and almost ready to produce.

## Cost Management

PTTEP has adapted our expenditure plan to suit the lower oil price environment under the SAVE to be SAFE program

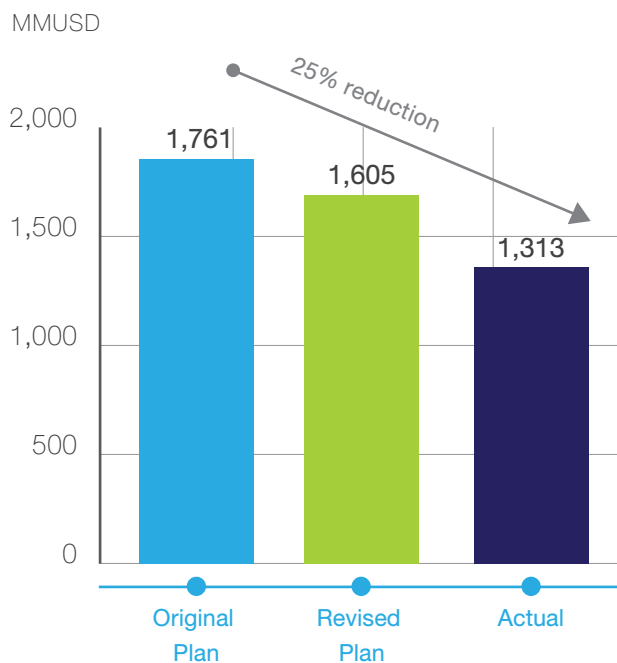
- Reduce: Seek opportunities to reduce costs and identify effective work processes or technologies which will enable cost reduction in the short and long run
- Remove: Refrain from non-essential activities and focus on "need to have / need to do" rather than "nice to have / nice to do".
- Reschedule: Postpone investments in high risk projects by prioritizing expenditures to correspond with the oil price environment.

In 2015, PTTEP successfully reduced operating and capital expenditures by 25% and 32% respectively compared to the original expenditure plan, which amounted to USD 1.42 billion in operating and capital

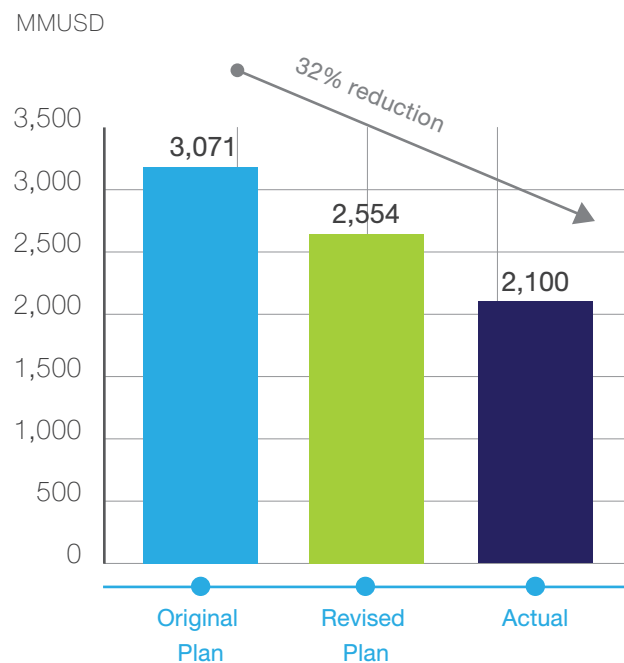
expenditures, whilst achieved sales volume growth of 3% as targeted. The cost reduction effort drove down total expenses, excluding the loss on asset impairment, to USD 4,642 million in 2015, or a decrease USD 445 million when compared to USD 5,087 million in 2014. This was achieved through improved work and cost efficiency such as shortening drilling days especially in drilling operations in the Gulf of Thailand, as a result

of which well cost was brought down by more than 20% in comparison to 2014 performance, logistical optimization through reducing number of supply boats as well as better inventory management. The Company also pursued renegotiation of major equipment rental and service contracts, as well as actively maintained a robust capital structure through a prepayment of 1,100 MMUSD debentures.

2015 Operating Expenditure



2015 Capital Expenditure



# Management Discussion and Analysis of Operating Results

## Sustainable Development

PTTEP demonstrates our dedication and excellence in sustainable development, both domestically and globally. In April 2015, PTTEP received an Advanced Level certification from the United Nations Global Compact (UNGC), which is highest level of commitment to the Global Compact. As of present, only four of 33 UNGC participants from Thailand achieved the Advanced Level certification. PTTEP began our participation in the UNGC in 2011, adhering to the ten principles in the areas of human rights, labor standards, environment, and anti-corruption.

In September 2015, PTTEP was listed for the second consecutive year on the Dow Jones Sustainability Index (DJSI) under the world Index of oil and gas Industry. Moreover, in October 2015, PTTEP was declared as one of the listed companies under Thailand Sustainability Investment of 2015 by the Stock Exchange of Thailand. The enlistment was granted to companies for their outstanding performances in Environmental, Social, and Governance areas along with good business performances.

The achievements are proud reflections of PTTEP's aspiration to become a leading Asian E&P company through technology and green practices and drive the organization towards its goal of sustainable growth. In order to continuously enhance PTTEP's sustainable development practices, the Company has outlined a sustainable development plan for short-term and long-term, which has also been included in the Company's 2015 corporate objectives, around the three areas of business, social and environment. Key activities in 2015 are as follows.



## Business

PTTEP aims for technological enhancements to support our business to achieve sustainable growth and apply those technologies to our projects to improve operating performance, reduce costs and prepare for new business opportunities. In 2015, PTTEP introduced the use of multi-purpose plant inspector octocopter (MPIO) to assist the inspection of wellhead platforms in the Arthit project in the Gulf of Thailand. The Company also developed more durable and less costly choke valves. In addition, PTTEP provided services to HMC Polymers Ltd., a PTT Group company, for the inspection of flare stacks in November 2015. In 2016, the MPIO will be mobilized in various applications, such as the inspection of oil pipeline and extend its services to other PTT Group companies. Furthermore, PTTEP is in the process of studying the use of electromagnetic technologies to improve production levels at the Sirikit Oil Field.

## Wider Society

PTTEP is dedicated to carry out our business operations with responsibility to society, in accordance with our social development strategy. The framework emphasizes on four development areas: fundamental needs, education, environment, and culture and sports. The Company organized many activities with local communities to ensure that their essential needs are met. Results of the activities were reviewed, evaluated and incorporated with improvement plan for the long-term benefits to the stakeholders in areas in which PTTEP operates as well as to the society as a whole.

In 2015, PTTEP engaged in the following noteworthy and socially responsible activities:

### Activities in Thailand

- 1) The Preservation and Development of Chan Palace Project in the Area of S1 Project Operations - PTTEP, in collaboration with the Yen-Sira-Phro-Pra-Boriban Foundation and the Fine Arts Department to preserve and develop the Chan Palace, in Phitsanulok Province, to be revered with historical importance to the community and younger generations. On December

19, 2015, Her Royal Highness Princess Maha Chakri Sirindhorn graced her presence to officiate the opening ceremony of the Chan Palace Historical Center.

- 2) The PTTEP Thai Heritage World Heritage Project - PTTEP has fulfilled the work identified in the memorandum with the Fine Arts Department to support the second phase of the World Heritage project (2014 - 2017). The project received guidance from Her Royal Highness Princess Maha Chakri Sirindhorn with the purpose to nurture the learning experience of world heritage sites in the history-enriched Phra Nakhon Si Ayutthaya Province. The Company supported the architectural and archaeological analysis project by providing the learning tools on the ancient palace. The Company also helped establish learning trails and archeological exhibits, as well as promote the three-dimensional model of the ancient royal palace of Phra Nakhon Si Ayutthaya Province for the ease and interest of learning experience.
- 3) The Learning Center (Phase 1) Project at the Songkhla Province - the purpose of the project is to build a solid foundation for youth education in the local community. PTTEP believes that well-supported education leads to solid knowledge, which in turn helps to develop the local community and society. In December 2015, PTTEP, in collaboration with the city municipal and the provincial administration organization of Songkhla Province, conducted the opening ceremony of the Songkhla Learning Center at the Si Daeng building.
- 4) The Reforestation for Ecological Study at the Sri Nakhon Khuean Khan Park and Botanical Garden under the Guidance of Her Royal Highness Princess Maha Chakri Sirindhorn at Bang Kachao - PTTEP, in conjunction with the Royal Forest Department and Kasetsart University, launched the campaign for ecological reforestation in over 40 Rais of land. The project also undertakes the land improvement initiatives in 108 Rais of land surrounding Sri Nakhon Khuean Khan Park, restore the bicycle trails and wheelchairs, and promote exhibits on the preservation of green area "Khung Bang Kachao". The project was presented to the Royal Forest Department and Bang Kachao community in June.

### Activities in Overseas

PTTEP-LKC Project - PTTEP, in collaboration with Dompot Dhuafa, a leading Indonesian non-profit organization dedicated to social responsibility, established a cost-free clinic to provide basic healthcare and sanitation for the Indonesian community at the Rorotan village, located in a remote area north of Jakarta. In April 2015, the clinic was officially inaugurated by the Minister of Health of Indonesia.

### Safety, Security, Health and Environment

PTTEP has an environmental management system which encompasses a project's entire life cycle, and is a subset of PTTEP's Safety, Security, Health and Environment Management System (SSHE MS). In 2015, PTTEP had a Lost Time Injury Frequency (LTIF) score of 0.13, and a Total Recordable Incident Rates (TRIR) score of 1.11. The Company's performance on both safety indicators is better than the average of the members in the International Association of Oil and Gas Producers (IOGP).

Moreover, PTTEP aims to become a Low Carbon Footprint organization, and has set a goal to reduce our greenhouse gas (GHG) emissions by not less the 20% in the year 2020 versus its 2012 base year figure. In 2015, PTTEP reduced our greenhouse gas (GHG) emissions by 4.7% below our 2012 levels.



# Management Discussion and Analysis of Operating Results

## Business Outlook for 2016

Crude oil price, which is one of the key factors that drive PTTEP's financial performance, is expected to remain at low levels for the first half of 2016 on oversupply concerns. OPEC is expected to retain high production levels to maintain its market share whilst non-OPEC production remains resilient to low oil prices. Furthermore, Iran is preparing to ramp up its crude oil export by 0.5-0.7 million BPD in the first half of 2015 following the sanction lift. Crude oil supply could slow in the second half of 2016 as investment cutbacks by non-OPEC producers, most notably the US, following persistently low oil prices since 2015 expectedly start to yield a more noticeable impact to global oil production capacity. This supply rebalance expectedly would support oil price recovery in the later part of the year.

On the economic front, the World Bank has toned down global economy growth in 2016 from 3.3% to 2.9% in January 2016. The downward revision is mainly driven by the slowdown in five major emerging national economies, namely Brazil, Russia, India, China and South Africa (BRICS). As for the Thai economy, the Monetary Policy Committee of the Bank of Thailand has forecasted the country's growth in 2016 at 3.5%, supported by increased government and private sector spending and continued growth momentum in the tourism sector.

PTTEP expects the THB currency to depreciate further on the likelihood of the FOMC to increase US interest rate further in 2016. The financial performance of PTTEP will be affected in the form of deferred taxes that arise from the difference between the Company functional currency and the tax filing currency and driven by a change in exchange rate. The majority of the difference, however, does not impact the Company's cash flow. Furthermore, the increase in interest rate is expected to have minimal impact on the Company's financial performance as more than 80% of total debt is made up of fixed interest rate debt.

Under the currently suppressed oil price environment, PTTEP has prepared plans to maneuver through 2016 as follows.

- 1) Continue to use oil price hedging instruments to alleviate the impact of a highly volatile oil price environment. Similar strategy was adopted in 2015, based on which the Company was able to alleviate the price impact through profits made on oil price hedging of around USD 120 million.
- 2) Focus on further cost reduction through the SAVE to be SAFE program including consideration to delaying or stopping investments in high-cost projects. With continued fall in oil prices, renegotiation of key service and rig contracts will be re-visited and further savings from logistical optimization, inventory management and maintenance activity will also be worked on.
- 3) Manage production level by taking into consideration a balance of investment returns, profitability and cash flow; while ensuring there is no disruption to Thailand's energy supply.
- 4) Simulate various oil price and exchange rate scenarios to assess risk factors and prepare mitigation plans. Short-term and long-term investment program is created with some degree of flexibility to enable PTTEP to promptly respond to changes in oil price and the Company's liquidity can always be maintained at an appropriate level.
- 5) Emphasize on financial discipline and a strong capital structure where debt-to-equity ratios are kept at appropriate levels corresponding to the business profile and liquidity levels are sufficient to cope with volatile oil prices and economic conditions, while business opportunities can also be seized.



# Significant Financial Information

## Summary of Financial Information

### Statements of Financial Position

PTT Exploration and Production Public Company Limited and Subsidiaries

Assets	As at January 1, 2014 (Beginning) (Restated)		As at December 31, 2014 (Restated)		As at December 31, 2015	
	Thousand (USD)	%	Thousand (USD)	%	Thousand (USD)	%
<b>Current Assets</b>						
Cash and cash equivalents	2,350,960	10.9	3,930,360	16.9	2,995,403	15.2
Short-term investments	-	-	-	-	264,160	1.3
Investments in trading securities	143	0.0	176	0.0	118	0.0
Account receivable - parent company	882,835	4.1	630,911	2.7	475,827	2.4
Trade accounts receivable	146,710	0.7	151,231	0.6	84,251	0.4
Other accounts receivable	141,782	0.7	116,510	0.5	101,057	0.5
Inventories, net	45,387	0.2	31,114	0.1	47,214	0.2
Materials and supplies, net	327,807	1.5	365,073	1.6	404,269	2.1
Other current assets	186,409	0.9	338,730	1.5	328,407	1.7
<b>Total Current Assets</b>	<b>4,082,033</b>	<b>18.9</b>	<b>5,564,105</b>	<b>23.9</b>	<b>4,700,706</b>	<b>23.9</b>
<b>Non-current Assets</b>						
Investments in available-for-sales securities	1,659	0.0	900	0.0	875	0.0
Investments in associates	36,842	0.2	39,097	0.2	42,861	0.2
Investments in joint ventures	24,672	0.1	23,547	0.1	21,297	0.1
Long-term loans to related parties	27,176	0.1	17,595	0.1	16,072	0.1
Property, plant and equipment, net	12,650,224	58.7	11,485,943	49.4	9,652,406	49.1
Goodwill, net	992,293	4.6	1,126,774	4.8	1,014,382	5.2
Intangible assets, net	3,279,089	15.2	4,525,096	19.4	3,691,165	18.8
Deferred tax assets	354,943	1.6	280,581	1.2	180,092	0.9
Other non-current assets	112,452	0.5	207,049	0.9	322,470	1.6
<b>Total Non-current Assets</b>	<b>17,479,350</b>	<b>81.1</b>	<b>17,706,582</b>	<b>76.1</b>	<b>14,941,620</b>	<b>76.1</b>
<b>Total Assets</b>	<b>21,561,383</b>	<b>100.0</b>	<b>23,270,687</b>	<b>100.0</b>	<b>19,642,326</b>	<b>100.0</b>

## Significant Financial Information

Liabilities and Shareholders' Equity	As at January 1, 2014 (Beginning) (Restated)		As at December 31, 2014 (Restated)		As at December 31, 2015	
	Thousand (USD)	%	Thousand (USD)	%	Thousand (USD)	%
<b>Current Liabilities</b>						
Trade accounts payable	131,039	0.6	129,864	0.6	118,302	0.6
Current portion of long-term debts	356,523	1.7	749,216	3.2	-	-
Working capital to co-venturers	25,073	0.1	10,621	0.0	16,889	0.1
Accrued expenses	851,484	3.9	911,084	3.9	614,915	3.1
Accrued interests payable	49,505	0.2	57,676	0.2	32,813	0.2
Income tax payable	972,249	4.5	865,714	3.7	501,511	2.6
Financial derivative liabilities	35,870	0.2	213	0.0	6,770	0.0
Short-term provision	48,198	0.2	54,914	0.2	53,196	0.3
Other current liabilities	135,367	0.6	81,220	0.3	63,374	0.3
<b>Total Current Liabilities</b>	<b>2,605,308</b>	<b>12.1</b>	<b>2,860,522</b>	<b>12.3</b>	<b>1,407,770</b>	<b>7.2</b>
<b>Non-current Assets</b>						
Debentures	2,608,762	12.1	2,504,875	10.8	2,434,698	12.4
Long-term loans from financial institution	1,057,696	4.9	974,625	4.2	570,543	2.9
Deferred tax liabilities	1,639,495	7.6	1,499,847	6.4	1,269,541	6.5
Share of loss of joint ventures	18,218	0.1	2,558	0.0	-	-
Employee benefit obligations	103,801	0.5	110,896	0.5	99,189	0.5
Provision for decommissioning costs	1,186,896	5.5	2,163,120	9.3	2,085,820	10.6
Provision for remuneration for the renewal of petroleum production	530,471	2.5	492,511	2.1	295,487	1.5
Other non-current liabilities	91,916	0.4	113,750	0.5	151,287	0.8
<b>Total Non-current Liabilities</b>	<b>7,237,255</b>	<b>33.6</b>	<b>7,862,182</b>	<b>33.8</b>	<b>6,906,565</b>	<b>35.2</b>
<b>Total Liabilities</b>	<b>9,842,563</b>	<b>45.6</b>	<b>10,722,704</b>	<b>46.1</b>	<b>8,314,335</b>	<b>42.3</b>
<b>Shareholders' Equity</b>						
Share capital						
Issued and paid-up share capital	150,684	0.7	150,684	0.6	150,684	0.8
Share premium	3,439,037	15.9	3,439,037	14.8	3,439,037	17.5
Subordinated capital debentures	156,571	0.7	1,152,103	5.0	1,152,103	5.9
Retained earnings						
Appropriated						
Legal reserve	15,048	0.1	15,048	0.1	15,048	0.1
Reserve for expansion	431,231	2.0	431,231	1.9	431,231	2.2
Unappropriated	7,547,030	35.0	7,462,227	32.1	6,288,214	32.0
Other components of Shareholders' Equity	(20,781)	(0.1)	(102,347)	(0.4)	(148,326)	(0.8)
<b>Total Shareholders' Equity</b>	<b>11,718,820</b>	<b>54.4</b>	<b>12,547,983</b>	<b>53.9</b>	<b>11,327,991</b>	<b>57.7</b>
<b>Total Liabilities and Shareholders' Equity</b>	<b>21,561,383</b>	<b>100.0</b>	<b>23,270,687</b>	<b>100.0</b>	<b>19,642,325</b>	<b>100.0</b>
Book value per share (USD)	2.95		3.16		2.85	
Issued and fully paid-up capital at the end of year (Thousand share)	3,969,985		3,969,985		3,969,985	

## Statements of Income

PTT Exploration and Production Public Company Limited and Subsidiaries for the Years Ended December 31.

	2013*		2014 (Restated)		2015	
	Thousand (USD)	%	Thousand (USD)	%	Thousand (USD)	%
<b>Revenues</b>						
Sales	7,171,896	96.3	7,319,189	93.4	5,325,915	94.2
Revenue from pipeline transportation	150,675	2.0	137,925	1.8	118,488	2.1
Interest income	33,065	0.4	22,932	0.3	31,916	0.6
Gain on financial derivatives	-	-	197,018	2.5	132,161	2.3
Other income	89,263	1.2	156,639	2.0	45,200	0.8
<b>Total Revenues</b>	<b>7,444,899</b>	<b>100.0</b>	<b>7,833,703</b>	<b>100.0</b>	<b>5,653,680</b>	<b>100.0</b>
<b>Expenses</b>						
Operating expenses	827,377	11.1	856,507	10.9	709,766	12.6
Exploration expenses	172,020	2.3	332,917	4.2	183,547	3.2
Administrative expenses	332,662	4.5	370,562	4.7	277,472	4.9
Petroleum royalties and remuneration	816,741	11.0	608,803	7.8	426,045	7.5
Depreciation, depletion and amortization	1,637,400	22.0	2,562,087	32.7	2,719,715	48.1
Loss on foreign exchange	89,550	1.2	49,456	0.6	69,424	1.2
Loss on financial derivative	5,440	0.1	-	-	-	-
Management's remuneration	6,185	0.1	6,059	0.1	3,778	0.1
Impairment loss on assets	-	-	996,790	12.7	1,385,210	24.5
Other expenses	-	-	41,125	0.5	-	-
Finance costs	200,765	2.7	259,337	3.3	251,981	4.5
<b>Total Expenses</b>	<b>4,088,140</b>	<b>54.9</b>	<b>6,083,643</b>	<b>77.7</b>	<b>6,026,938</b>	<b>106.6</b>
Share of gain from associates and joint ventures	6,157	0.1	21,942	0.3	9,028	0.2
<b>Profit (loss) before income taxes</b>	<b>3,362,916</b>	<b>45.2</b>	<b>1,772,002</b>	<b>22.6</b>	<b>(364,230)</b>	<b>(6.4)</b>
Income tax expenses	(1,516,270)	(20.4)	(1,094,543)	(14.0)	(489,360)	(8.7)
<b>Profit (loss) for the year</b>	<b>1,846,646</b>	<b>24.8</b>	<b>677,459</b>	<b>8.6</b>	<b>(853,590)</b>	<b>(15.1)</b>
<b>Earnings (loss) per share (USD)</b>	<b>0.46</b>		<b>0.16</b>		<b>(0.22)</b>	

\* The figures as per 2013 financial statement reported to the Stock Exchange of Thailand on February 17, 2014

# Significant Financial Information

## A Statements of Cash Flows

PTT Exploration and Production Public Company Limited and Subsidiaries for the Years Ended December 31.

	2013*	2014 (Restated)	2015
	Thousand (USD)	Thousand (USD)	Thousand (USD)
<b>Cash flows from operating activities</b>			
Profit (loss) before income taxes	3,362,915	1,772,002	(364,230)
Adjustment to reconcile profit before income tax to net cash provided by (used in) operating activities			
Share of gain from associates and joint ventures	(6,157)	(21,942)	(9,028)
Depreciation, depletion and amortization	1,637,400	2,562,087	2,719,715
Impairment loss on assets	-	996,790	1,385,210
Amortization of exploration expenses	71,438	266,423	147,988
Amortization of other expenses	6,953	7,940	31,227
(Gain) Loss on disposal of assets	7,834	(1,724)	9,888
Income recognized from deferred income	(6,884)	(1,037)	(13,828)
(Gain) Loss on financial derivatives	11,322	(24,267)	(21,550)
(Gain) from restructuring of the ownership interest in KKD Project	-	(32,136)	-
Employee benefit obligations	12,596	11,893	17,896
Other income	-	(11,384)	-
Loss from debt forgiveness for loan to related parties	-	15,301	-
(Gain) Loss on foreign exchange	26,440	28,903	(649)
Interest income less than interest expenses	161,221	229,224	211,584
	5,285,078	5,798,074	4,114,223
Change in operating assets and liabilities	(1,545,232)	(1,481,985)	(1,225,571)
Net cash provided by operating activities	3,739,846	4,316,089	2,888,652
<b>Cash flows from investing activities</b>			
Increase in short-term investments	-	-	(264,160)
Increase in investments in joint ventures	-	-	(2,650)
Decrease in investments in joint ventures	-	1,311	2,161
Cash received from restructuring of the ownership interests in KKD project	-	388,488	-
Cash payment from purchase of business	(240,945)	(812,832)	-
Dividends received from related parties	513	3,835	4,403
Interest received from short-term investment	-	-	9,293
Interest received from loans	801	659	581
Increase in property, plant and equipment	(2,633,409)	(2,051,479)	(1,743,527)
Increase in intangible assets	(32,847)	(532,003)	(142,135)
Net cash used in investing activities	(2,905,887)	(3,002,021)	(2,136,034)

	2013*	2014 (Restated)	2015
	Thousand (USD)	Thousand (USD)	Thousand (USD)
<b>Cash flows from financing activities</b>			
Payments of short-term loans	(62,000)	-	-
Proceeds from issuance of debentures	500,000	601,456	-
Payments of debentures	(175,605)	(360,086)	(700,000)
Payment from long-term loans	-	-	(411,469)
Interest paid for loans	(164,333)	(182,548)	(186,916)
Net cash payment for financial derivative contract	-	(29,414)	-
Cash payments for financial costs	(9,778)	(735)	-
Proceeds from issuance of subordinated capital debentures	-	1,000,000	-
Interest paid for subordinated capital debentures	(9,393)	(33,399)	(65,893)
Cash payments for financial costs from issuance of subordinated capital debentures	-	(4,467)	-
Dividends paid	(783,293)	(735,573)	(297,702)
Net cash provided by (used in) financing activities	(704,402)	255,234	(1,661,980)
Net increase (decrease) in cash and cash equivalents	129,557	1,569,302	(909,362)
Cash and cash equivalents at the beginning of the year	2,291,919	2,350,960	3,930,360
	2,421,476	3,920,262	3,020,998
Adjustment for the effect of exchange rate changes	(64,438)	10,098	(25,595)
Cash and cash equivalents at the end of the year	2,357,038	3,930,360	2,995,403

\* The figures as per 2013 financial statement reported to the Stock Exchange of Thailand on February 17, 2014

# Significant Financial Information

## Summary Significant Financial Ratio Table

		2013	2014 (Restated)	2015
<b>Liquidity ratio</b>				
Current Ratio	Times	1.57	1.95	3.34
Quick Ratio	Times	1.30	1.65	2.71
Cash Flow from Operations to Current Liabilities Ratio	Times	1.50	1.58	1.35
Account Receivable Turnover	Times	7.07	8.23	8.11
Collection Period	Days	52	44	45
<b>Profitability Ratio</b>				
Net Profit Margin	%	24.80	8.65	(15.10)
Return on Equity	%	16.47	5.58	(7.15)
<b>Efficiency Ratio</b>				
Return on Assets	%	8.96	3.02	(3.98)
Return on Fixed Assets	%	23.12	20.28	12.71
Assets Turnover	Times	0.36	0.35	0.26
<b>Financial Policy Ratio</b>				
Debt to Equity Ratio	Times	0.34	0.34	0.27
Times Interest Earned	Times	25.74	20.37	15.25
Dividend Ratio	%	40	82	N/A
<b>Data per Share</b>				
Book Value per Share	USD	2.95	3.16	2.85
Net Profit per Share	USD	0.46	0.16	(0.22)
Dividend per Share	THB	6.00	4.50	3.00
<b>Growth Rate</b>				
Total Asset	%	9.80	7.93	(15.59)
Total Liabilities	%	10.14	8.94	(22.46)
Sales	%	N/A	N/A	(26.99)
Net Profit	%	0.06	(63.31)	(226.00)



## Abbreviations

BBL	Barrel
BOE	Barrel of Oil Equivalent
BOED	Barrel of Oil Equivalent per Day
BPD	Barrel per Day
BSCF*	Billion Standard Cubic Feet
BTU	British Thermal Unit
CNG <sup>1</sup>	Compressed Natural Gas
DCQ	Daily Contract Quantity
GSA	Gas Sale Agreement
HOA	Heads of Agreement
KBD	Thousand Barrels per Day
LNG <sup>2</sup>	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
MMBBL	Million Barrels
MMBOE	Million Barrels of Oil Equivalent
MMBPD	Million Barrels per Day
MMSCF*	Million Standard Cubic Feet
MMSCFD*	Million Standard Cubic Feet per Day
MMSTB*	Million Stock-Tank Barrels
MMSTBD*	Million Stock-Tank Barrels per Day
NGV	Natural Gas for Vehicles
STB*	Stock-Tank Barrel
STBD*	Stock-Tank Barrel per Day
TCF	Trillion Cubic Feet
TPD	Ton per Day
USD	US Dollar

\* Referring to gas and oil at standard condition, 60° F and 1 atmosphere (ATM)

<sup>1</sup> Natural gas liquefied by increasing pressure

<sup>2</sup> Natural gas liquefied by decreasing temperature



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