

Growing Together
for the Energy of Thailand



Corporate Shared Value

The Ultimate Value

In our pursuit of business performance with due regard for environmental, community, and social stewardship, plenty of new ideas are applied to derive green innovations.

In the process, knowledge transfer to communities takes place.

It is through the galvanization of ideas, knowledge, and virtue that PTT Group's business growth has been driven. For we believe that sustained power is what the people of this country need.

CSV

INNOVATION = ENDLESS POSSIBILITIES

HUMANS:
THE FOUNDATION
OF IDEAS

At PTT, knowledge is vital, and education is the key. A firm belief in Thais' potential, upon whom we rely. By leveraging science and technology, we've continuously produced inventions to make Thailand a knowledgeable society imbued with a sustainable quality of life.

GREEN ROAD MAP

Green Heart + Action = Green Chain

GETTING
DOWN
TO WORK

PTT's Green Roadmap connects the elements of the ecology and processes. It's the brainwork of our more than three full decades of business existence, our stakeholders' commitment, and conscientious consumption of resources—all for the good of society in the many years to come.



GREEN
INNOVATION



PTT

PERFORMA
SUPER SYNTHETIC
API-SN OW-30

The first lube oil to
earn a carbon-footprint
label in ASEAN.

Amazon Bio Cup
Innovative paper cup
coated with Bio PBS
bioplastics, fully
biodegradable
within 180 days.

100% : 180
Recycle Days

CARBON
FOOTPRINT



Carbon Footprint

Percentage



<20%

ENERGY

THE MIGHT
OF INFINITE
IDEAS

In a way, sustainability means one can't stop thinking. Innovations always spring to the trained mind. Amid today's state of changes, one of PTT's missions is to apply science and technology in our quest to produce smart, green innovations and products. Like renewable energy, we believe that our infinite ideas can produce infinite ways of promoting Thais' quality of life.

BIO
PLASTIC

GREEN INNOVATION = SUSTAINABILITY

PTT DIESEL
CNG



PTT DIESEL CNG: a novel technology brought to you by PTT Research & Technology institute that enables small diesel vehicles to consume an average of 60% more natural gas, in place of diesel.



(Idea)²
= Environmentally
friendly



ChemnoBot



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PTT GROUP VISION

THAI PREMIER
MULTINATIONAL
ENERGY COMPANY

PTT GROUP MISSION



To conduct integrated energy and petrochemical business as the nation's energy company whose mission to equally respond to all stakeholders through the following aspects

PTT GROUP VALUES



Synergy

Performance
Excellence

Innovation

Responsibility
for Society

Integrity &
Ethics

Trust &
Respect

SPIRIT

BUSINESS DIRECTION

BIG

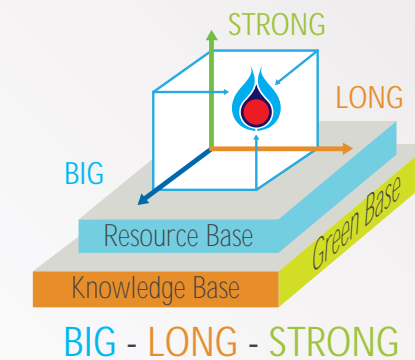
A world class Company to be listed in FORTUNE 100 by 2020

LONG

A Company with sustainable growth to be listed in DJSI in 2013

STRONG

Operational excellence to achieve Top Quartile Performance by 2020



PTT STRATEGIC FRAMEWORK



CSR STRATEGY



"The Balance and Harmony among Economy, Social and Ecology will be a new framework for sustainable growth"



CSV
Creating Shared Value
Creating Shared Value for the business and society



TA: Technologically Advanced
Leading-edge technology to maximize value of the business

G: Green roadmap
Growth and profits are achieved in a sustainable manner

NOC: National Oil Company

- Energy security
- National wealth
- Support Thailand into a knowledge based economy

Financial Highlights

| | | 2011 | 2012 | 2013 |
|--|------------------|---------------------|---------------------|---------------------|
| Statement of Income (Million Baht) | | | | |
| Sales and Service Income | | 2,428,126 | 2,793,833 | 2,842,688 |
| Earnings before Finance Costs, Income Taxes, Depreciation, and Amortization including Other Non-operating Income and Expenses (EBITDA) | | 211,373 | 227,843 | 228,972 |
| Net Income (Loss) | | 106,260 | 104,608 | 94,652 |
| Statement of Financial Position (Million Baht) | | | | |
| Total Assets | | 1,401,846 | 1,629,511 | 1,801,722 |
| Total Liabilities | | 758,133 | 899,615 | 978,543 |
| Total Equity | | 643,713 | 729,896 | 823,178 |
| Total Equity Attributable to Equity Holders of the company | | 555,763 | 603,920 | 682,647 |
| Shares or Information about Common Shares | | | | |
| Shares and Fully Paid-up Share Capital | (Million Shares) | 2,856.30 | 2,856.30 | 2,856.30 |
| Book Value per Share ^{1/} | (Baht) | 194.57 | 211.43 | 239.00 |
| Earnings per Share ^{1/} | (Baht) | 37.24 | 36.59 | 33.07 |
| Dividend per Share | (Baht) | 13.00 | 13.00 | 13.00 ^{2/} |
| Dividend Payout Ratio to Net Income | (%) | 34.90 | 35.50 | 39.30 |
| Share Price at the End of Financial Period | (Baht) | 318.00 | 332.00 | 286.00 |
| Financial Ratios | | | | |
| Net Income to Net Revenues ^{3/} | (%) | 4.38 ^{3/} | 3.74 ^{3/} | 3.33 ^{3/} |
| Return on Equity | (%) | 20.50 | 18.06 | 14.71 |
| Return on Total Assets | (%) | 8.08 | 6.90 | 5.52 |
| Debt to Equity | (Times) | 1.18 | 1.23 | 1.19 |
| Net Debt to Equity | (Times) | 0.44 | 0.43 | 0.39 |
| Net Debt to EBITDA | (Times) | 1.33 | 1.37 | 1.41 |
| Interest Coverage ^{4/} | (Times) | 12.15 ^{4/} | 12.27 ^{4/} | 12.52 ^{4/} |

Remarks:

1/ Based on the weighted common shares of 2,856.30 million (as of December 31, 2012) and 2,856.30 million (as of December 31, 2013).

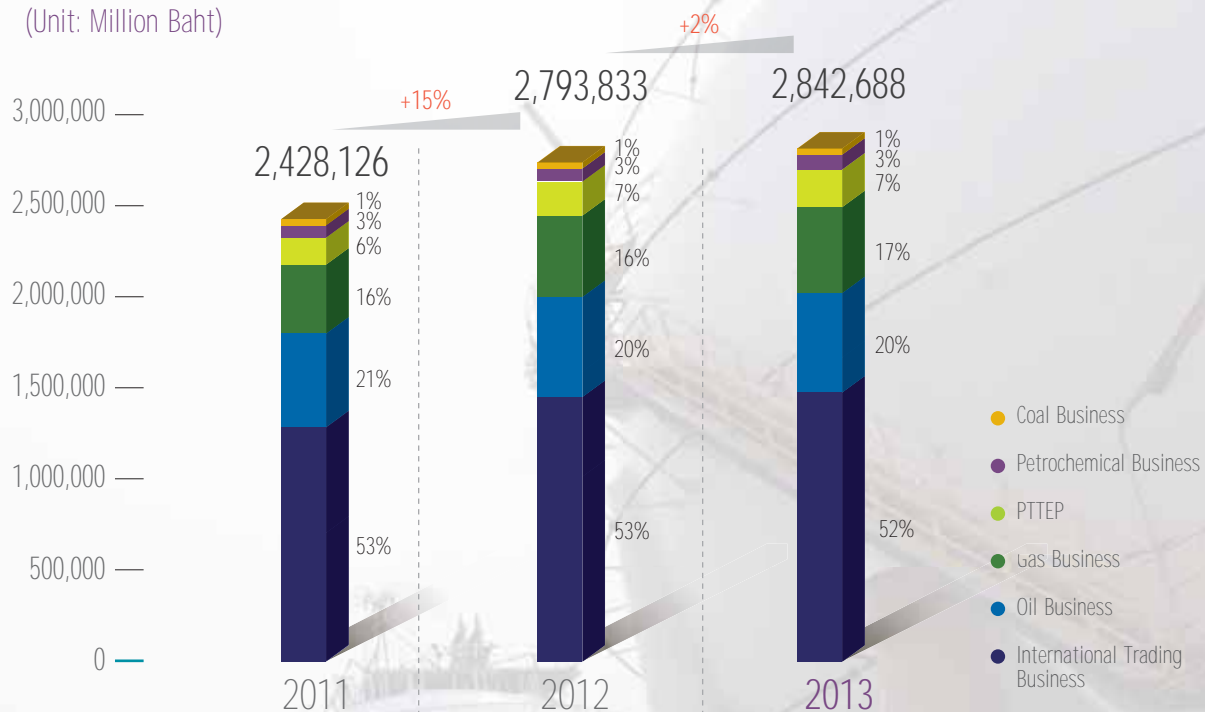
2/ The Board of Directors on February 21, 2014, approved the rate of dividend paid to the shareholders, which will be tabled for the 2014 AGM's approval on April 10, 2014.

3/ Ratio of net income on net revenues = net income/ net sale, a revision from net income = net income/ total revenue, so that the performance comparison of each period may reflect actual business performance (exclusive of non-recurring income).

4/ Interest Coverage = profit before finance cost, income tax, depreciation and amortization expenses, and non-related expenses and income (EBITDA)/ interest from business operation and investment. The formula has changed to interest coverage ratio = (cash flow from operation + interest from business operation + tax)/ interest from business operation and investment.

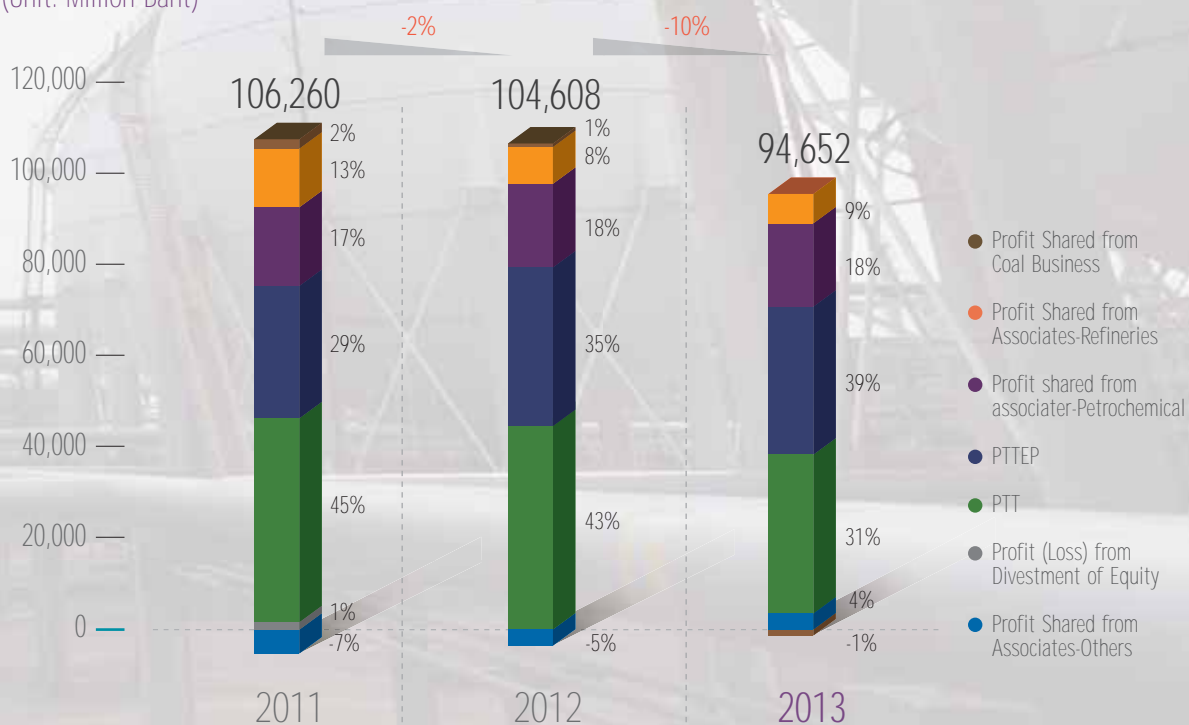
Sale and Service Income

(Unit: Million Baht)



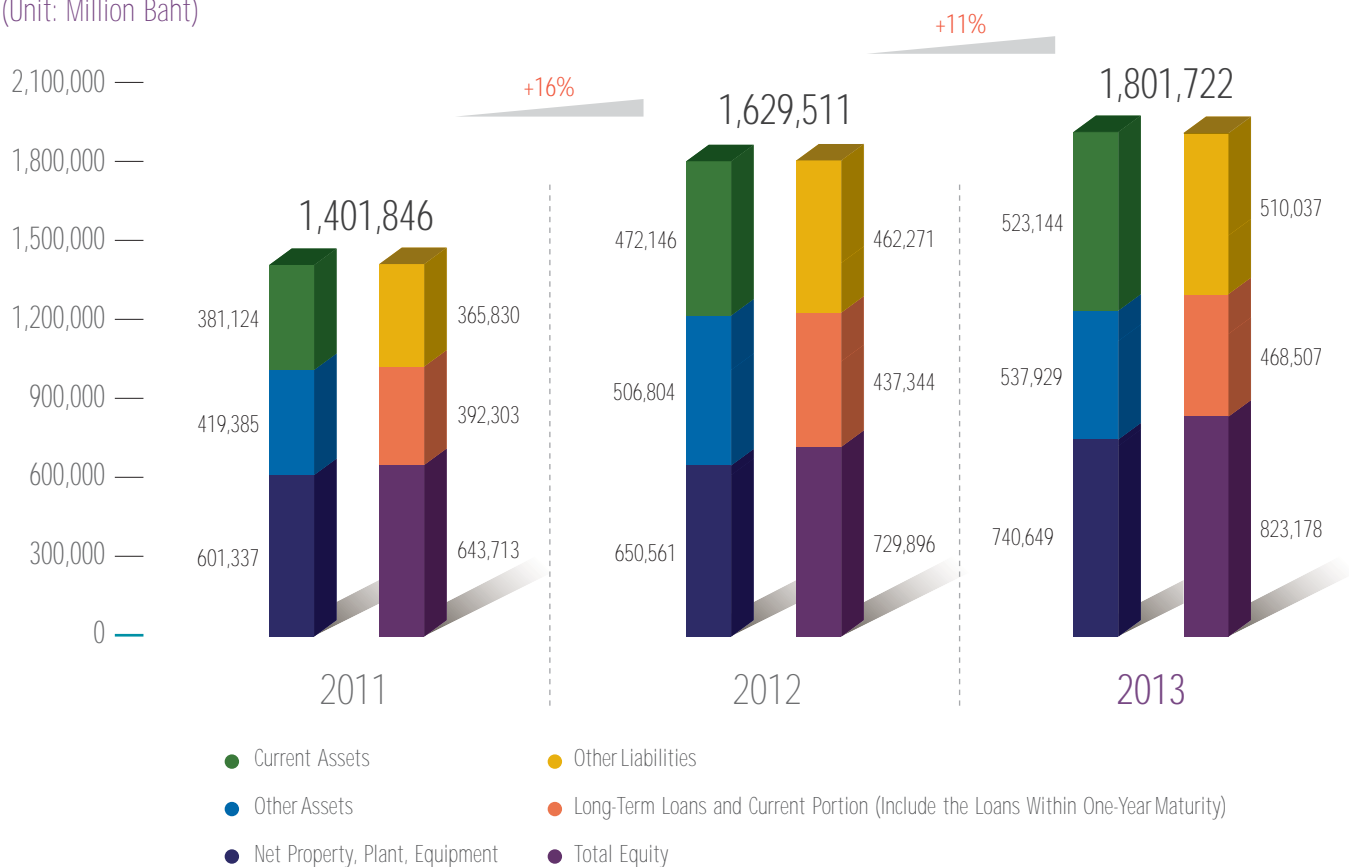
Net Income

(Unit: Million Baht)



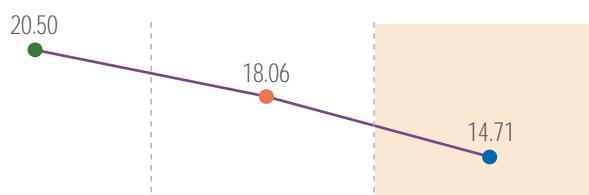
Statement of Financial Position

(Unit: Million Baht)

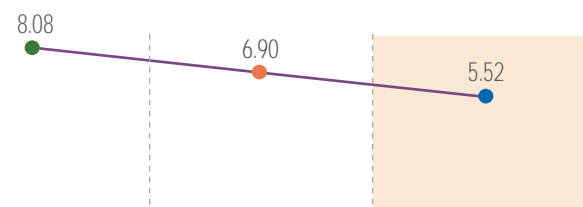


Financial Ratios

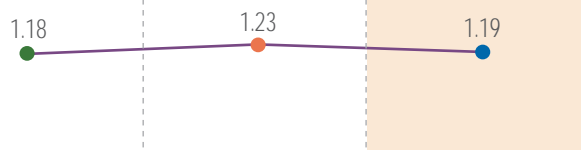
Return on Equity (%)



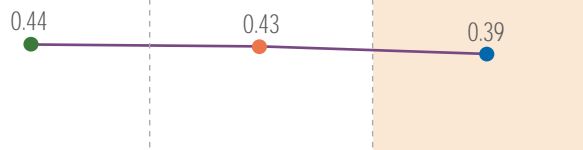
Return on Total Assets (%)



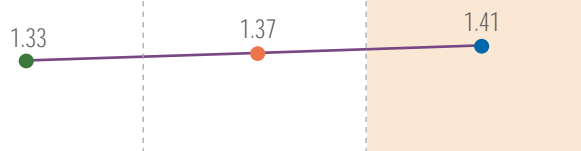
Debt to Equity (Times)



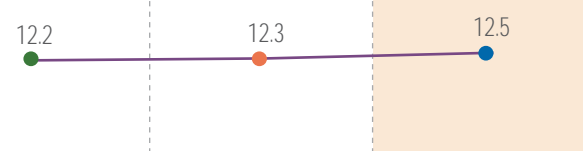
Net Debt to Equity (Times)



Net Debt to EBITDA (Times)



Interest Coverage (Times)



2011

2012

2013

2011

2012

2013

PTT Information

| | |
|--|---|
| Name | PTT Public Company Limited |
| Initial | PTT |
| Registered Number | 0107544000108 |
| Type of Business | Engage in petroleum business via investment through subsidiaries, jointly controlled entities, and associated (Group of Companies), which operate upstream and downstream petroleum business and coal business. |
| Registered Capital | Baht 28,572,457,250 including 2,857,245,725 common shares, Baht 10 per share (as of December 31, 2013) |
| Paid of Capital | Baht 28,562,996,250 including 2,856,299,625 common shares, Baht 10 per share (as of December 31, 2013) |
| Location | 555 Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900, Thailand Telephone: 66 (0) 2537-2000 Telefax: 66 (0) 2537-3498-9 Website: www.pttplc.com |
| Corporate Communication Department | Telephone: 66 (0) 2537-2150-1 Telefax: 66 (0) 2537-2169, 66 (0) 2537-2171 E-mail: corporate@pttplc.com |
| Investor Relations Department | Telephone: 66 (0) 2537-3518 Telefax: 66 (0) 2537-3948 E-mail: ir@pttplc.com |
| Office of the President and Corporate Secretary | Telephone: 66 (0) 2537-3885-6 Telefax: 66 (0) 2537-3883 E-mail: corporatesecretary@pttplc.com |
| Reference | |
| • Share Registrar | Thailand Securities Depository Company Limited 4 th Floor, SET Building, Ratchadapisek Road, Klongtoey, Bangkok 10110 Telephone: 66 (0) 2229-2888 Telefax: 66 (0) 2229-2800 |
| • Auditor | Office of the Auditor General of Thailand Rama VI Road, Phayathai, Bangkok 10400 Telephone: 66 (0) 2271-8000 Telefax: 66 (0) 2681-5807 |
| • Registrar | Siam Commercial Bank Plc. Registrar 1, Markets Operations Division 2 nd Building, 3 rd Floor, 1060 Petchaburi Road, Ratchathewi, Bangkok 10400 Telephone: 66 (0) 2256-2323-8 Telefax: 66 (0) 2256-2406 Corporate Trust Sale, Corporate Trust 9 Ratchadapisek Road, Chatuchak, Bangkok 10900 Telephone: 66 (0) 2544-3937, 66 (0) 2544-2923 Telefax: 66 (0) 2937-7662 |

Message from the Board of Directors

Dear Shareholders

2013 has been another successful year for PTT despite challenges from economic volatility and series of uncontrollable events. Nevertheless, with PTT's distinctive business capacity along with continued improvement in operations under the TAGNOC (Technologically Advanced and Green National Oil Company) directions and strategies, which focus on making technology and knowledge essential operating tools for PTT Group, consequently, in 2013 PTT's net income is Baht 94,652 million. The excellence performance enables PTT to deliver Baht 59,331 million to Treasury for developing the country and improving quality of life for the people.

The significant accomplishment in 2013 is that PTT remains in the Fortune 100 world's largest corporations list for the second consecutive year in which this year PTT is ranked at No. 81. We also maintain listed member of the Dow Jones Sustainability Indices for the second consecutive year as well. These achievements echo our strong performance as being the national energy company, resulting from proper corporate direction setting, in both short term and long term. Moreover, PTT is the first Thai company to launch "Zero Coupon Bond" or the 10-year debenture with single interest payment upon redemption with total value as high as Baht 10 billion. The Zero Coupon Bond is the currently Thailand's highest value debenture and emphasizes the confidence of investors on PTT.

Apart from our mission as the national oil company which is ensuring energy security by supplying the energy to the country's demand, our responsibility as a corporate enterprise registered in the Stock Exchange of Thailand also include enhancing economic prosperity by delivering high income to the state. PTT has been determined to conduct its businesses as a public company along with being responsible for the society, community and environment, which is another essential key to promote the country's sustainable development. PTT has also brought



innovations to our businesses i.e. PTT Smart Fuel-up Technology, PTT HyForce Premium Diesel, PTT Composite Plus gas cylinder, PTT Diesel CNG kit development which enables natural gas to be used with the PTT HyForce Premium Diesel in response to the Energy Ministry policy in reducing energy consumption, and introducing the 100% degradable Amazon Biocup to be used at every branch of Amazon Café, which help reducing 200 tons of plastic waste per year, as well as introducing 100% degradable Friendly Pop popcorn bucket to entrepreneurs, etc. To enhance business competitiveness, we increased trading volumes of crude oil, fuel oil, and petrochemical product and deployed more suitable and efficient risk management tools. We also expanded investment opportunity in both domestic and overseas to exceed the competitiveness of PTT Group. The year 2013 also saw investment restructuring to add business value and drive plans and projects, and expanding petrochemical business to cover the entire value chain. Restructuring policy of PTT Group was also appointed to add business value by founding Global Power Synergy Co., Ltd. (GPSC) which is the main electricity business company of PTT Group.

To expand PTT's business during the commencement of ASEAN Economic Community in 2015, PTT opened representative offices which are PTT International Trading Co., Ltd. and PTT Polymer Marketing Co., Ltd. in Jakarta, Indonesia. PTT Regional Treasury Center (PTT RTC) in Singapore was also founded to be conformed to directions and strategies of PTT which consolidate to PTT Group's financial operations in order to accommodate overall financial management.

With our determination in promoting sustainable development, PTT emphasized our role in being responsible for society, community and environment. Our significant projects include launching OTOP by PTT, which offers OTOP products at PTT service stations. In terms of natural resource and environmental development, PTT coordinated with communities to continue the maintenance of the 1 million rai of afforested land under the Carbon Sink approach



Mr. Parnpree Bahiddha-nukara
Chairman



Mr. Pailin Chuchottaworn
President & CEO

and launch the 12-rai urban foresting project on Sukhaphiban 2 Road, Prawet District, Bangkok, in order to raise awareness of environmental conservation among urban citizens. Another effort is conducting environmentally-friendly business according to "Green Roadmap" which covers developing eco-industrial town in our business area in Rayong. Thus, PTT opened "PTT Group's Rayong Wanarom Eco-Forest" on the protection strip of PTT Eco Industrial Zone (PTT ECO IZ) in the Asia Industrial Estate, Rayong. The Eco-Forest earned the "Eco-Symbiosis Award" from the Industrial Estate Authority of Thailand.

PTT Group also set the PTT Group CSV: Creating Shared Value strategies with an aim to shift PTT Group into a learning organization including developing employee's talents and offering energy literacy to our stakeholders. PTT Group intends to help shaping the future of Thailand by fostering Thai youth to be well-rounded with advanced energy technology. Thus, we mobilize on the "Learning Triad toward Sustainability" strategies with the vision to elevate Thailand to be innovation creator by shifting from resource-based into knowledge-based in order to create sustainable development. The 3 projects are founding Rayong Institute of Science & Technology (RAIST) and Rayong Science Academy (RSA), Thailand Energy Academy (TEA) and PTT Leadership and Learning Institute (PLLI). We believe that knowledge is a foundation for sustainable development, which consequently leverage benefits for the country and the organization in a long-term.

Major events of the year 2013 provided PTT Group with valuable lessons with resolving crises prudently, collaborating and supporting from government and private sectors, as a result, our businesses emerged relatively unscathed. Key incidents include Yetagun gas supply shut down, the lightening incident at Gas Separation Plant Unit 5, the PTT Global Chemical Plc. oil spill and the ongoing political unrest. To cope with the aforementioned events, PTT Group strictly conformed to the Business Continuity Management (BCM) processes, enabling work to proceed without affecting stakeholders. The experiences are adopted as practical guidelines for safety and monitoring effects on environment, society and community.

Thanks to the capability of organizational management, PTT's operations were widely recognized and received numerous awards from both national and international levels.

The Board of Directors is highly grateful to all stakeholders for their support and trust in PTT and our subsidiaries, enabling tremendous success amid various challenges. PTT reaffirm here our readiness in business operation and management under corporate governance for sustainable strength and growth of the organization. Moreover, we would like to underline our mission in ensuring energy security and being the force to enhance quality of life for Thais with technology, innovation and knowledge. With these aspirations, PTT Group will be the force to advance Thailand to be equivalent to other countries and maintain our position as the "Power for Sustainable Future" for the prosperity of Thailand.

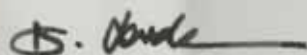
Report of the Audit Committee

Dear Shareholders

The Audit Committee consists of independent directors who are knowledgeable as well as experienced in law, finance, information technology, and organization management. This year, the committee was chaired by Mr. Athapol Yaisawang (replacing Mr. Chulasingh Vasantasingh, effective from November 25, 2013), with Mr. Boonsom Lerdhirunwong and Mr. Waroonthep Watcharaporn as members. On January 31, 2014, the Board of Directors appointed four members to the committee, chaired by Mr. Boonsom Lerdhirunwong (replacing Mr. Athapol Yaisawang who resigned on December 25, 2013), with Mr. Waroonthep Watcharaporn, Mr. Insorn Buakeow, and Mr. Montri Sotangkul as members, effective from February 1, 2014.

The committee carried out Board-assigned duties under PTT's regulations on the criteria and guidelines for its Audit Committee, in alignment with the regulations of the Stock Exchange of Thailand (SET). The committee's policy focused on conformance to corporate governance and on good internal controls by:

- Focusing on preventive audit to promote systematic business performance, with knowledge creation mechanisms for PTT Group officers to understand and master to enable complete, proper job performance with the same standards and reduction of errors.
- Managing business risk with a focus on all risk factors identification, particularly those of international investment.
- Valuing of compliance by executives and employees with relevant legislation, regulations, and requirements.



Mr. Boonsom Lerdhirunwong
Chairman of the Audit Committee



This year the committee held 18 meetings, occasionally with the Management, the Office of Corporate Audit, and the external auditor, as summarized below.

1. Review of financial reports The committee reviewed quarterly, annual, and consolidated financial statements, together with connected transactions and those with potential conflicts of interest, with the Management and the Office of Corporate Audit. Each time quarterly and annual financial statements were examined with the external auditor. The committee discussed with the external auditor about the financial statements completeness including adjustment entries materially affecting the statements, adequacy and suitability of accounting entry methods and audit scope, accuracy and adequacy of disclosure information, and the external auditor's independence. Satisfactory answers to these questions ensured the committee that the financial statements were reliable, timely and comply with legal and accounting standard requirements under generally accepted accounting principles. All adequate information had been disclosed in the financial statements for the benefit of investors or users of such statements. This year the committee and the external auditor held a meeting in the absence of the Management to examine the external auditor's work scope, approaches, and annual audit plan.

2. Review of risk management The committee examined PTT's risk management policy, plans and approaches under the corporate risk profile, risk management arising from impacts of world oil prices, sourcing of energy supply, and other event risks. It also reviewed risk management resulting from PTT's internal and external circumstances, including those arising from operating in other countries. To this end, the committee visited such operations and held quarterly meetings with the Management to examine the efficiency and suitability of risk management processes and provide recommendations for further improvement.

3. Review of internal control effectiveness Together with the external auditor and the head of the Office of Corporate Audit, the committee reviewed the internal control system for each quarter with a focus on operation, resource consumption, stewardship of properties, and prevention or minimization of errors, losses, waste, and fraud. It also reviewed the credibility of financial reports together with PTT's compliance with legislation, regulations, and Cabinet resolutions. The external auditor agreed that no significant issues or shortcomings had been detected. This year, PTT also assessed its internal controls against the regulations of the Auditor Commission on internal control standards of 2001, with 100% responses by executives to assessment questionnaires. PTT improved control self-assessment forms on the basis of a list of key controls by functional description and executives' responsibility under The Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Management and the Office of Corporate Audit agreed that PTT's internal control system was adequate and effective for its businesses.

4. Review of corporate governance Reviewing PTT's performance against the designed business processes, the committee found that PTT's businesses had been conducted with virtue, and that in compliance with securities and securities exchange legislation, SET's requirements, and other legislation relevant to its businesses (particularly connected transactions among PTT Group) to ensure regular transactions conducted under normal, sensible conditions. The committee also reviewed PTT's complaint-handling and whistleblowing process. In addition, it carried out its own performance assessment, both as a whole and individually, against state-enterprise audit committee best practices and SET's criterion. The findings indicated very good quality.

5. Oversight of internal audit The committee reviewed the Office of Corporate Audit's strategic plans, its annual and long-term audit plans, and their implementation. The audit findings were reviewed and recommendations given to follow up the corrective actions of key items, thus leading to good corporate governance and adequate internal controls. The committee examined PTT's amended regulations on the committee's criteria and guidelines together with PTT's requirements for internal audits and a related internal audit manual to ensure international standard achievement. It also reviewed the annual budget of the Office of Corporate Audit, including its development, recruitment, and rotation plans, training, assessment of resource adequacy and suitability, key performance measurement indicators, and the annual merit consideration for its head. In addition, it ensured the internal quality by both internal and external assessments by a third-party assessor. The committee concluded that PTT's internal audit system was adequate, appropriate, and effective, with continuous audit quality improvement in personnel and audit performance on a par with international standards.

The committee provided recommendations for continual competency development, particularly in business knowledge, and participating in PTT's emerging businesses by enhancing advisory role on risks and internal control to promptly ward off misunderstanding or mistakes. Finally, it recommended that actual case studies should be circulated among senior executives as a preventive measure. To this recommendation, the Office of Corporate Audit established and distributed CG handbook to the Board and senior executives this year.

6. Appointment of the external auditor for 2014 The committee proposed the appointment of the Office of the Auditor General as PTT's external auditor for 2014 to the Board, which will in turn submit it, along with its fees, for shareholders' approval at the 2014 AGM.

In summary, the Audit Committee performed its duties as specified in the Board-approved charter with caliber, prudence, and adequate independence in equitable interests of stakeholders. In its opinion, PTT's financial reports were accurate and reliable, and agreed with generally accepted accounting principles. PTT commanded adequate risk management practices, appropriate internal control and internal audit systems, compliance with good corporate governance, legislation, requirements, and obligations relevant to its businesses.

Report of the Nominating Committee

Dear Shareholders

To align with the criteria of the ASEAN Corporate Governance Scorecard, the Stock Exchange of Thailand (SET) has revised the corporate governance principles for listed companies (2012), thus elevating Thailand's standard for corporate governance and preparing listed companies for ASEAN regional competition. Among additional good practices are more stringent requirements concerning the number of directors, Board composition, competence, and experience, including the guideline for at least one non-management director to be knowledgeable in the core business of the given listed company, the requirement for directors to serve at no more than five listed companies, the limit of consecutive terms for independent directors at nine years, and the minimum frequency of meetings.

Charged with the nomination of new directors and the recruitment of the President & CEO under strict and transparent selection procedures, the committee has observed good practices under corporate governance principles as well as those under international principles. Today PTT's Board of Directors consists of 10 independent directors out of 15, thus giving its major decisions efficiency, transparency, and neutrality. The Board is also made up of qualified directors with diverse knowledge, competence, and experience from all disciplines in the public, academic, and business sectors. As a result, it has provided balanced views on related issues facing state enterprises and business concerns.

For the annual general meeting of shareholders in 2014, conforming to PTT's criteria and procedures, this year the committee asked the shareholders to exercise their right to nominate directors, representing minor shareholders. No nomination, however, was provided.

This year the committee held a total of seven meetings. All members performed their duties with prudence, care, and sensibility as disclosed in this annual report.



Mr. Watcharakiti Watcharothai

Chairman of the Nominating Committee
(November 4, 2011 - January 31, 2014)

Mr. Athapol Yaisawang

Chairman of the Nominating Committee
(February 1, 2014 - Present)

Report of the Remuneration Committee

Dear Shareholders

Remuneration is a key factor to attract and retain the talents in PTT and an incentive to a better performance. The committee must ensure that the compensation of directors is competitive and sensible, by applying a system of pay for performance against annual KPIs to decide compensation for the Board and top management.

Recognizing the much greater responsibility and business complexity among PTT Group facing the Board, the shareholders' meeting of 2013 approved compensation adjustment for directors in line with the practices of listed companies, as well as the guidelines for listed state enterprises.

The committee held one meeting this year. Directors, committee members and executives' remuneration is disclosed in this annual report for transparency.



Mr. Arkhom Termpittayapaisith
Chairman of the Remuneration Committee



Report of the Corporate Governance Committee

Dear Shareholders

The Board of Directors of PTT highly values the promotion of and emphasis on corporate governance (CG), code of business conduct, and PTT Group's framework of sustainable development to improve PTT's CG system for greater efficiency to produce greater confidence among all its stakeholders.

The Board has assigned the Corporate Governance Committee, which consists of three independent directors, to propose CG guidelines and oversee the conduct of directors and the management to ensure conformance to CG principles, SET's CG principles, and the international principles of The Organisation for Economic Cooperation and Development (OECD). The committee's mandate also encompasses the management of sustainability and framework formulation for oversight of PTT's anti-corruption tasks.

This year the committee held five meetings to track CG tasks together with those under social, community, and environmental responsibility and sustainable development plans, as detailed below:

Information disclosure and transparency

- Completed the annual information disclosure form (Form 56-1), developed the annual report, and constantly disclosed quarterly performance and key information for shareholders, investors, and the public, complete with essential, adequate, credible, and prompt details through assorted channels, including SET's publicity channels and www.pttplc.com. The core units for information distribution were Investor Relations and Corporate Communications.
- Developed the annual sustainability report to conform to the goal of preparing a report under the Global Reporting Initiative (GRI) Generation 3.1 (G3.1) and pass the required assessment at the A+ level, due for completion by March 2014.
- Developed the quarterly PTT Bizway newsletter for common-stock holders to keep them informed and foster relations.
- Developed the quarterly Happiness newsletter for debenture holders to keep them informed and foster relations.



A handwritten signature in black ink, appearing to read 'W. Watcharakiti'.

Mr. Watcharakiti Watcharothai

Chairman of the Corporate Governance
Committee

(June 27, 2012 - November 24, 2013)

A handwritten signature in black ink, appearing to read 'Thosaphorn Sirisumphand'.

Prof. Dr. Thosaphorn Sirisumphand

Chairman of the Corporate Governance
Committee

(November 25, 2013 - Present)

Rights of the shareholders

- Held the annual general meeting of shareholders (AGM) in 2014 and provided in advance adequate and timely information on the date, time, venue, and agenda, as well as all information relevant to matters needing decisions at the meeting.
- Informed the shareholders about meeting protocols and distributed such information at the company's website in advance before sending the meeting notices, so that they may have adequate time to study details in advance. Facilitated their full exercising of their meeting participation and voting rights. As a result, PTT scored "excellent" on the AGM Checklist assessment.

Equitable treatment of shareholders

- Allowed all shareholders to propose additional agenda items and nominate directors in advance from October 1, to December 31, 2013, under PTT's requirement.
- Required all directors and executives to disclose their vested interests and related parties for the year so that the Board may review PTT's transactions with potential conflicts of interest and decide in PTT's best interests.
- Required all directors, executives, and employees to report their conflicts of interest for the year, with this year's online reporting as an option.
- Required all directors and executives to report their stock portfolios as required by law and assigned the Corporate Secretary to collect and report these to the Board every quarter.

Responsibilities of the Board

- Assessed Board performance in four ways (overall, self-assessment, cross-assessment, and subcommittee assessment), with excellent outcomes for the year.
- Directors attended key training courses hosted by the Thai Institute of Directors (IOD), including Director Certification Program; Role of the Chairman Program; Successful Formulation and Execution of Strategy; Role of the Nomination and Governance Committee; Monitoring Fraud Risk Management; and Monitoring the Quality of Financial Reporting. They also took part in two seminars: Meeting the AEC Challenge: Role of the Chairman and The 2nd National Director Conference 2013: Board Leadership Evolution. Finally, they attended senior executive training at the Thai Energy Academy.
- Participated in PTT Group's domestic and international site visits.
- Held one meeting among the independent directors.

Recognition of stakeholders

- Produced the third revision of a handbook of PTT's CG, ethical standards, and code of business conduct to align with SET's CG principles for listed companies and with good practices of leading companies under DJSI Sustainability Assessment guidelines.
- Established RAYong Institute of Science & Technology (RAIST) and RAYong Science Academy (RSA), with construction set to begin in early 2014 and enrollment in 2015. The Group joined the entourage of HRH Princess Maha Chakri Sirindhorn to South Korea to leading science and technological institutes, which proved beneficial for curriculum design.

- Defined the operating approach to apply for membership certification of the Private Sector Collective Action Coalition against Corruption (CAC). The Board endorsed in principle of the anti-corruption policy, a steering committee, and a taskforce to investigate and develop work regimes for such application. Development work is ongoing for a self-assessment form for anti-corruption measures for certification purposes.

Social responsibility and sustainable development

- Defined PTT Group's CSR operating strategies in support of success in accommodating uniform corporate business growth under three strategies, namely educational development, social/community development, and conservation of natural resources and the environment.
- Successfully passed the assessment to become a DJSI World member of the Dow Jones Sustainability Indices (DJSI) for 2013. PTT was one of 15 companies whose performance was in the 10th percentile of the oil and gas industry (from a field of 123 companies worldwide).

Awards of pride

Thanks to its firm commitment to operating business with transparency and fairness for the benefit of all stakeholders, in 2013 PTT earned extensive recognition from domestic and international entities alike for CG and social responsibility practices. Awards included the Board of the Year Awards 2013 (Outstanding Board of Directors); an "Excellent" ranking of its CG report based on a survey of listed companies in 2013; "SET Awards 2013" for being a listed company with continued excellence in social responsibility (2011 - 2013) and Best Corporate Governance Report Award; CSRI Recognition 2013 (General Award); Outstanding Sustainability Report Award 2013; Asian Corporate Director Recognition Awards 2013 (in the fourth consecutive year); Corporate Governance Asia Recognition Awards 2013: Asia's Icon in Corporate Governance (in the eighth consecutive year); Corporate Awards 2013 (Platinum), presented by The Asset Magazine (in the fifth consecutive year), among others.

The Corporate Governance Committee will remain committed to improving its efficiency in overseeing PTT's CG, social responsibility, and sustainable development practices for greater effectiveness and the best interests of PTT, shareholders, communities, society, the environment, and all stakeholders - which will benefit Thailand as a whole.

Report of the Enterprise Risk Management Committee

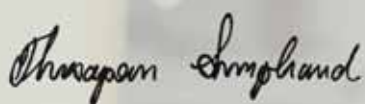
Dear Shareholders

Highly valuing efficient risk management to bolster confidence in corporate goal achievement for sustainable growth amid today's circumstances and business uncertainty, the Board of Directors of PTT Plc. approved the appointment of the Enterprise Risk Management Committee this year. This committee is responsible for defining policies and framework for risk management, overseeing corporate risk management practices to ensure alignment with corporate strategies and goals, and providing recommendations on risk management approaches. Consisting of qualified, knowledgeable, and experienced directors, with effect from November 25, 2013, the committee is chaired by Mr. Thosaporn Sirisumphand (an independent director), with Mr. Prasert Bunsumpun and Mr. Somchai Sujjapongse, as members. The committee will be joined by Mr. Athapol Yaisawang, an independent director, with effect from February 1, 2014.

The committee's key action plan for 2014 appears below:

1. Review and amend corporate risk management policies in line with business directions and international standards.
2. Endorse mitigation plans to ensure manageable risks, while earnestly monitoring and reporting "Key Risk Indicators: Leading" to alert the company and manage risks in an efficient and timely manner.
3. Recommend operating guidelines, monitor, and assess key corporate risks for 2014 for the RMCC (Risk Management and Internal Control Committee) to carry out and improve the risk management system for continual efficiency.
4. Endorse key corporate risks for 2015 that align with business directions, strategies, corporate goals, and changing circumstances. This is part of the enterprise plan submitted to the Board of Directors.

The above-mentioned plan is critical in bolstering the confidence that PTT Plc. will be able to achieve its strategies and goals to supplement value to the company, its shareholders, and its stakeholders in a sustainable manner.



Prof. Dr. Thosaporn Sirisumphand

Chairman of the Enterprise
Risk Management Committee



2013 World Economic, Petroleum, and Petrochemical Review

World economic review

The world economic growth in 2013 slightly slowed down from the previous year due to decelerated expansion of advanced economies. The US economy was affected by the government's sequestration despite being able to partially avert the fiscal cliff by extending tax reduction for the middle-income and low-income people and the government offices' shutdown for 16 days, since the draft bill for temporary budget was not approved by September 30. The prolonged political conflict had prompted Fitch Ratings to downgrade the US economy from stable to negative. In all, slow economic recovery in the US led the FED to continue its QE (Quantitative Easing) measures by buying government bonds and security-backed

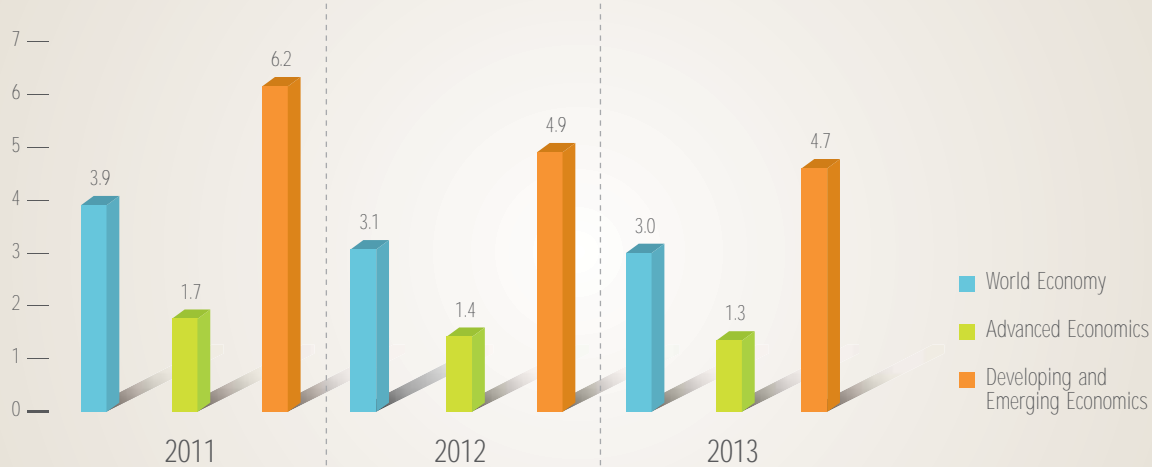
mortgages for up to US\$ 85 billion a month to boost the economy until the unemployment rate came down as planned, and keeping the interest rate low. Euro economies, meanwhile, started to improve, though still negative, since the prolonged public debt woes had escalated to Cyprus, a major lender to Greece, which became the fifth country to apply for financial assistance from the European Union (EU) and the IMF. In addition, the European Central Bank tried to stimulate the economy by reducing the policy interest rate to a historical low at 0.25%. Developing and emerging economies also experienced economic slowdown due to the weak domestic consumption and investment, as well as export (a prime driver), which was hit by shrinking economic growth in developed countries. The IMF predicted in



January 2014 that the world economic growth this year would be 3.0%, a slight drop from 3.1% a year earlier, that in developed countries would be 1.3%, while that in developed and emerging economies would reach 4.7% (Figure 1).

Figure 1: World's Economic Growth Rate during 2011 - 2013

Unit: % YoY



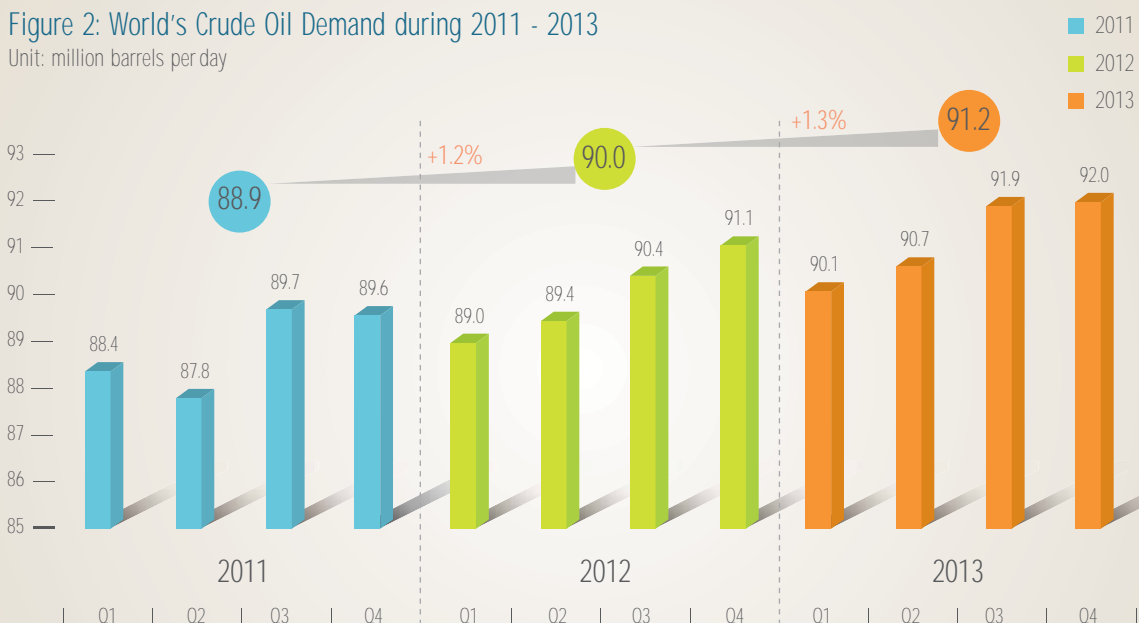
Source: IMF as of January 2014

World petroleum & petrochemical review

The expanding world economy boosted this year's oil demand, especially in developing and emerging economies like China, India, and the Middle East, while that in developed economies proved stable. The International Energy Agency (IEA) reported in December 2013 that world oil demand had increased by 1.3% (1.2 million barrels per day) from 2012 to 91.2 million barrels per day (Figure 2).

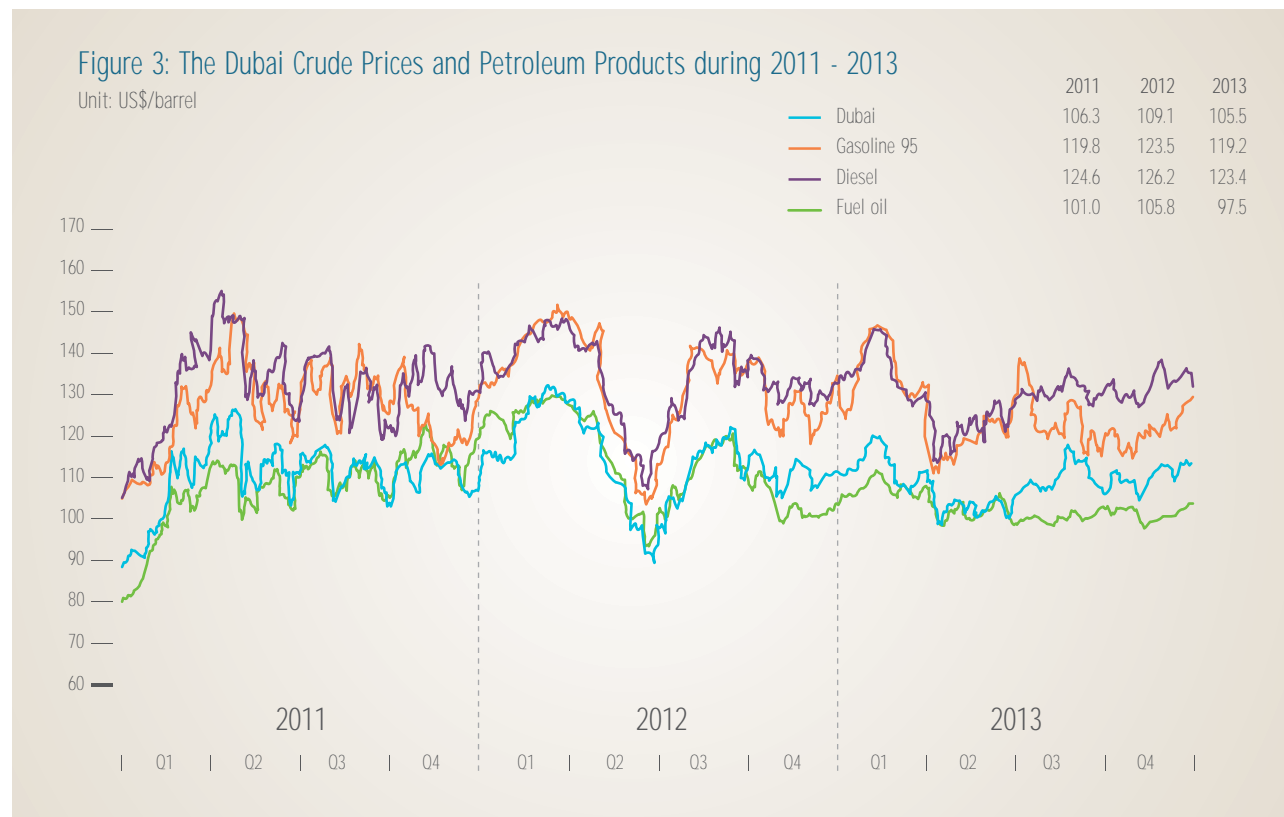
Figure 2: World's Crude Oil Demand during 2011 - 2013

Unit: million barrels per day



Source: IEA as of December 2013

In contrast with this year's rising demand, oil prices lost ground due to additional outputs from Non-OPEC countries, particularly shale oil production in the US. However, the drop was little, since there was fear of supply disruption due to unrest in the Middle East and the North African regions, including the nuclear development conflict between Iran and the West, as well as incidents in Syria, Egypt, Libya, and Iraq. The Dubai oil price averaged US\$ 105.5 per barrel in 2013, which is lower than the average price in 2012 which is at US\$ 109.1 per barrel (Figure 3).



In 2013 the overall prices of oil product slumped, as crude oil prices and oil demand fell with the rising supply. The average price of gasoline 95 was US\$ 119.2 per barrel, against US\$ 123.5 per barrel a year earlier, due to less demand in the region. Nevertheless, Indonesia raised its domestic gasoline retail prices, thanks to more supply to reduce the government's subsidy burden. As for the diesel price, the year's average was US\$ 123.4 per barrel, against US\$ 126.2 per barrel a year earlier, since the demand from China fell with the economic slowdown, and India exported more. The average fuel oil price this year was US\$ 97.5 per barrel, against US\$ 105.8 per barrel in 2012, as a result of less demand and the high Singapore stock level. The average LPG price this year also fell from US\$ 916 per ton in 2012 to US\$ 868 per ton, in line with lower oil prices and less demand, especially from China, as more supply from shale oil and shale gas in the US entered the market.

Amid declining demand for petroleum products, the average prices this year were down from last year, especially those for gasoline 95 and fuel oil. This resulted in a lower cracker's average refining margin this year of US\$ 6.2 per barrel in Singapore, against US\$ 7.4 per barrel the year before.

In general, the year saw petrochemical product prices rise with improving demand. To begin with, olefins prices rose with more demand, mainly from China. China imported high volumes of high density polyethylene (HDPE) and polypropylene (PP) to supplement its shortfall domestic production. The prices this year averaged higher than those of last year, with HDPE registering US\$ 1,487 against US\$ 1,378 per ton, and PP registering US\$ 1,512 against

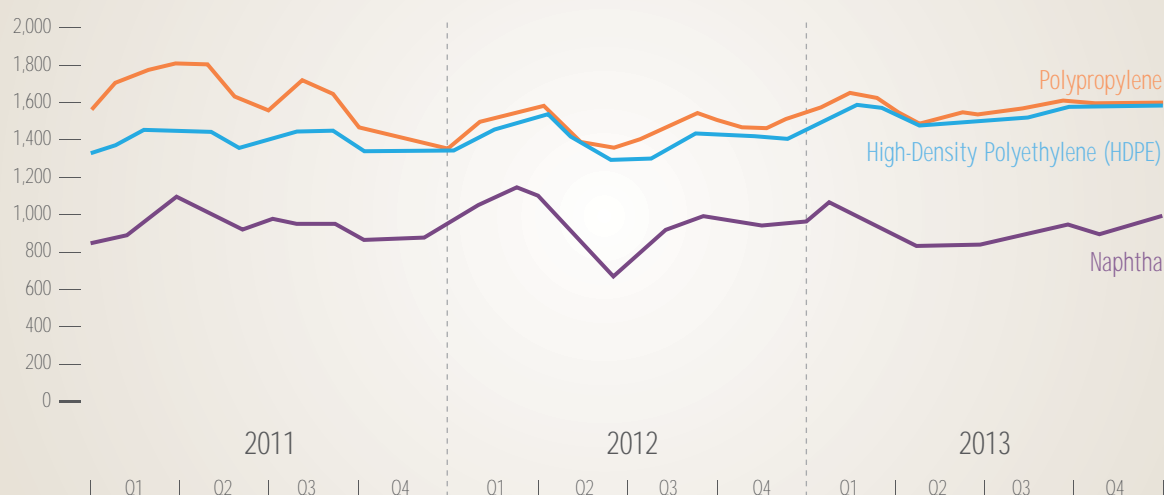
US\$ 1,444 per ton. With the exception of paraxylene, all aromatics prices surged. The year's average benzene price was US\$ 1,302 per ton, against US\$ 1,212 per ton last year, following high benzene prices in the US due to lower production caused by shale gas and shale oil production. The year's average price of paraxylene was US\$ 1,471 per ton, against US\$ 1,497 per ton in 2012, because of more new supply and less demand in the sluggish PTA market (Figure 4).

Figure 4: Average Prices of Petrochemical Products in Asian Market during 2011 - 2013

Olefin Chain

Unit: US\$/Ton

| | 2011 | 2012 | 2013 |
|----------------------------------|-------|-------|-------|
| Polypropylene | 1,584 | 1,444 | 1,512 |
| High-Density Polyethylene (HDPE) | 1,373 | 1,378 | 1,487 |
| Naphtha | 922 | 933 | 910 |



Source: ICIS

Aromatic Chain

Unit: US\$/Ton

| | 2011 | 2012 | 2013 |
|------------|-------|-------|-------|
| Paraxylene | 1,540 | 1,497 | 1,471 |
| Benzene | 1,103 | 1,212 | 1,302 |
| Naphtha | 922 | 933 | 910 |



Source: ICIS

2013 Thailand Economic and Petroleum Review

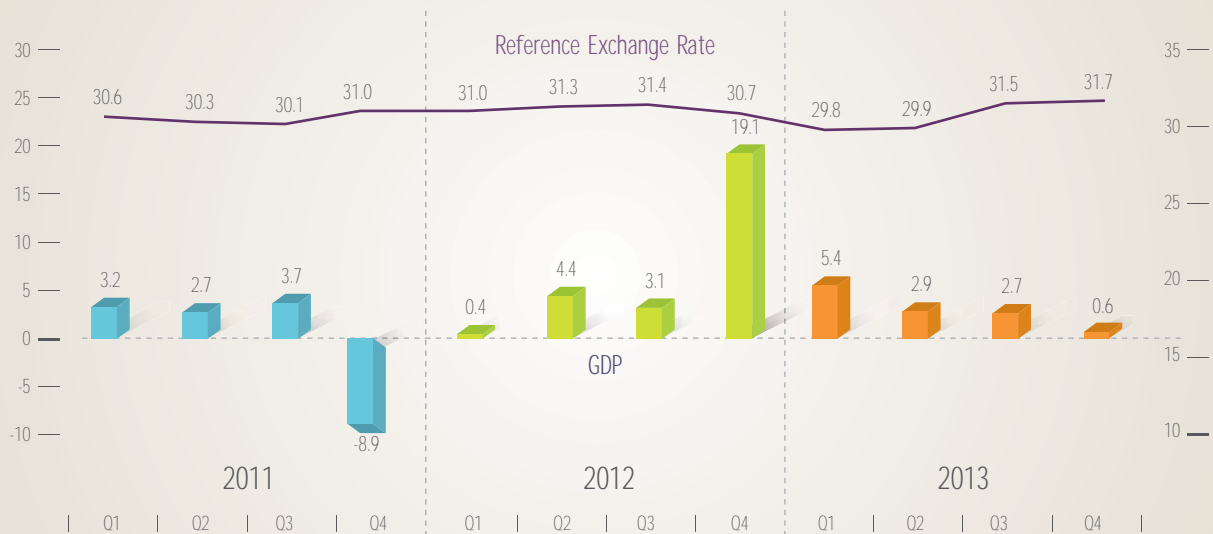
Economic Review

Thailand's economic growth fell from 6.5% in 2012 to 2.9% in 2013 as a result of delayed export due to the slowdown of global economy. Private investment and consumption decreased as the government's economic stimulation plan ended. The increasing household debts also caused consumers to spend carefully. The government investment was delayed. In addition, political turmoil in the fourth quarter dragged down the economy, particularly consumers' confidence, private investment, tourism, and government budget spending. Despite the poor overall economic conditions, easy monetary policies of developed countries resulted in a continuous fund flow, especially in the first half of the year, into developing and emerging economy countries including Thailand, which resulted in the strengthening of the baht. However, the improving US economy prompted the FED to signal the reduction of the QE amount sooner than the market had expected. In combination with the domestic political unrest, the baht was weakening. The average exchange rate over the year was Baht 30.7 to the US\$ (Figure 5).

Figure 5: Thailand's Economic Growth Rate 2011 - 2013

Unit: % YoY

Unit: baht/US\$



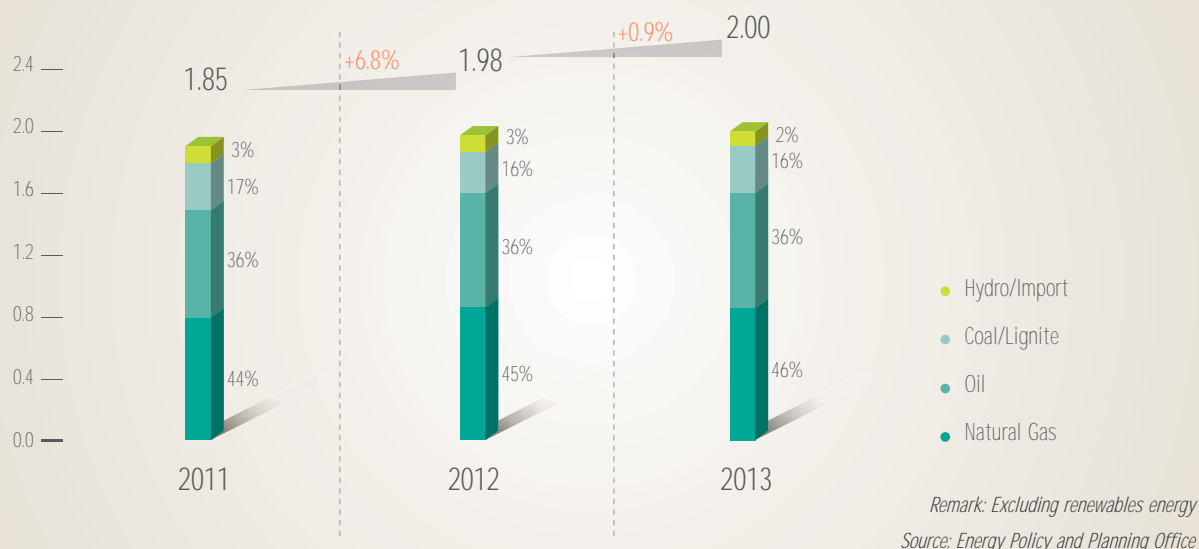
Source: Office of the National Economic and Social Development Board

Petroleum Review

The year's domestic economic slowdown brought a mild rise in primary energy consumption (excluding alternative and renewable energy sources) of 0.9% with the average rate of 2.0 million barrels per day (Figure 6). Consumption of natural gas and crude oil, which are Thailand's primary energy sources, edged up by 2.6% and 2.8% respectively. Meanwhile, total LPG consumption grew by 1.4%, the majority of which (67.4%) came from the transportation sector. On the other hand, consumption in the household sector contracted by 20.9%, and that in the industrial sector declined by 2.1%. Meanwhile, NGV consumption expanded by 10.4% to 307 million cubic feet per day.

Figure 6: Thailand's Primary Commercial Energy Consumption 2011 - 2013

Unit: million barrels/day

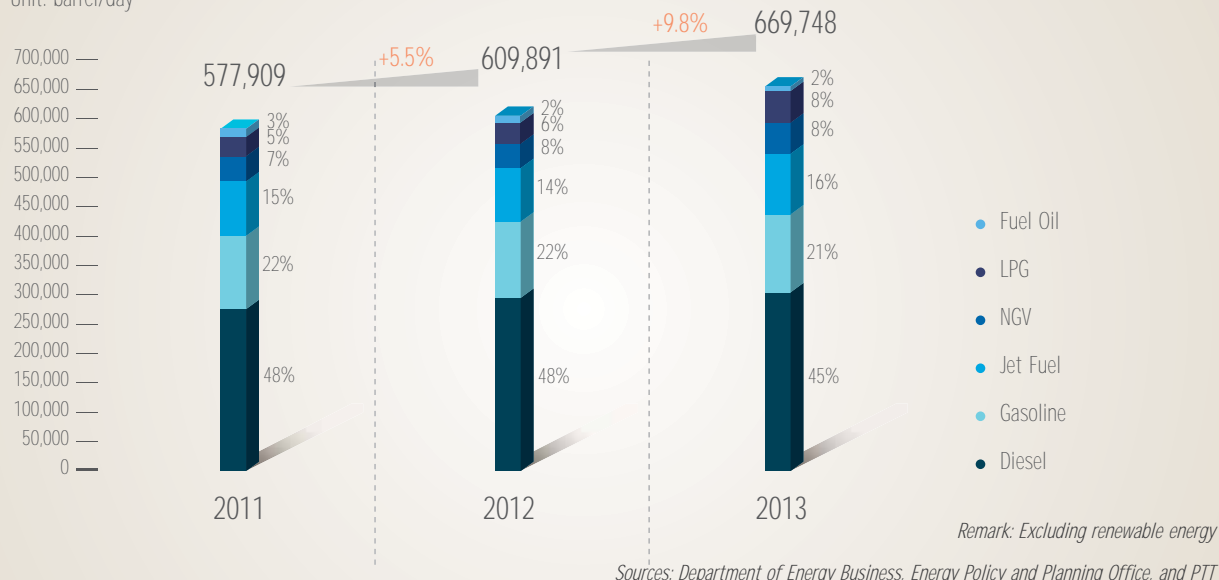


The year's domestic energy consumption by key economic sectors can be summarized below:

1. The average consumption in transportation sector was raised by 9.8% from last year (Figure 7). Gasoline consumption was 6.4% higher, as more cars turned up from the government's First Car regime. Because of the economic slowdown in the latter half, diesel consumption rose by only 1.9% despite the government's policy to control the price to not exceed Baht 30 per liter. LPG consumption soared by as much as 67.4%, an accelerated rate from last year, since the government enforced stricter measures to prevent LPG smuggling for the household sector to sell in other sectors. Consequently, sales of LPG in the household sector dropped, while the number of transportation sector increased. The number of LPG-fueled cars soared, as the price of LPG for transportation sector is lower than that of gasoline and diesel, and the price will be remained until mid-2014. Meanwhile, NGV consumption also expanded by 10.4%.

Figure 7: Thailand's Transport Sector Consumption 2011 - 2013

Unit: barrel/day

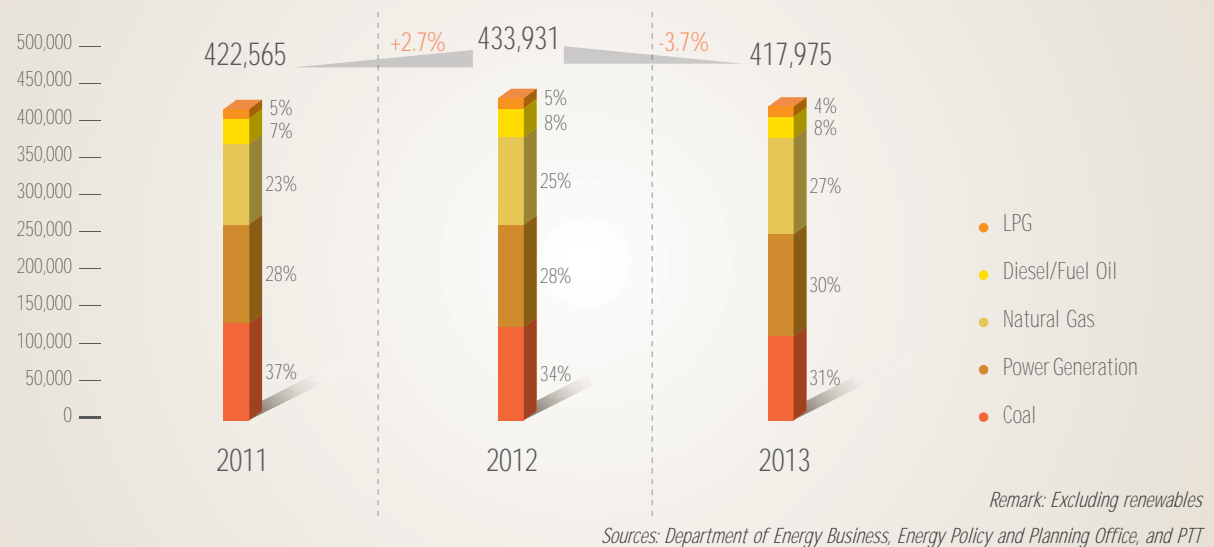


As for ethanol, the average consumption rate is at 2.5 million liters per day or raised by 86.1% from 2012 due to the cancellation of gasoline 91 which was effective from January 1, 2013. As a result, more car users turn to fill gasoline 91 and 95 while the consumption proportion of gasoline E20 and E85 was also increased. As for the biodiesel (B100), the average consumption rate is at 2.92 million liters per day, or 20.7% of acceleration from the previous year.

2. Energy consumption in the industrial sector registered 417,975 barrels per day, a 3.7% drop from last year (Figure 8), as domestic economic conditions decelerated and export growth was low in the latter half of the year. Natural gas and electricity demand, meanwhile, notched up only 1.0% and 0.6%, while coal consumption fell by 10.0% to make way for more natural gas. LPG consumption decreased by 2.1%, since in 2011 the government gradually increased the LPG price for the industrial sector to a level reflecting the production cost of refineries. Moreover, there was a strict government policy to prevent the use of LPG for other sectors in the industrial sector.

Figure 8: Thailand's Industrial Sector Consumption 2011 - 2013

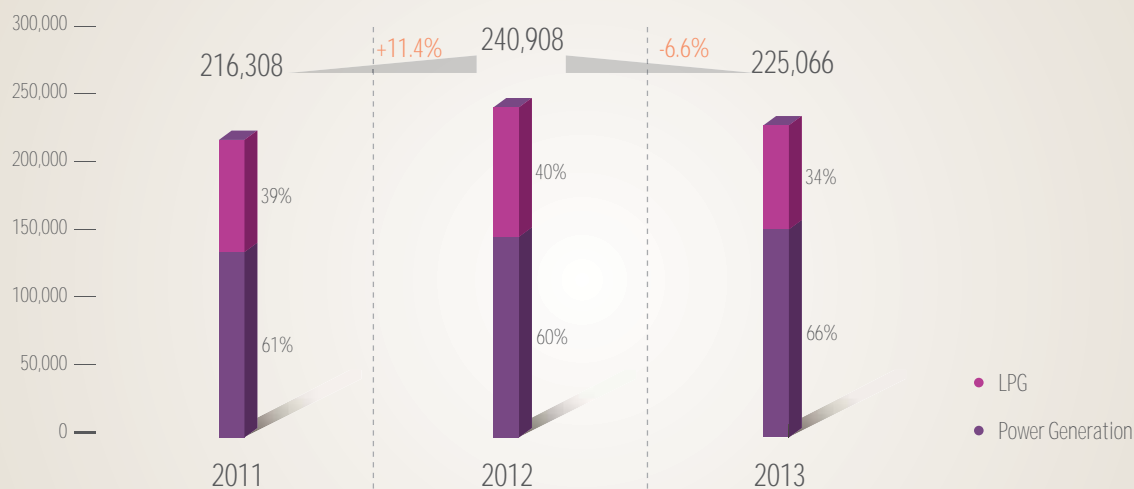
Unit: million barrels/day



3. The household and business sectors consumed 225,066 barrels per day of energy, a 6.6% fall from 2012 (Figure 9), and used 20.9% less LPG because of the strict government's measure to prevent the smuggling of LPG from the household sector to other sectors, and the increase of the LPG price in the household sector, starting on September 1, 2013 by Baht 0.50 per kilogram. The government's target price is Baht 24.82 per kilogram from the original price of Baht 18.13 per kilogram. Electricity demand grew by 3.0%, partly buoyed by the demand in the hotel business due to the increasing number of foreign tourists.

Figure 9: Thailand's Household and Commercial Energy Consumption 2011 - 2013

Unit: barrel/day



Remark: Excluding renewables

Sources: Department of Energy Business, Energy Policy and Planning Office, and PTT

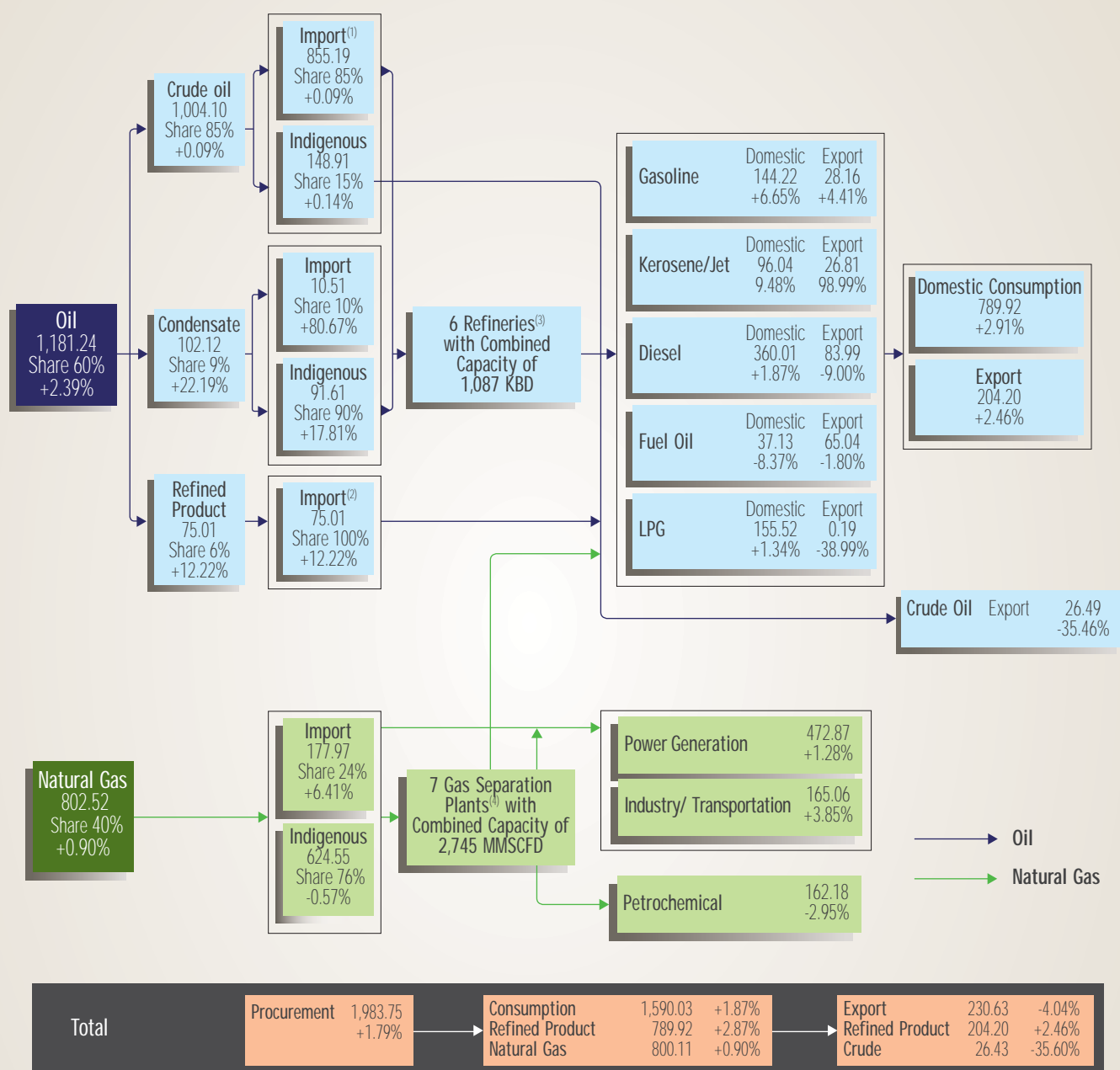
This year's petroleum supply and sales amounted to 1,983.75 KBD, rising by 1.79% (Figure 10). Oil accounted for 60% while natural gas accounted for 40% out of the total oil procurement, 80% was imported as crude oil at an average volume of 855.19 KBD. Natural gas was imported at the rate of 177.97 KBD. The total distribution of petroleum is at 1,590.03 KBD or 1.87% increase from previous year with virtually identical ratios between petroleum products and natural gas. Meanwhile, the export of petroleum products fell by 4.04%, made up of 204.20 KBD of petroleum products, a 2.46% rise from 2012, and 26.43 KBD of crude oil, or 35.60% decrease.

Figure 10: Thailand Petroleum Balance 2013

Procurement

Domestic Consumption/ Export

Unit: KBD



Sources: Energy Policy and Planning Office, Department of Energy Business, Department of Mineral Fuels, and PTT (as of February 2014)

Notes: (1) Crude import including other Long Residue.

(2) Including LPG

(3) Capacity includes those of BCP, ESSO, IRPC, PTTGC, SPRC, TOP and excludes PTTGC's condensate splitters & Fang refinery.

(4) Capacity includes those of PTT GSP 1-6, PTT ESP, and PTTEP Siam/ Phalang Phet. The Petroleum Procurement Balance excludes Bitumen.

2014 World Economic, Petroleum, and Petrochemical Outlook

World Economic Outlook

The global economy in 2014 is expected to outgrow the 2013. In January 2014, the IMF forecasted that the global economy will expand around 3.7% from 3.0% in 2013 since the advanced economies are recovering. The US economy could strongly expand from domestic consumption and investment, which is a result of the agreement in increasing budget spending. The continual recovery of real estates and employment causes the FED to cut QE down by buying government bonds and securities with collateral agreements of US\$ 75 billion per month in January 2014 from US\$ 85 billion and buy US\$ 65 billion per month from February 2014 onwards. The FED will gradually decrease QE in 2014 if the US economy still expands. In addition, the government could meet debt payment appointment after the parliament issue the law to expand public debt ceiling so the government can loan until March 15, 2015. Euro economies, meanwhile, will come out of the recession and start to grow. Developing and emerging economies are projected to continue expanding despite a slowdown in domestic consumption and investment, since there will be a push from the expanding export in tandem with world economic growth. However, there are risk factors to keep a close watch on, namely deflation in Eurozone countries, public debt ceilings, and the long-term balance of the US Treasury, in addition to higher volatility of fund flow and the financial market after the Fed decreases QEs.

World Petroleum & Petrochemical Outlook

Oil demand next year is expected to surge by 1.2 million to 92.4 million barrels per day, according to the IEA's report in December 2013. This will be led by developing and emerging economies, particularly China, India, and the Middle East. On the other hand, oil demand in advanced countries such as the US and European countries will remain stable. The average oil price in 2014 is expected to drop from the 2013 level to US\$ 100 - 105 per barrel despite higher demand because it will be supplied by the rising shale oil production in the US. However, the price could be higher with supply disruption from insurgency in the Middle East. Nonetheless, the prices could drop due to global economic crisis.

Next year the Singapore refining margin is predicted to be US\$ 6 - 7 per barrel, similar to this year's level, because product prices are expected to be stable.

Olefins prices are likely to pick up, as polymer product demand is still growing in countries with large populations and expanding economies, including China, India, and Indonesia, while new supply capacities will be eclipsed by demand increments. The HDPE price is projected to be US\$ 1,545 per ton; the PP price will be at US\$ 1,547 per ton. Aromatics prices will likely be lower due to gluts caused by new capacities in Southeast Asia, with only slightly more demand. Finally, the gasoline price is forecasted at US\$ 1,269 per ton; the PX price, US\$ 1,373 per ton.

2014 Thailand Economic and Petroleum Outlook

Economic Outlook

The Thai economy in 2014 is expected to outpace that of 2013, with a drive from export sector, which will take off as the world economy recovers, boosted by higher consumption and investment in the private sector as a result of eased monetary policy with low interest rates. Government investment in megaprojects was delayed, since the Administrative Court ordered public hearings to be held ahead of the 350-billion-baht water management investment, and the 2-trillion-baht infrastructure investment is pending the ruling of the Constitution Court. In addition, more negative risk factors from the political turmoil will erode the confidence of consumers, investors, and tourists. In addition, world financial fund flow volatility will affect the baht's value. Next year, the lowest exchange rate should be Baht

32.5 - 33.5 to the US\$. Finally, the NESDB predicted in January 2014 that Thailand's economic growth in 2014 would be 3.0 - 4.0%.

Petroleum Outlook

Primary energy consumption next year is expected to grow by 2.0 - 2.5% over this year in line with domestic economic conditions and with positive factors from the improving world economy. Oil demand, meanwhile, is expected to grow by 1.0 - 1.5%, and natural gas consumption by 3.5 - 4.0%, in line with economic conditions and demand for power generation. Gasoline consumption and diesel consumption are forecasted to improve. For NGV, the demand for consumption is not likely to change. The demand for LPG in household sector will still decline, while that transportation sector will rise, owing to policy to adjust the price to reflect the actual production cost of refineries and the strict measures to suppress LPG smuggling across different sectors.





Nature of Business

PTT is a fully integrated national petroleum and petrochemical company with a mission to foster national energy security, economic prosperity, and corporate sustainability with due regard for the stewardship of the environment and the Thai society.

PTT's operations cover the business value chain from upstream to downstream with a focus on incremental value addition in tandem with the creation of innovation. The overall operations of PTT, including those conducted by both PTT directly and through PTT Group companies, are summarized below.



PTT-operated businesses

• Upstream business

Gas Business Unit: The business unit conducts natural gas supply procurement, transmission, distribution, and processing, and invests in NGV service stations and sales, as well as gas-related value-added businesses in the Group companies. Supply includes indigenous gas and imports from neighboring countries, plus liquefied natural gas (LNG), to meet the growing demand. The distribution network includes major power producers through PTT's transmission pipelines, industrial users through PTT's distribution pipelines, and NGV distribution through NGV service stations. NGV is an alternative fuel for vehicles, in addition to gasoline and diesel. PTT also invests in gas separation plants (GSPs) to add business value by extracting a variety of valuable chemical components from natural gas to provide petrochemical feedstocks, which in turn represent essential elements of all other subsequent industries, consequently driving national economic growth. One of these products is LPG, used in households, industry, and transport. Moreover, PTT LNG Co., Ltd., a wholly-owned subsidiary of PTT under the supervision of the Gas Business Unit, invests in LNG-receiving terminals, LNG storage, and LNG re-gasification to support LNG import by PTT.



Natural gas supply procurement, transmission, and distribution businesses are operated under the Energy Industry Act, B.E. 2550 (2007), supervised by the Energy Regulatory Commission (ERC), a body appointed by HM the King. The supply procurement and pricing structure to power producers and piped gas management fees are strictly controlled with a constant rate of return, while the pricing structure of procured gas to industrial users fluctuates with the world fuel oil market price to ensure competitiveness with domestic fuel oil retail price. While in terms of gas separation plant, depends on its products price that distribute to petrochemical industry as feedstock which also rely on petroleum and petrochemical price in the world market. Even the government has raised

the retail price of household LPG by Baht 0.50 per kilogram since September 2013, it manipulated the Oil Fund to support its policy and also controlling the ex-refinery LPG price at about US\$ 333 per ton (excluding tax and Oil Fund contribution), which is far lower world LPG prices. Meanwhile, for NGV, the government's current policy is to ease consumers' burden by fixing its price at Baht 10.50 per kilogram.

Supply of natural gas consists of 78% from indigenous production, and the remaining consists of import piped gas from Myanmar and LNG.



• Downstream business

Oil Business Unit: The business unit is in charge of distribution of quality petroleum products, which break down into three core products. First, fuel products, consisting of liquid fuels and LPG. Second, lubricating oil and other lubricating products. Third, retail business products. All these are sold through three major distribution channels. First, B2C retail (through service stations, which have been upgraded and modernized into PTT Life Stations, catering to modern consumers' lifestyles that favor one-stop service made possible by diverse retail businesses found at service stations. This year, the PTT Blue Card was launched to foster customer engagement and brand loyalty, while enabling insight into consumers' spending behavior for the benefit of marketing strategic planning for improved responses to



consumers' needs. Besides service stations, B2C features LPG sales through bottling plants, LPG stand-alone outlets, and lubricant sales through lubricant outlets. Second, B2B (commercial market), sales through civil servant groups, state enterprise workers, industries, aircraft, ocean liners, fishing vessels, and exports. Third, sales of products to customers under Article 7 and Article 10 of the Fuel Trade Act.

Moreover, the business unit manages investments through PTT Group companies, most of which are wholly owned by PTT, and is engaged in domestic and overseas oil businesses, such as retail sales and service stations, lubricating oil blending and bottling, and aviation fuel services.

The oil business has become more liberalized and highly competitive under several laws, including the Fuel Trade Act, B.E. 2543 (2000) and Fuel Oils Control Act, B.E. 2542 (1999). As of December this year, PTT was one of 41 fuel oil traders registered with the Department of Energy Business. Moreover, the oil business is heavily regulated by various authorities, including the Energy Policy and Planning Office, Department of Energy Business, Department of Internal Trade, and Office of the Consumer Protection Board. Its financial performance therefore relies primarily on marketing margins in retail stores and partly on other supplementary products and year-end inventory.



International Trading Business Unit:

The business unit operates fully integrated international trading businesses, ranging from procurement, import and export of crude oil, condensate, petroleum products, petrochemical products (except plastics), to solvents and chemicals, as well as other commodities. The business unit is also in charge of providing shipment and price risk management in support of integrated international trading businesses. The essential goals of the business unit are to become a leading multinational trading company, enhance energy security for the Kingdom, and supplement business value to PTT Group.

To cope with the changing nature of international businesses, such as oil price volatility, reliability and integrity of trading partners, safety of delivery and shipment, and potential natural disasters. PTT International Trading has implemented an international risk management system covering all aspects of risk exposure equivalent to those systems adopted by leading international trading companies. As world oil price volatility is the biggest risk, PTT's mitigation measures include not only closely monitoring of movements of all contributing factors, but also the exercise of necessary financial transactions including futures, swaps, and derivatives trading. State-of-the-art information technology verifies details of every transaction engaged in by operation staff on a daily basis. This year, International Trading business unit undertook software refinement for the Trading Control System to accommodate more complex

transactions and encompass other commodities to be traded in the future, while efficiently tracking risks of transactions (Commodity Trading and Risk Management System). This represents an application of technology to supplement trade capability by streamlining work, controlling risks more stringently, and reporting trade status in a more accurate and timelier way. Implementation of this new system is due in 2015. Similar practices have been adopted to control and ease possible impacts from shipment and transport of petroleum and petrochemical products on the environment and communities. Procurement and logistics of all products are strictly managed and controlled to international standards and regulations through the PTT Group Ship Vetting Project.

To overcome possible cross-boundary legal barriers and to add competitiveness in international trading, PTT International Trading has founded and appointed subsidiaries and agencies in many countries, including PTT International Trading Pte. Ltd. (PTTT) in Singapore, PTT International Trading DMCC in Dubai, United Arab Emirates, PTT International Trading Guangzhou Representative in the People's Republic of China, and the latest office in Jakarta, Indonesia, known as PTT International Trading Jakarta Representative. Currently, PTT International Trading manages business transactions in more than 50 countries covering all regions of the world.



Businesses invested through PTT Group companies

• Upstream business

Petroleum exploration and production business: Through PTT Exploration and Production Plc. (PTTEP), PTT operates domestic and international petroleum exploration and production (E&P) and invests in associated businesses. The mission is to seek and secure competitively priced crude oil and natural gas to ensure Thailand's energy security. PTTEP demonstrates this responsibility through its petroleum sales agreement with PTT on all produced petroleum in neighboring countries, mostly natural gas, for consumption in Thailand. Moreover, PTTEP has expanded its E&P business to other regions, including PTTEP Australasia and the Montara field. Petroleum production from





these overseas projects is sold internationally to produce a revenue inflow to support national economic growth, while some petroleum products is distributed to Thailand.

PTTEP's performance primarily depends on the world oil price, petroleum exploration and field development success, efficient cost management of E&P projects, investment opportunities, and organizational competency development. E&P activities and petroleum pricing structures are governed by the Petroleum Act, B.E. 2514 (1971), under the supervision of the Petroleum Committee.

Power business: PTT is engaged in the power business through Global Power Synergy Co., Ltd. (GPSC), the power-business flagship for the Group, consisting of four joint venturers: PTT (30.10%), PTTGC (30.31%), TOP (11.88%), and TP (27.71%). Today, GPSC produces electricity, steam, and demineralized water domestically and internationally to add value to PTT Group and enhance national energy security. GPSC's customers are the Electricity Generating Authority of Thailand (EGAT), PTT Group's petrochemical plants, and others. In addition, GPSC has expanded investment in the ASEAN region, such as hydropower plant in Laos, to generate revenue for Thailand.

GPSC's performance hinges largely on natural gas prices, power and steam supply and demand, base power tariffs and variable power tariffs in each operated country, power stability, availability payment, efficient cost and operating expense management, including investment opportunities and corporate capability development.



• Downstream business

Petrochemical business: PTT invests in the petrochemical business to add value to the products from gas separation plants and refineries by reducing imported feedstock. It also support the development of the local petrochemical industry and other industries using petrochemicals as raw materials, such as the automotive industry, construction industry, and packaging industry. PTT operates its petrochemical business and integrated associated companies through its investment in 9 companies, namely PTT Global Chemical Plc. (PTTGC), HMC Polymers Co., Ltd. (HMC), PTT Asahi Chemical Co., Ltd. (PTTAC), PTT MCC Biochem Co., Ltd. (PMBC), PTT PMMA Co., Ltd., PTT Polymer Marketing Co., Ltd. (PTTPM), PTT Polymer Logistics Co., Ltd. (PTTPL), PTT Maintenance and Engineering Co., Ltd. (PTTME), and PTT Energy Solutions Co., Ltd. (PTTES). This wide range of investments covers businesses from the processing and distribution of upstream, midstream, and plastic products marketing and distribution in both domestic and international markets, integrated logistical services and the supply of industrial engineering services, to maintenance services for PTT Group and other industrial plants.

Performance is primarily subject to world petrochemical prices, fluctuating in a cycle of supply and demand, and the year-end inventory. The main feedstock in petrochemical production comes from PTT's GSPs, including ethane, propane, condensate and natural gas liquids (NGLs), together with products from PTT Group's oil refineries, like naphtha and reformate.



*Remark: * PTT sold its shares, which accounts for 40% of total shares, in PTT Phenol Co., Ltd. (PPCL), to PTT Global Chemical Plc. (PTTGC). As a result, as of May 2, 2013, PPCL was 100% wholly owned by PTTGC.*



Refining business: PTT invests in the refining business mainly to provide refining product security to the country and to reduce the import of petroleum products. PTT operates its oil refining business and associated businesses using refined products as raw materials (or feedstock) through its investment in Group companies, consisting of Thai Oil Plc. (TOP), IRPC Plc. (IRPC), Star Petroleum Refining Co., Ltd. (SPRC), Bangchak Plc. (BCP). The business structure allows PTT to provide crude oil as feedstock for these companies and, in turn, buy all refined and petrochemical products from them to market and distribute domestically, and export to international markets.

Performance is primarily subject to the refining margin—the average value of refined products less the average cost of crude runs (based on volatile world prices)—which is cyclical with the world-market supply and demand, world oil price volatility, and year-end inventory.





• International investment business

PTT intends to secure energy supply for Thailand with overseas energy and new alternative energy sources by integrating its entire organizational capability of knowledge, skills, personal experiences, and cooperation among PTT Group. All international investments are made through PTT's wholly owned subsidiaries, PTT International Co., Ltd. (PTTI), and PTT Green Energy Co., Ltd. (PTTGE). A joint-venture was set up this year, namely GPSC, to invest in the power business in Thailand and overseas.

Currently, PTTI's investment portfolio includes coal mining businesses in Indonesia and Madagascar, a joint venture to investigate the potential of coal deposits in Brunei, and a gas pipeline business in Egypt for transmission from Egypt to Israel. PTTI is in the process of transferring investment in a hydropower plant in Lao PDR to GPSC.



CREATE VALUE THROUGH BUSINESS CHAIN

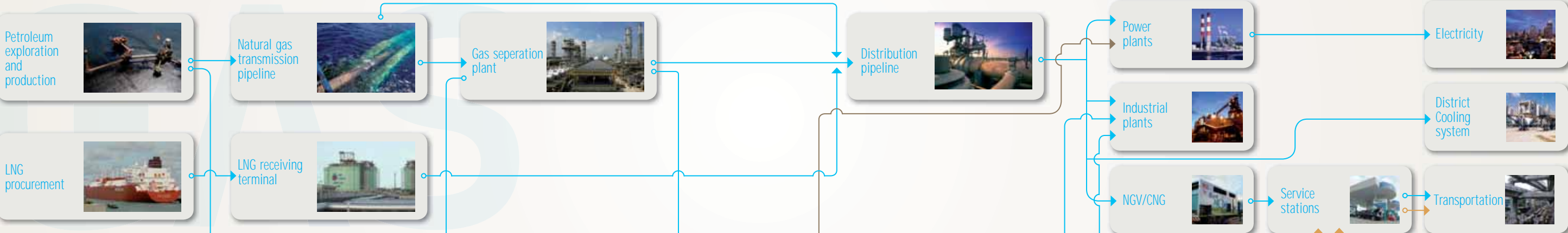
UPSTREAM

INTERMEDIATE

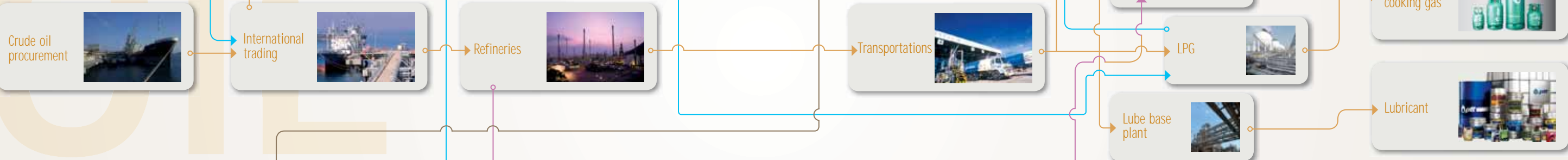
DOWNSTREAM

END CUSTOMER

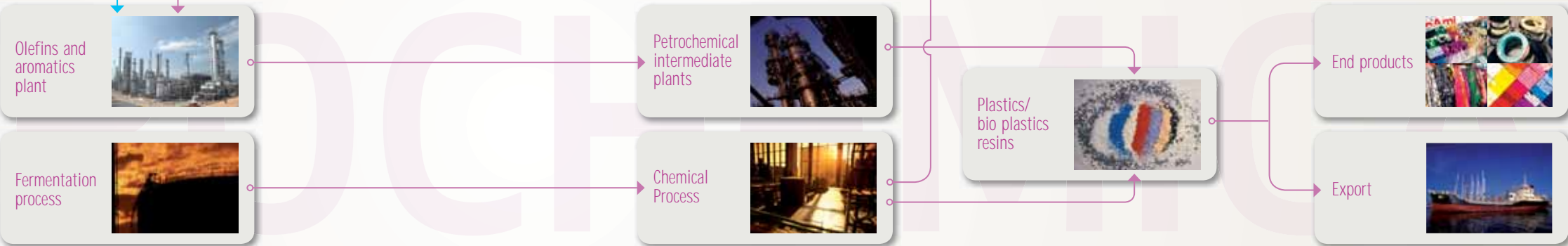
GAS CHAIN



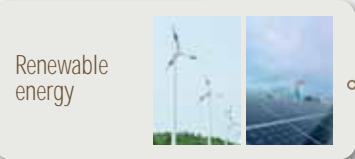
OIL CHAIN



PETROCHEMICAL CHAIN



RENEWABLE



NEW BUSINESS



Business Performance 2013

This year was another successful one for PTT's businesses, whether upstream or downstream. Upstream, the key success included PTTEP's higher sales volumes and the acquisition of Hess Corporation's subsidiary that held 75% shares in the Pangkah Project and 23% in the Natuna Sea A Project offshore Indonesia. To meet the higher domestic demand, PTT successfully procured more natural gas. Downstream, PTT Group successfully added value through the Operational Excellence (OpEx) Project, along with capacity expansions in the petrochemical and refining group. In the fuel market, PTT remained at the top, amid volatile world-market energy price situation together with sluggish economic conditions. Such adverse conditions have inevitably affected oil stocks and squeezed spread margins in the petrochemical and refining businesses. Note also that the Dubai crude oil price (a representative crude) averaged US\$ 105.5/barrel this year, down from US\$ 109.1/barrel last year. Unforeseen events also played a part in this year's performance outcomes: The offshore oil leak at PTTGC and the lightning incident at GSP Unit 5, which raised the cost of natural gas. In summary, the net income for the year amounted to Baht 94,652 million, Baht 9,956 million down from last year, as detailed below.

PTT-operated businesses

• Upstream Business Group

Gas Business Unit

This year's operational success of the business unit resulted largely from the success in natural gas procurement, additional import shipment of LNG to meet the rising demand across the sectors, including power, industrial, and transport sectors, together with GSPs. Key operational performance results this year for the business unit appear below:

Natural gas procurement

Supply procurement totaled 4,602 MMcf/d, a rise of 41 MMcf/d or 1% from last year at 4,561 MMcf/d, consisting of 3,581 MMcf/d from indigenous sources and 1,021 MMcf/d from import, or an equivalent indigenous/import ratio of 78 : 22.

Gas sales to the power sector

Sales to this sector totaled 2,712 MMcf/d, about 59% of total sales, representing a 1% rise from last year at 2,678 MMcf/d, due to the rising demand for power. Sales were completed to EGAT at 1,229 MMcf/d, or 45% of the total; to seven independent power producers (IPPs) at a total of 872 MMcf/d, or 32% of the total; and to 24 small power producers (SPPs) at 611 MMcf/d, or 23% of total sales.

Gas sales to the industrial sector

Sales to this sector totaled 640 MMcf/d, equivalent to 14% of the total sales, an increase of 1% from last year at 631 MMcf/d. Accounting for the rise in sales was investment in expanded gas distribution pipelines to users in both industrial and commercial groups, currently numbering more than 320.

Gas sales to the transport sector

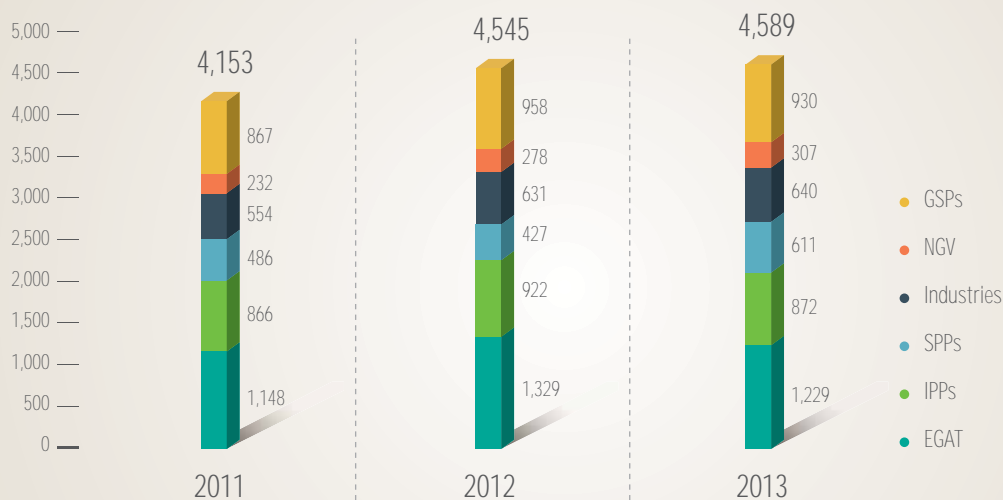
Sales to the transport sector averaged 307 MMcf/d or 7% of the total sales, recording a 11% increase from last year at 278 MMcf/d, due to the ever-rising number of service stations. Currently, there are 490 PTT service stations, of which 391 are directly invested by PTT and 99 invested by franchisees, covering 54 provinces. Consumption of natural gas in the transport sector to replace gasoline and diesel rose from 10.8% last year to 11.9%. At the year end, the number of vehicles fueled by natural gas increased by 63,964, or 17% from last year, to 438,821 units.

Sales of products from GSPs

GSPs processed 930 MMcf/d of natural gas this year, or 20% of total sales, a 3% drop from last year at 958 MMcf/d. On August 13 this year, GSP Unit 5 faced a temporarily shutdown because the waste heat recovery unit was struck by lightning. The total output this year, therefore, was a drop in total processed product volume by 4% from last year to 6,196,138 tons, while last year was at 6,452,137 tons. The products included 2,074,447 tons of ethane, 726,952 tons of propane, 2,690,389 tons of LPG, and 704,350 tons of NGLs.

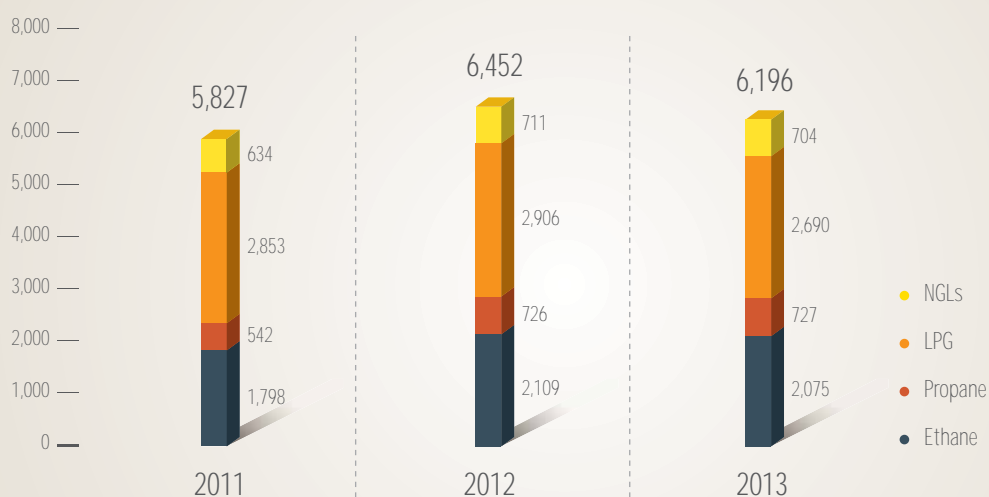
Natural Gas Sales

Unit: MMcf/d at 1,000 BTU/cu.ft.



Products from Gas Separation Plants

Unit: thousand tons





Gas Business Unit was awarded Thailand Quality Class: TQC.



Rayong GSP was certified TLS 8001-2553.



CNG sales agreement signing ceremony.

Gas Business Unit milestones

January

- Operations Center, Natural Gas Transmission/Region 2 to Region 9 Pipeline Operations Divisions earned certification of ISO 50001, a world-class energy management standard from Management System Certification Institute (MASCI).

February

- Gas Business Unit won the 2012 TQC (Thailand Quality Class) awarded from the Thailand Quality Award Office for a third consecutive year. This award recognized entities with management excellence on a par with international standards.

- PTT successfully amended its GSP product sales agreement with HMC Polymers, retroactive to December 2012.

March

- PTT signed a Gas Sales Agreement (GSA) with an SPP group, namely Hitech Cogeneration Co., Ltd., Victory Cogeneration Co., Ltd., and Thai Energy Generator Co., Ltd., for a delivered volume of 68 MMcf/d at 1,000 Btu/cubic feet for 25 years. The deal will enhance energy consumption through cogeneration.

- GSP Rayong earned the TLS 8001-2553 (Complete Level, Initiated) award from the Department of Labour Protection and Welfare.

- PTT signed a CNG sales agreement with Universal Adsorbent & Chemicals Plc. (UAC). Gas comes from associated gas that UAC buys from Burapha-A Field, Amphoe Kong Krai Lat, Sukhothai, at 15 - 20 tons/day for three years. The end product is NGV for cars in the Northern Thailand. Production and delivery are expected by October 2013. The deal will cut down oil imports and help reduce pollutants, while promoting alternative energy and indigenous energy.

April

- Market & Service Section, NGV Marketing Department, Natural Gas for Vehicles unit won a Silver Award (Task Achieving QCC Prize) for its QCC presentation on process modification of fitting NGV cars at PTT's standard NGV installation center. The award was presented at the final round of the Thailand Quality Prize 2013 event.

- PTT signed a CBG sales agreement with UAC, the first in Thailand, at Amphoe Mae Taeng, Chiang Mai. The CBG will be derived from waste water and pig manure, blended with napier grass, a volume of 6 tons/day. Commercial start-up and delivery are due in August 2013, to cut down on diesel demand for trucks and vans by some 320,000 liters, or some Baht 9.6 million, per year.

- GSP Rayong won certification for a standard on prevention and overcoming of narcotics in the workplace, presented by the Department of Labour Protection and Welfare.



CBG sales agreement with UAC

May

- PTT signed a GSA with an SPP Group, namely Siam Pure Rice and Bowin Clean Energy, for delivery of 30 MMcf/d at 1,000 Btu/cubic feet over 25 years. The deal will contribute to clean energy development and raise energy efficiency through efficient power generation.

- Khanom GSP won ISO 50001 certificate, a world-class energy management standard. Meanwhile, Operations Center and Region 2 to Region 9 Pipeline Operations Divisions earned ISO 9001 certificate. All awards were presented by MASCI.

June

- Operations Center, Natural Gas Transmission, earned TLS 8001-2553 certificate (Complete, Initiated) from the Department of Labour Protection and Welfare/ Region 2 to Region 9 Pipeline Operations Divisions earned ISO 14001 and OHSAS 18001/TIS 18001 certificates from MASCI.

- Bang Pa-in Cogeneration Co., Ltd. (BIC) which is a joint venture among PTT, Ch. Karn Chang Plc., Bang Pa-in Land Co., Ltd., and the Industrial Estate Authority of Thailand began commercial generation of power (119 MW) and steam (20 tons/hour). Of these outputs, 90 MW are to be supplied to EGAT, and the rest to customers in the Bang Pa-in Industrial Estate. PTT will supply 20 - 25 MMcf/d of the gas to BIC over 25 years.

- A project to install an onshore gas compressor (Unit 4) in Rayong was completed to boost the pressure of the gas transmission pipeline network.



Rayong GSP, Khanom GSP won National Outstanding Business Operator in Safety, Occupational Health, and Work Environment Awards.



Khanom GSP was certificated Zero Accident operating site.

July

- Rayong GSP, Khanom GSP, Operations Center, Region 2 to Region 8 Pipeline Operations Divisions won the National Outstanding Business Operator in Safety, Occupational Health, and Work Environment Awards 2013, presented by the Department of Labour Protection and Welfare. The Operations Center has won this distinction for 12 straight years, while the Region 4 and Region 5 Pipeline Operations Divisions have earned the award for the 11th consecutive year.

August

- The GSP Unit 5 in Rayong was struck by lightning at the rendered waste heat recovery unit (WHRU). The sustained damage the Unit inoperable. PTT quickly repaired the damaged parts, which enabled Unit 5 to formally return to about 50% of the capacity in late October 2013, ahead of schedule.

- PTT and Khanom Electricity Generating Co., Ltd. (KEGCO), signed a GSA for gas fueled power generation at the Khanom Power Plant, Unit 4, Amphoe Khanom, Nakhon Si Thammarat a new unit under construction. With a capacity of 930 MW, Unit 4 is due to transmit power in 2016 over a period of 25 years. The deal will enhance power security and satisfy future gas demand in the South.

- Rayong GSP and Khanom GSP earned awards at the 2013 Zero Accident Campaign, based on the man-hours and days-away-from-work accident data under the campaign. The Occupational Safety and Health Bureau, Department of Labour Protection and Welfare, presented bronze awards to both GSPs in recognition of the management's consistent valuing of regard for work safety for employees and wage earners.

- PTT and Osaka Gas Company of Japan signed an MOU agreement as a guideline for setting up a joint-venture company to provide energy services in Thailand. Services are to include those provided to industrial gas users in fuel supply procurement, machinery replacement, and annual maintenance and inspection-all done to raise energy efficiency for plants in an integrated manner. This business enabled PTT to

expand its gas distribution pipeline market, while generating additional income apart from gas sales; it also afforded opportunities to share experience and technology with Osaka Gas, a long-standing major company in the gas business whose current ranking third in income in Asia.

September

- The Energy Regulatory Commission (ERC) endorsed the commodity charge (Tc) of gas transmission tariff for the offshore pipeline system at Rayong (Zone 1), the offshore pipeline system at Khanom (Zone 2), and the onshore pipeline system (Zone 3) for the year at Baht 1.3380 per million BTU. It also endorsed the Tc for the onshore pipeline system at Chana (Zone 4) for the year at Baht 0.0145 per million BTU. Finally, it endorsed the Tc for storage and gasification for PTT LNG Co., Ltd., for the year at Baht 0.9774 per million BTU. All these were to take effect from September 2013.

- PTT signed a GSA with an SPP group, consisting of Electricity Generating Plc., Navanakorn Electricity Generating Co., Ltd., Amata B. Grimm Power (Rayong 1) Co., Ltd., Amata B. Grimm Power (Rayong 2) Co., Ltd., and Amata B. Grimm Power (Rayong 3) Co., Ltd., for delivery of a total of 120 MMcf/d at 1,000 BTU per cubic feet for 25 years. The deal contributed to clean energy development and raises energy efficiency through efficient power generation.

October

- Khanom GSP won a Green Industry award (Level 4) under the Green Industry Project, Ministry of Industry, which promotes the industrial sector's environmentally friendly operations, social responsibility, harmonious co-existence with society and communities hand in hand with sustainable development.

- PTT signed a GSA with Rojana Power Co., Ltd., an SPP, for delivery of 17 MMcf/d at 1,000 BTU per cubic feet over 25 years. The deal contributed to clean energy development and raises energy efficiency through efficient power generation.



Natural gas sales agreement for power generation in Khanom power plant.

December


- PTT and Petronas signed a Supplementary GSA for JDA A-18 deposits from the Sellers Group, namely the Malaysia-Thailand Joint Authority, Petronas Carigali (JDA) Sdn Bhd, Hess Oil Company of Thailand (JDA) Limited, and Hess Oil Company of Thailand. The incremental purchase of 100 MMcf/d is to be equally split between PTT and Petronas. The period for the GSA of 5.5 years is from December 3, 2013, and is extendable with mutual agreement.

- Rayong GSP successfully passed assessment for ISO 22301 by United Registrar of Systems Ltd. (URS), certified by United Kingdom Accreditation Service (UKAS). It is therefore the first part of the Gas Business Unit to win this distinction.

Natural Gas Transmission Pipeline System and Gas Separation Plants

Gas Separation Plant Capacity

| | |
|------------------------------|------------|
| Unit 1 | 400 MMcf/d |
| Unit 2 and 3 Ethane Plant | 800 MMcf/d |
| Unit 4 | 170 MMcf/d |
| Unit 5 | 570 MMcf/d |
| Unit 6 | 800 MMcf/d |

-  Natural Gas Fields
-  Power Plants
-  Gas Separation Plant
Unit 1, 2, 3, 5, 6 in Rayong
-  Gas Separation Unit 4 in
Nakhon Si Thammarat
-  Existing Pipeline
-  Future Pipeline

Note: Petroleum Terminal Comprises of Oil and LPG Terminal



Petroleum, Oil, LPG Terminals, and Jet Fuel Station Map



Note: Petroleum Terminal Comprises of Oil and LPG Terminal



Oil Business Unit

PTT continued to maintain its top position in the domestic retail market for 21 consecutive years, with a 38.7% market share, 0.5% higher than last year. For the lubricating oil market, PTT also succeeded in maintaining its top position for five straight years, with a market share of 38.3%. This year's business performance of the business unit appears below:

Fuel sales

In 2013, PTT sold 17,648 million liters of fuel, an increase of 666 million liters from the previous year. Sales consisted of 3,309 million liters of gasoline, 7,375 million liters of diesel, 2,214 million liters of jet fuel and kerosene, 1,604 million liters of fuel oil, and 3,146 million liters of LPG.

The year's average marketing margin was Baht 1.41 per liter, against the suitable margin of Baht 1.50 - 2.00 per liter, based on the coverage of operating expenses and appropriate financial returns for the Oil Business Unit and service station dealers.

As of December 2013, PTT operated 1,382 service stations across the country, or 6.5% of the total, made up of 10 aviation fuel stations, 13 oil terminals (PTT owned

10 and the others were joint/rented ones), two LPG terminals, six petroleum terminals, four LPG-bottling plants, 1,063 Seven-Eleven convenience stores, 995 Café Amazon outlets, 1,566 CO Brand outlets, and 82 auto-service centers.

Lubricating oil sales

This year, through its commitment to lubricant R&D, PTT launched 10 new lubricants while expanding its market abroad in 30 countries, an increase from 28 countries last year.

Biofuel sales

PTT continued to promote biofuel energy as an automotive option, with gasohol to replace gasoline. Gasohol E85 is now found in 120 locations; Gasohol E20, 1,094 locations. The market shares in 2013 for PTT Gasohol E10, Gasohol E20, and Gasohol E85, were 37.1%, 65.3%, and 21.5%, respectively.

The year also saw PTT HyForce Premium Diesel launched by PTT in support of the policy to use indigenous alternative energy and reduce crude oil imports, thus driving Thailand's policy on alternative energy onward to sustainability.

National energy security enhancement

As the national energy company, PTT provides service and operation of product terminals, as well as sourcing and transporting petroleum for national energy security.

This year PTT has taken steps to enhance the efficiency of energy management in line with national demand.

- Raised the required levels of domestic fuel reserves from 5% to 6%, and those of imported fuel reserves from 10% to 12% of traded volumes under the announcement of the Department of Energy Business, dated November 1, 2013. For the short term, PTT has secured storage locations for the 174 million liters of additional volumes and, for the long term, planned to fabricate more tanks for the 180 - 190 million liters of additional volumes.

- Expanded the product transfer capacity under the project to raise the capability of LPG import, dispensation, and transport system so as to accommodate future gas consumption. At the Khao Bo Ya LPG terminal, PTT is fabricating storage tanks and a marine terminal. At regional terminals, work is ongoing for the expanded system of receiving, storing, and dispensing. The goal is to raise the import capacity to 250,000 tons per month if the first phase of the project is completed, and to 500,000 tons per month if the entire project is completed by 2018 as planned.

Formulated is a facility master plan for the oil business infrastructure to develop a network of terminals and transport systems to further enhance national energy security. In the short term, PTT will source the land plots for terminal expansion in the South, locate additional outlet points in the Northeast, extend the rental agreement of the Phra Khanong terminal and facilities, and build a new office at Lam Luk Ka.



CSV activities

Apart from the core mission of national energy security enhancement, PTT constantly recognizes and values the stewardship of society, communities, and the environment, which will be instrumental to lead Thailand's development to sustainability. In 2013, the "OTOP by PTT Project" was launched at PTT service stations as a sales channel for OTOP community products and as a trade negotiation forum between buyers and sellers, without middlemen, to enable communities to gain direct, full benefits. Besides generating jobs and income, leading to product development matching domestic and international consumers' needs, the idea will play a key part in developing the quality of life for people and foster the national economy. The pilot outlet was at the PTT service station at Laem Chabang (inbound), Chon Buri, with 42 others to follow in 2014.

Fulfilling the Green Strategies of PTT Group

This year the Oil Business Unit's activities aligned with the corporate goals by valuing and conforming to PTT's operating directions and policies on the environment.

- Launched PTT HyForce Premium Diesel, a brainchild of PTT Research & Technology Institute that relies on the same technology as the latest generation of synthetic aviation fuels. Designed for high-performance diesel engines, the resulting product is monomolecular synthetic diesel with Hy-Booster, a super premier additive that boosts engine performance from acceleration. This was the first and only product in Thailand to achieve the Euro 5 standard by cutting particulate matters and engine exhaust, thus lowering the likelihood of respiratory diseases among the population. It is, therefore, another Green Product available from PTT at 61 pilot stations.

- Launched the PTT Composite Plus, which is an LPG cylinder made of composite material innovatively substituting for common steel cylinder. The resulting tank has a nice appearance, light weight, durability, rustproof qualities, ease of use, less carbon dioxide emissions in the production process, and being environmental friendly. PTT initially plans a pilot program in southern provinces, since some of these provinces face the sea, which shortens the useful life of common LPG cylinder. PTT's move also aligned with the Ministry of Energy's policy to promote composite cylinders over steel cylinders in the three southernmost provinces. The product will be put on sales nationwide.

- Built and developed a prototype service station that consumed and sold alternative energy, while operating in an environmental friendly way (the Green Station), including electricity generated from solar energy. Completed at The Crystal PTT on Chaiphruak Road in Bangkok, the first such station began transmitting power in August, 2013, which included an EV Charger for electric vehicles. The EV Charger was also completed at the Laem Chabang (inbound) service station.

- The Zero Waste Project, which saw its debut at a PTT service station in Sara Buri, lessened carbon dioxide emissions by more efficiently transporting and managing garbage at sources, as well as promoting among Thai society energy-conscious consumption habits. A second station (on the inbound West Ring Road) is under the construction contractor.



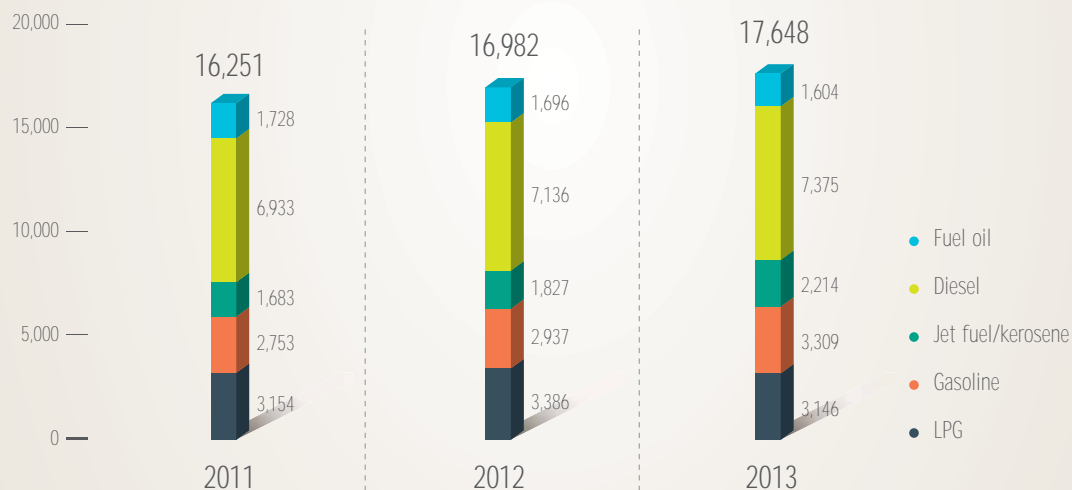
- Developed and introduced fuel-saving lubricating oil, including PTT Performa Super-Synthetic SAE 0W-20, new formula (VI 200++), which relies on the High Film Strength Technology (HFS) to provide maximum protection through all application temperatures (maximum heat or cooler than the boiling point). This lube is recommended for new-model gasoline engines. Another instance is the Upgrade PTT Dynamic Semi-Synthetic lube into API CI-4 Plus, which prolongs the useful life; this was another product developed to meet technological requirements and align with the Green Concept.

- Planned to install a dome roof tank for gasoline storage tanks to meet engineering criteria of minimizing oil loss and prevent vapor dissipation, with installation due in early 2014.

In addition, two products have earned Green for Life labels: E20 gasohol and HyForce Premium Diesel; six Green Label distinctions for service stations: Head Office, Raw 1 Raw Aw, Suthisan, Sukhaphiban 3, Bang Na (outbound), and Bang Pa-in; seven Carbon Footprint labels: ULR 91, ULG 95, 91-Gasohol, 95-Gasohol, E20 Gasohol, PTT Performa Super Synthetic lubricating oil (1-liter and 4-liter sizes).

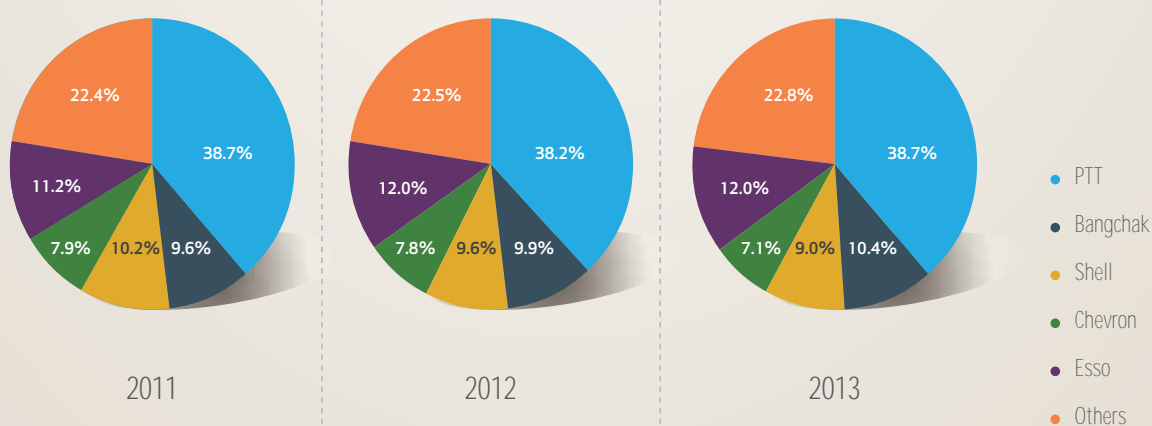
Domestic Petroleum Product Sales

Unit: million liters



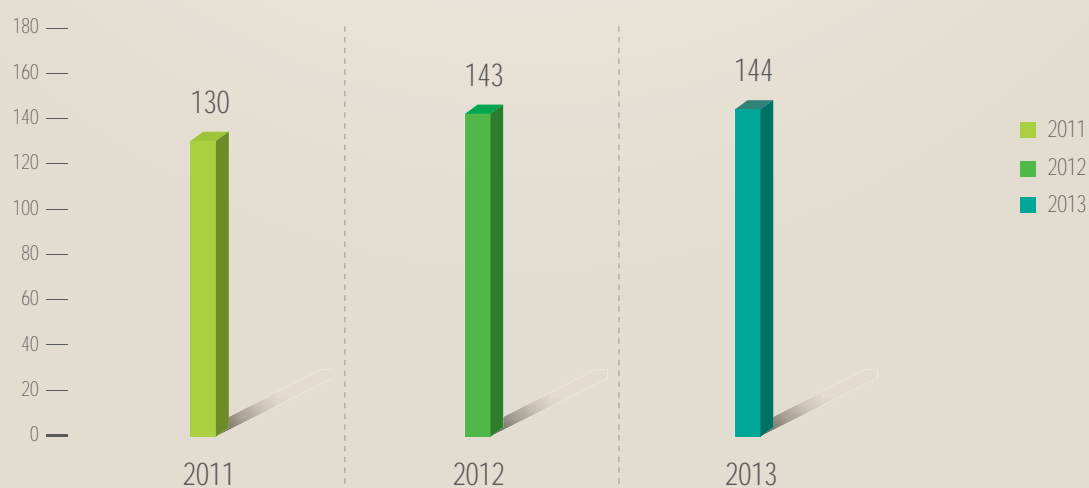
Domestic Market Share

Unit: percentage



Domestic Lubricating Oil Sales

Unit: million liters



Note: Excluding LPG used as petrochemical feedstock.
Source: Department of Energy Business, Ministry of Energy



Launched "PTT Smart Fuel-up Technology".



Launched "PTT Blue Card".



Launched "Amazon Bio Cup".



Promoted consumption of B7 biodiesel by BMTA.

Oil Business Unit milestones

January

- Launched "PTT Smart Fuel-up Technology" at the Head Office service station. This technology's Vehicle Identification System, with RFID (Radio Frequency Identification) Technology, speeds up service.

March

- Launched "PTT Blue Card", a point-accrual card good for cash in redeeming prizes and privileges. Cardholders accrue points with purchases of PTT products and services, including fuel and lube products, Café Amazon, Jiffy, and the Fit Station service center. The points are as good as cash in vehicle refueling at PTT service stations or in buying goods at Café Amazon and Jiffy nationwide.

- Launched "Amazon Bio Cup", Thailand's first fully biodegradable paper cup coated with PBS (a bioplastic) to cut problems of waste management and approach environmental equilibrium through reduction of some 200 tons per year. The cup was made available on March 15 at all Café Amazon nationwide.

- Participated in promoting consumption of B7 biodiesel by BMTA (Bangkok Mass Transit Authority) buses in support of Thai farmers by lowering the palm oil glut and encouraging alternative-energy consumption.

May

- Launched "FitStation Mobile Service", a mobile lube replacement service at offices and residences to meet today's consumers' needs. As a result, consumers save time and resources.

- Launched "OTOP by PTT", a project leveraging PTT service stations as another sales channel for community OTOP products. By generating jobs and income for community members, PTT contributes to the development of lives and strengthens the national economy.

August

- Launched "The Greenery Station", an innovative service station on Chaiyaphruek Road, Nonthaburi. The roof linking the pumps contains solar cells that generate

electricity for the station's own consumption. Also in use are energy-saving bulbs and an experimental EV charging stations for electric vehicles.

September

- Launched the PHON THONG – Chai Thani service station in Vientiane, Laos. In attendance were PTT executives, the Senior Executive Vice President (Oil Business Unit), state representatives (the deputy governor of Vientiane and the governor of PHON THONG), and the Thai Ambassador to that country.

October

- Launched “PTT Hyforce Premium Diesel”, a new grade formulated for greater efficiency (acceleration rate and noiselessness).

November

- Launched “PTT Composite Plus”, LPG tank made of composite materials to sustain gaseous pressure, replacing steel tanks currently used. To elaborate, a technology combines polymers and fiberglass through filament winding, resulting in a new shape of tank that is good in appearance, lightweighted, durable, rust-resistant, and convenient to use. Above all, it lowers carbon dioxide emissions in the production process for the sake of a sustainable, green globe.

- Launched the new formula of “PTT Performa Super-Synthetic SAW 0W-20”, called “VI 200++”, which is a 100% synthetic lube product featuring the “High Film Strength Technology (HFS)”. Provide maximum engine protection at all temperature ranges, from extreme heat to below the freezing point, the new product suits new-model gasoline engines recommended by automobile industry.

December

- Launched “PTT Fill & Go”, a smart refueling system for the pilot group of passenger buses. The RFID control management system provides faster services, minimization refueling errors, cost efficiency, and afford high safety. PTT has planned to grow the number of such service stations to about 200 by the end of 2014.



Café Amazon Drive Awake application has won the Silver Lions Award from Cannes, France.



Launched “PTT Hyforce Premium Diesel”.



Launched “PTT Fill & Go” a smart refueling system.

International Trading Business Unit

One of the business unit's core missions is to bolster national energy security through supply security. This year it imported over 45,500 million liters of crude oil, condensate, and petroleum products, some 2% more than the previous year-particularly LPG, which eclipsed last year's import by 1,959 million tons or 163,258 tons per month (13% over the year). This satisfied a large part of domestic demand.

The business unit also successfully raised competitiveness not only through more physical trading of crude oil, petroleum products, and petrochemicals, but through more efficient risk management tools. An instance of this is price risk management through the Future Exchange Market to offset oil price volatility for PTT Group's companies and refineries. In addition, it joined the downstream business group in carrying out the Project Price Strategy and Risk Management Team (PRISM) in promotion of the capability of market analysis and price risk management based on cooperation among PTT Group.

Crude oil, petroleum product, and petrochemical product trading

In 2013, the business unit's physical trading amounted to 71,636 liters (about 1,234 MMBOED), a 1% drop or 702 million liters from that of last year, consisting of 45,613 million liters of crude oil, a 4% rise; 7,549 million liters of condensate, a 9% fall; 15,269 million liters of petroleum products, a 13% drop. Trading of petrochemicals dropped to 3,173 million liters (or 0.3%).

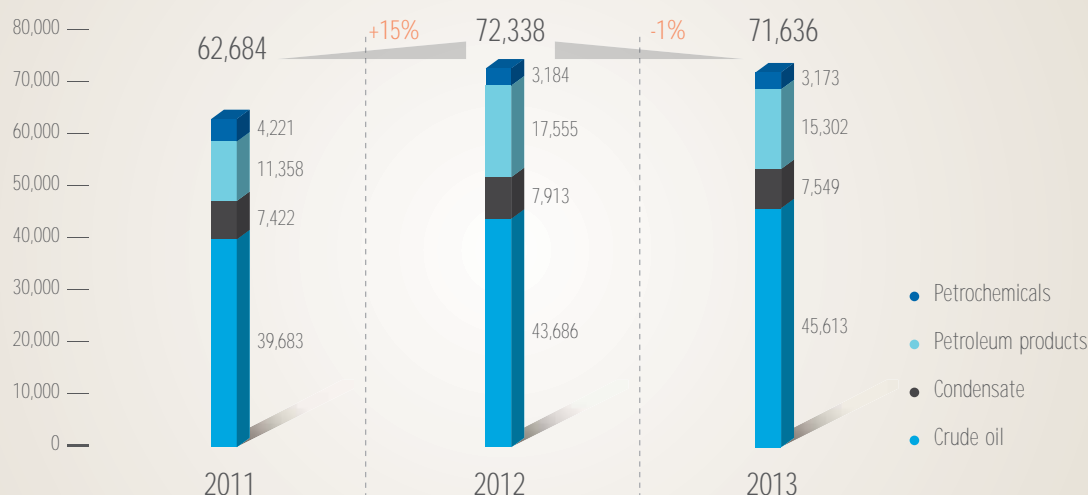
In addition, physical trading of other commodities like crude palm oil and palm kernel shells, amounting to over 33 million liters, represented growth in trading value in the market for non-energy merchandise, which agreed with PTT's strategic business option.

Price risk management

Price risk management this year amounted to 49,917 million liters, a 26% drop from last year, amid market conditions less favorable to price risk management practices.

International Trading Volumes

Unit: million liters



International Trading Business Unit milestones

January

- Signed a condensate joint-venture agreement for Bayu, Undan, and Kitan at a volume of 6 - 10 million barrels per year, worth a total of about Baht 2,700 million per year at Timor Leste. The deal not only bolstered national energy security, but also created national wealth, while encouraging PTT to become Thai premium multinational energy company.

February

- Signed an LPG sales agreement with TASWEEQ (Qatar's state enterprise) as a G2G term contract for 2013, the fifth rolling contract since 2009.

May

- Concluded assorted negotiations on petrochemical transactions at Asia Petrochemicals Industry Conference (APIC 2003), held in Taipei, Taiwan, worth a total of over US\$ 6.3 million, and clinched over 10 new business opportunities.

November

- Signed a crude oil sales agreement with Abu Dhabi National Oil Company (ADNOC), the UAE's national oil company and the world's fourth-largest, worth over US\$ 4,500 million. The deal saw the long-standing relationship between PTT and ADNOC reinforced, and strengthened national energy security.

- Signed a crude oil sales agreement with the Ministry of Oil & Gas, Sultanate of Oman, worth about US\$ 650 million. This was a G2G deal for greater energy security and for fulfillment of national energy demand.



LPG Sales agreement signing ceremony with TASWEEQ.



Businesses invested through PTT Group companies

• Upstream business

Petroleum Exploration and Production

For fiscal year 2013, PTTEP and its subsidiaries generated a consolidated revenue of US\$ 7,445 million, a 6% rise or US\$ 424 million from the year before (of US\$ 7,021 million). The rise was mainly driven by the higher oil price; the average 2013 product price was US\$ 65.58 per barrel of oil equivalent, up from US\$ 64.86, a year earlier. The sales volume is another main factor; the average 2012 sales of 275,923 barrels of oil equivalent per day (BOED) rose to 292,629 BOED in 2013. The additional volume was from Bongkot Project in the Gulf of Thailand and Montara Project operated by PTTEP Australasia in Australia.

The 2013 net income for PTTEP and its subsidiaries amounted to US\$ 1,846 million (versus the 2012 income of US\$ 1,846 million). At the end of 2013, PTTEP was operating 42 projects in 10 different countries.

Exploration Projects

PTTEP continued its exploration activities worldwide to assess the potentiality of petroleum blocks and increase petroleum reserves in its portfolio. A number of exploration and appraisal wells were drilled in 2013, including the following.

- **Myanmar Block M3 Project:** The appraisal drilling campaign ended in August with discoveries of natural gas and condensate. Detailed studies and an additional eight-well appraisal drilling campaign preparation are underway. This next drilling campaign, tentatively scheduled for the third quarter of 2014, is set to support natural gas field development and production plan for the Aung Sinkha field.

In September 2013, Myanmar granted an approval for PTTEP to include Mitsui Oil Exploration Co., Ltd. (MOECO) for Block M 3 as a business partner with a 20% working interest. PTTEP now holds 80% in working interest and retains the operatorship.

- **Myanmar Block M11 Project:** The current activities include the MNZ-1 final well report preparation and petroleum potential assessment in other areas within the M11 block for further evaluation.

- **Myanmar PSCG and EP2 Project:** In the project area north of Yangon, a surface geological survey and 2D seismic acquisition are being conducted. A drilling campaign, including four exploration wells, is slated for the second quarter of 2014.

- **Algeria Hassi Bir Rekaiz Project:** The first phase exploration drilling campaign, consisting of seven wells in 2012 and two wells in 2013, was completed with eight petroleum discoveries. The company is planning phase 2 of the drilling campaign during May 2013 - May 2015.

- **Kenya L5, L7, L11A, L11B and L12 Project:** The Kiboko-1 of L11B exploration drilling was completed and dry. Well evaluation is being integrated with the ongoing geology study of the area.

Development Projects

All activities focus on the advancement of the production projects to proceed under the timeline and approved budget in order to generate revenue and create added value to the organization in the near term, and to substitute depleted production projects, including the following.

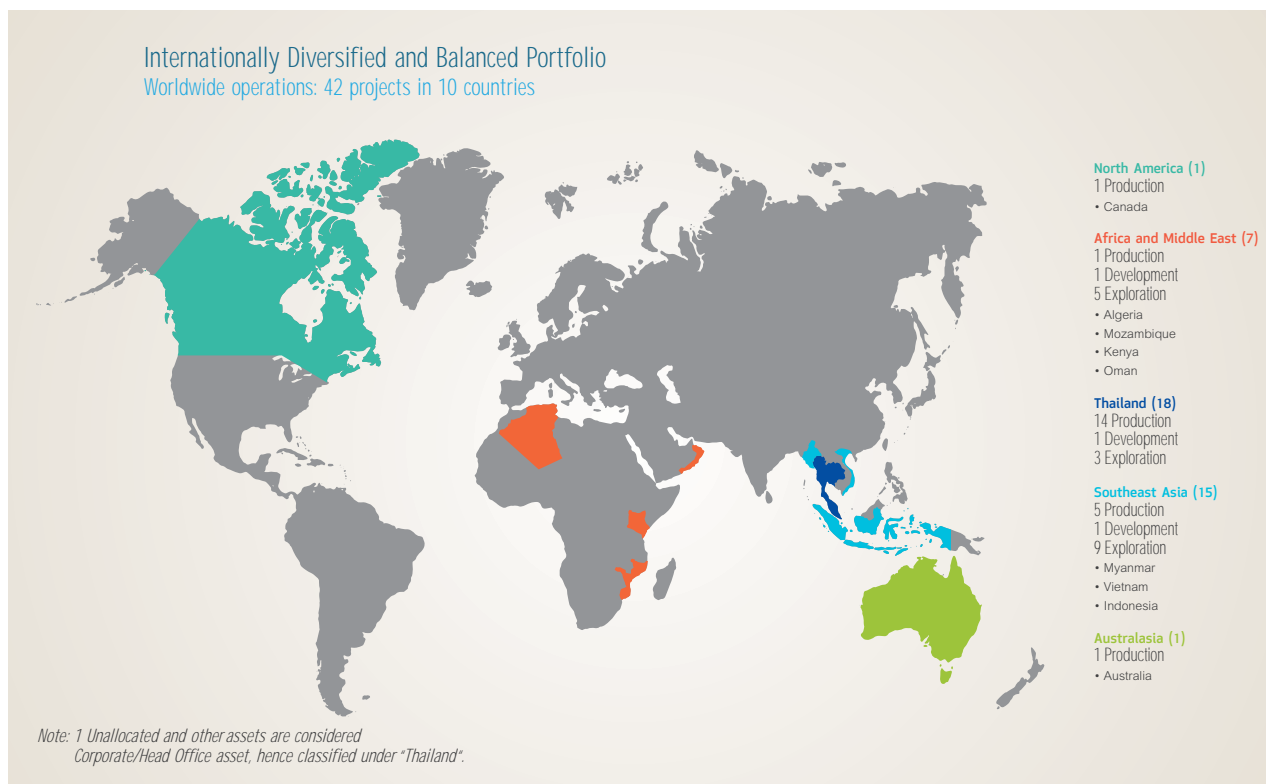
- **Zawtika Project:** The project phase 1A is ongoing. Construction and installation of three wellhead platforms, interconnecting pipelines and the trunk line were completed offshore. Ongoing activities include the laying of onshore gas pipeline, a production well drilling campaign and the fabrication of the central processing platform, scheduled for sailing and installation in October 2014. Commercial production is set to begin in the first quarter of 2014.

- **Cash Maple Project:** PTTEP Australasia is actively evaluating petroleum commercial potential with geology, geophysics and engineering technology, and development options. Additional exploration drilling is scheduled for early 2014.

- **Canada Oil Sands KKD Project:** The project is under FEED (Front End Engineering Design) with a production capacity design for Corner Field at 40,000 b/d.

- **Algeria 433a & 416b Project:** Development drilling at six out of 12 wells was completed. Engineering work, procurement and construction of the production facilities and transport pipeline (EPC1) and accommodation and utilities (EPC2) are ongoing. Commercial production is scheduled for late 2014.

- **Mozambique Rovuma Offshore Area 1 Project:** The project includes the development of an offshore gas field; fabrication and construction of the onshore LNG facilities in the Cape Afungi industrial zone in Cabo Delgado, a town located in northern Mozambique; and a series of exploration and appraisal drilling campaigns to identify additional petroleum potential. A major gas deposit was discovered at the Espadarte-1 exploration well and its appraisal wells Atum-3, Golfinho-5 and Golfinho-6. Detailed evaluation of these wells is also ongoing.



Production Projects

Total production is from both domestic and international projects, including those operated by PTTEP and by its operating partners to maintain and increase, wherever possible, production capacity with the best available technologies.

- **Bongkot Project:** The 2013 average Bongkot North production was 600 MMcf/d and 21,600 b/d of condensate. The year's average Bongkot South production was 320 MMcf/d and 10,995 b/d. With the current combined production of 925 MMcf/d, Bongkot Field output accounts for 20% of Thailand's total need of natural gas.

- **S1 Project:** As a result of more new wells, artificial lifting and water flooding-enhanced oil recovery activities continually conducted throughout the year, the peak production was recorded at 37,890 b/d in February 2013.

- **Vietnam 16-1 Project:** The appraisal well drilling in the H5 prospect, south of Te Giac Trang field, was successful. The near-future production plan is underway. The project's average output this year included 43,700 b/d and 29.9 MMcf/d of the crude oil and natural gas accordingly.

- **PTTEP Australasia Project:** PTTEP Australasia began crude oil production from Montara in June 2013, and the current production is 10,000 b/d. The first oil sale and shipment of 500,000 barrels was made in August. The production rate is set to steadily rise. Since the end of the Montara incident to the third quarter this year, the company has earned US\$ 212 million in insurance claims. Additional insurance-claim applications are being filed, and PTTEP Australasia expects payment during the fourth quarter of 2013 to 2014. The company has maintained a dialogue with the Indonesian government on their claim borne by the oil spill from Montara under the principle of proven evidence and impacts on scientific grounds.

- **Canada Oil Sands KKD Project:** The 2013 average bitumen production from Leismer Field was 14,827 b/d. The project is currently under FEED (Front End Engineering Design) for production capacity expansion to around 40,000 b/d in 2017.

Power Business

The merger between Independent Power (Thailand) Co., Ltd. (IPT), and PTT Utility Co., Ltd. (PTTUT), was completed on January 10 this year, thus forming Global Power Synergy Co., Ltd. (GPSC), PTT Group's power-business flagship. Its present installed capacity is 1,038 MW and 1,500 tons/hour of steam. In addition, its capacity proportional to equity shares amounts to 514 MW and 96.8 tons/hour of steam. In all, GPSC therefore commands 1,552 MW and 1,596.8 tons/hour of steam.

In Thailand and the ASEAN region, GPSC has constantly expanded its investment and has actively pushed for operational excellence through the PTT Group Operational Excellence to lead to efficient, effective, and sustainable operations on a par with leading international companies (top quartile performance).

As of the year-end, GPSC posted Baht 27,016 million in total revenue, resulting from power sale of 7,250,690 MW/hour, steam sale of 5,782,225 tons, and demineralized-water sale of 3,450,600 cubic meters net to the company, which commanded a total net profit of Baht 1,158 million.



GPSC Milestones

January

- The merger between PTTUT and IPT was completed on January 10, thus forming Global Power Synergy Co., Ltd. (GPSC). Its four joint venturers consisted of PTT (30.10%), PTTGC (30.31%), TOP (11.88%), and TP (27.71%).

June

- On June 19, earned the Green Industry award (Level 3) for its Green System (systematic environmental management for the Rayong area unit), presented by the Ministry of Industry.

July

- On July 25, signed a memorandum of understanding with Myanmar's Department of Electric Power and GMS Power Co., Ltd., on a feasibility study of a 500-MW combined-cycle power plant located in Yangon and Irrawaddy.

December

- GPSC assumed transfer of the power business from PTT and its four subsidiaries, namely Combined Head and Power Producing Co., Ltd., Bangpa-in Cogeneration Co., Ltd., Thai Solar Renewable Co., Ltd., and Natee Synergy Co., Ltd., commanding a proportional capacity of about 393 MW.

- On December 17, acquired from IRPC Plc 51% of the shares in IRPC Clean Power Co., Ltd., which invests in two 120-MW SPPs, located in the IRPC Industrial Estate.

- On December 19, GPSC issued 260.73 million recapitalization shares at a par value of Baht 23.0127, worth a total of Baht 6,000 million, for all its shareholders in proportion to their equity holding, thus raising its registered paid-up capital to Baht 11,237.26 million.



• Downstream businesses

Petrochemicals and Refining Business

This business has consistently developed and increased their capacities, while adding products and services together with a constant search for investment opportunities worldwide to sharpen the competitive edge for PTT Group. It has also restructured investment of PTT Group companies in a move to add business values and push assorted plans/projects, including PTT Group Operational Excellence (OpEx), PTT Group Operational Excellence Management (OEMS), and Petrochemical and Refining integrated synergy management (PRISM). Thus, PTT could constantly derive results from operational excellence and forge Group synergy. In addition, the business unit expanded its plans to accommodate the core strategy of PTT Group, particularly that concerning the Green Growth Roadmap (alternative-energy and bioplastics products). The purposes are, first, to make joint strides toward common goals among the group for leading performance in Asia-Pacific; second, to play a part in supporting PTT Group's missions of establishing energy security and prosperity, together with improved living conditions for society, communities, and the environment in a sustainable manner. This year's performance for the business unit is summarized below.

Petrochemical and refining performance

First, the overall distribution of petrochemical products this year, led by PTT Global Chemical Plc (PTTGC), equaled 60.74 million barrels from the petroleum products and public utilities group, a fall of 9.98 million barrels from last year since production capacity fell from 100% to 91% due to 38-day maintenance shutdown in Q2/2013 and 9-day hydrocracking unit shutdown in Q3/2013; 3.35 million tons from the aromatics group, a rise of 0.08 million tons from last year; and 2.58 million tons from the olefins and downstream business group, a rise of 0.03 million tons from last year, despite the GSPS#5 shutdown incident of PTT causing PTTGC to not receiving feedstock at full amount, and the 77-day maintenance shutdown of LDPE plant. Meanwhile, there was a decrease of market GRM due to the fall of product to feed margins. However, the accounting GRM (gross refining margin) increased because of the profit from commodity hedging and the net realizable value (NRV). On the contrary there was

a continuous rise in product-to-feed margins on olefins and related products. The increase derived from the rising price of the products. Meanwhile, the product-to-feed margins of aromatics products rose with the increasing prices of paraxylene and benzene which rose by 3% and 45% respectively. Therefore PTTGC's earnings this year slightly fall from last year by only 2%.

HMC Polymers Co., Ltd. (HMC), recorded a total output of 650,447 tons this year, a slightly fall from previous year due to higher costs of feedstock from the new feedstock cost structure. The weakening baht caused exchange rate loss while last year HMC gained profits from the strengthening of the baht. HMC's performance outcome for the year was therefore less remarkable than last year.

PTT Asahi Chemical Co., Ltd. (PTTAC), began its commercial operation on January 1 this year with an acrylonitrile (AN) capacity of 200,000 tons/year and methyl methacrylate (MMA) capacity of 70,000 tons/year. For the year, PTTAC's total sales amounted to 244,878 tons.

PTT Polymer Marketing Co., Ltd. (PTTPM), the main distribution arm of petrochemical products for PTT, achieved a sales record of 1,648,319 tons, a rise of 12,414 tons, due to the rising HDPE sales of 51,666 tons, LLDPE sales of 717 tons, and sales of other products of 7,150 tons. Sales of LDPE, however, fell by 47,119 tons because of the 77-day maintenance shutdown of PTTGC's LDPE plant. Yet, because of less gains in foreign exchange rates this year and the higher operating expenses; PTTPM's performance this year was outdone by last year's results.

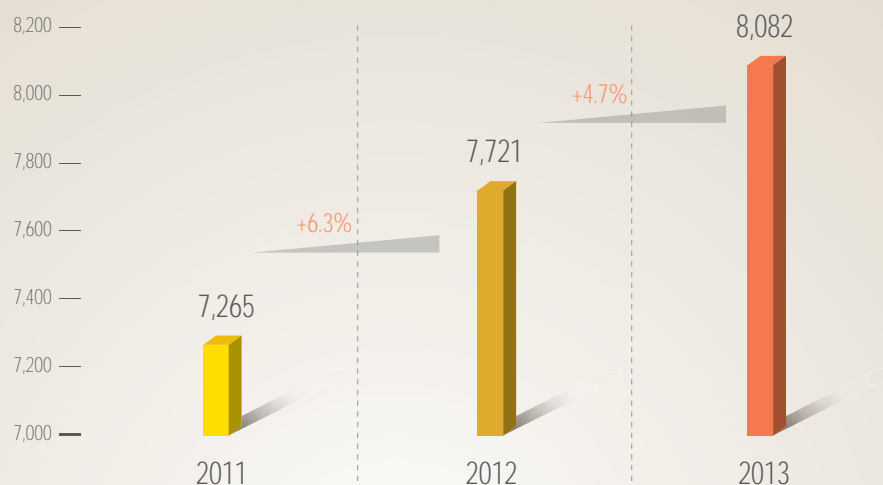
PTT Polymer Logistics Co., Ltd. (PTTPL), the fully integrated logistics arm of PTT Group's polymer production, achieved services totaling 8,790,745 tons, a rise of 364,356 tons from the last year due to 106,902 tons in transport service workload; 121,606 tons in Bagging & Packing; 47,917 tons in warehouse; and 87,931 tons in storage from last year-as a result of additional customers in and outside PTT Group. However, service costs and operation costs rose. As a result, PTTPL's 2012 performance decreased from last year.

For its overall refining business this year, the average equity holding by PTT was 36% in all domestic refineries of the total nationwide refining output of 1,045 KBD including the 135 KBD capacity of PTTGC's condensate splitting unit and the 17 KBD capacity of Rayong Purifier, which was indefinitely suspended since February 7, 2012. The total crude run of PTT Group's refineries (including PTTGC's crude distillation units and its condensate splitting unit) totaled 946 KBD, the rise to 51 KBD from last year. The CDU utilization was at 94% while last year was at 92%. This is because there was an annual maintenance shutdown of BCP while the Crude Refinery Unit 3, which

has refinery capacity of 80 KBD, had an accident and caused 44-day shutdown. The BCP lowered capacity to check the error in vacuum distillation unit and heat exchanger of Hydrogen Plant. The error of Co - Gen which supplies electricity to refineries causes hydrocracker disruption. As a result, the group's refinery businesses netted a lower profit than last year, apart from exchange rate loss. The gross integrated margin (GIM) of PTT refining businesses stood at US\$ 6.64 per barrel higher than the previous year which stood at US\$ 6.04 per barrel due to stock gain as well as the rise of commodity hedging and product spread.

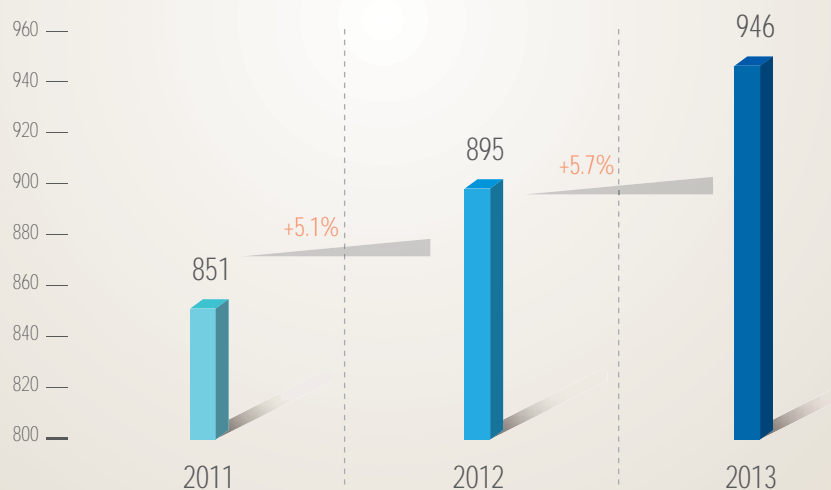
Total Sales Volume of Petrochemicals (Olefins + Aromatics + Polymers)

Unit: KT/year



Total Refining Throughput for PTT Group

Unit: Kbd



Petrochemicals and Refining Business Unit milestones

January

- PTT Asahi Chemical Co., Ltd., began commercial production under the Acrylonitrile (AN) Project, with a capacity of 200 KTA, along with 70 KTA of methyl methacrylate (MMA).

March

- IRPC Plc. began selling its Green ABS technology, thanks to its successful R&D for others. This move represented its transition from a licensee to a licensor.

- Bangchak Petroleum Plc. began commercial production under the phase 2 of its Sunny Bangchak Project with a capacity of 32 MW. It also launched, for the first time in Asia, Euro 5 Gasohol E20, containing five-fold reduction of sulfur dioxide in comparison with the Euro 4 standard.

April

- Bangchak Petroleum Plc. began its commercial production under the 32-MW Sunny Bangchak Project (Phase 2) in Phra Nakhon Si Ayutthaya and Chaiyaphum and signed a long-term Exclusive Partner agreement with Big C Supercenter Plc. to merge the development capability for Mini Big C outlets in Bangchak service stations nationwide, covering 500 branches in 2018.

- PTT Polymer Marketing Co., Ltd., was the appointed dealer in Thailand and Asia of the Ingeo bioplastics by NatureWorks LLC. This represented an expanded product sales to green plastics of international standards.

May

- Launched the “PTT Group’s Rayong Wanarom Eco-forest” on the protection strip of PTT Eco IZ project as a prototype eco-forest to provide knowledge of local plants and biodiversity.

- PTTGC acquired the 40% remaining shares of PTT Phenol Co., Ltd., making it the sole owner of the company.



Bangchak Petroleum Plc. began commercial production of its Sunny Bangchak Project.



The launch of “PTT Group’s Rayong Wanarom”

June

- Founded PTT PMMA Co., Ltd., to develop the Poly Methyl Methacrylate (PMMA) Project with a capacity of 40 KTA, an extension of the petrochemical business of PTT Group on the basis of MMA supplied by PTT Asahi Chemical Co., Ltd.

- IRPC Plc. founded IRPC Clean Power Co., Ltd., to engage in the generation of steam, power, and other industrial-sector public utilities.

July

- With eight Major Cineplex Group theaters, launched the Friendly POP bucket, which is fully biodegradable and a product from the Bio PBS innovation. Under the deal, the theaters will use Friendly POP for three years.



Partnering with Major Cineplex Group to launch biodegradable popcorn bucket, the Friendly Pop.

- PTTGC and the Sinochem Group (China's national oil company) signed a memorandum of understanding for a joint probe of business development in the People's Republic of China.

- IRPC Plc. expanded the capacity of Acrylonitrile Butadiene Styrene (ABS) from 120 KTA to 180 KTA.

- Thai Paraxylene Co., Ltd. (TPX, wholly owned by Thai Oil Plc.), and Mitsui & Co., Ltd., jointly formed LABIX Co., Ltd., to develop the 100,000-ton/year LAB (linear alkyl benzene) Project, a first in Thailand and Southeast Asia. Meanwhile, Thailand Marine Co., Ltd. (TM, also wholly owned by Thai Oil Plc.), partnered Natalin Co., Ltd., and TOP-NTL Shipping Trust (TOP-NTL, 50% owned by TM and Natalin each), to form TOP Nautical Star Co., Ltd., to provide storage and transport for crude oil, feedstock, and petroleum products using large vessels.

August

- IRPC Plc. expanded the capacity of EBSM from 200 KTA to 260 KTA.

September

- Signed a memorandum of understanding with Mitsubishi Rayon Co., Ltd., for a joint probe of business development opportunities for carbon fiber in ASEAN member countries.

- The PTT Eco IZ Project won the "Eco-Symbiosis Award", presented by the Industrial Estate Authority of Thailand.

- PTTGC, along with the Royal Project Foundation and the Thailand Research Fund, signed an agreement on the cooperation under a project to develop plastics products under the Green Project: Save the World, Save Us by Green Technology. The project seeks to jointly develop agro-plastics and applications of plastics as agricultural produce containers.

- PTTGC and Thai Oil Plc. were both ranked on the Dow Jones Sustainability Indices, but in different categories. PTTGC was in the Chemical, DJSI World, category; Thai Oil, the Oil & Gas, DJSI Emerging Markets.

- Bangchak Petroleum Plc. was the first company in Thailand to win a Carbon Offset Certificate from the Thailand Greenhouse Gas Management (Public Organization).

December

- PTTGC and PT Pertamina (Indonesia's national oil company) signed a joint-venture agreement on joint investment in a major petrochemical complex project in that country.



• International investment business

This year PTTI continued expanding its investment in the coal business to grow its coal reserves by investing in Indonesia and Madagascar, together with a joint-venture probe of the potential of coal deposits in Brunei. For its power generation aspects, the investment in a hydropower plant in Lao PDR is ongoing, but will be done under GPSC. Below are the highlights of major international investments.

Coal business

- Through its subsidiary PTTML, PTTI acquired shares in Sakari Resources Limited (SAR), an investor in coal mines in Indonesia, and completed delisting from Singapore's exchange in February. With PTTI currently holding 94.58% in SAR, its proportional production of coal rose to 10.5 million tons, whereas its coal reserves stood at 1,574 million tons. Also, PTTI has grown its management role in the company, as seen in the appointment of Mr. Surong Bulakul as CEO, replacing an executive who had completed his term.

- For the project in Madagascar, PTTI's equity share was 80%, with about 117 million tons in JORC reserves (only for open-pit mining). Joint-venture negotiation is ongoing, as is the wait for a production license from that government-on hold because of the

presidential election. All is due for completion by the first quarter of 2014, and commercial production is due by the third quarter of 2017.

- For the project in Brunei, PTTI's equity share was 35%. The project was awaiting coal business legislation approval from the government. PTTI and its joint-venture partners have prepared coal exploration drilling plans so as to proceed immediately once the law is promulgated. Commercial production is expected in the second quarter of 2019.

Power business

- The Xayaburi hydropower plant project (XPCL) in Laos, where PTTI holds 25% equity, chalked up about 20.02% in project construction progress. Construction is set for completion for commercial production by the end of 2019. Note that PTTI has migrated the project to GPSC since December 23 this year.

- As for the Nam Lik-1 hydropower project plant in Laos, PTTI's share is 40%. This year, the project has seen signatures put on a loan agreement with a lenders' group and another contractor contract for social and environmental work. The project is expected to due for commercial operation in late 2016. Note that PTTI has migrated the project to GPSC, which is due to be completed in the first quarter of 2014.

Palm oil plantation and development

- This year PTT Green Energy Co., Ltd. (PTTGE), held a net ownership of 1.2 million rai of land used for palm oil plantations. To date, it has completed work on 177,600 rai (net to PTTGE). The investment decision was based on the fact that Indonesia boasted the most suitable geography and climate for palm oil plantations, and that the world's largest palm oil plantations were in Indonesia. The total output of Indonesian palm oil (fresh fruit bunch, FFB) is now 298,266 tons.

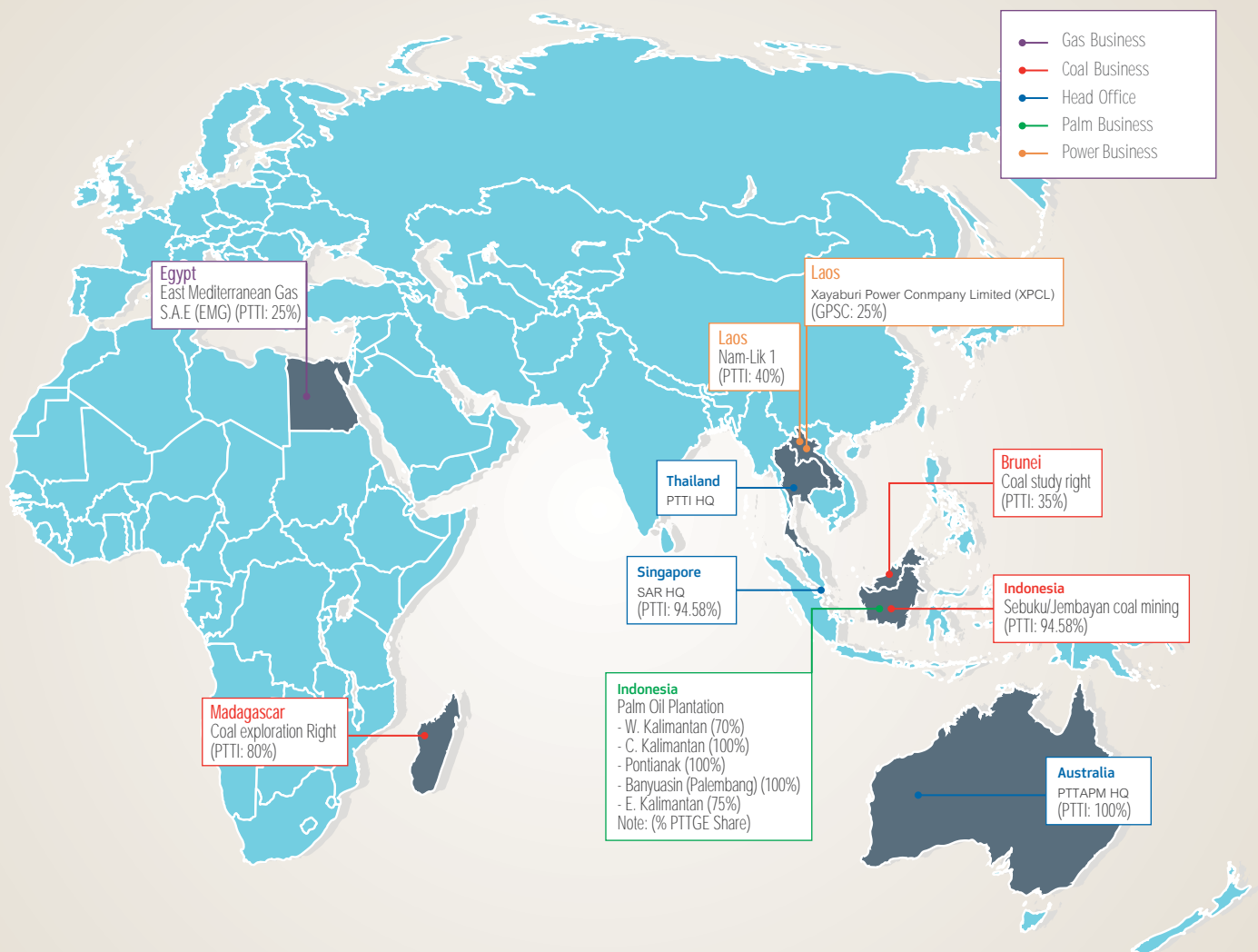
- PTTGE has also begun crude palm oil (CPO) planting at Pontianak on West Kalimantan and Palembang on Sumatra Island with a capacity of 45 tons/hour and 30 tons/hour respectively. To date, about 55,095 tons

has been produced. A 45-ton/hour extraction plant is being built on East Kalimantan Island, which is due for completion in the third quarter of 2014.

Regarding international investments, PTT's strategy is to focus on continuous efficiency improvement and production growth for existing projects, and on consistently seeking value-adding business development opportunities with optimal application of existing resources.

In addition to improving the performance of its business units, PTT and PTT Group took the following actions in running their businesses, with highlights captured below:

Current PTTI and PTTGE Investment



Strategic planning management

PTT's strategic planning process was ongoing all year, beginning with the Top Executive Thinking Session (TTS) to jointly review and define strategic directions for PTT Group over the next 5 - 10 years in line with prevailing business circumstances to ensure that PTT Group's businesses will fulfill its vision and goals in three aspects: (1) Ranked among the 100 major companies worldwide in Fortune's ranking in 2020 (2) Ranked on the Dow Jones Sustainability Indices (DJSI) (3) Post a top-quartile performance in 2020. Once TTS had concurred with the strategic directions over the next 5 - 10 years, the business units and supporting units developed their respective strategic directions and sought concurrence from an Executive Vice President and upward meeting of PTT Group (the Strategic Thinking Session, STS). And once STS concurred with such directions, the ideas were tabled for the concurrence of the Board. For 2013 to 2020, business directions and strategies consist of



- The TAGNOC (Technologically Advanced and Green National Oil Company) directions and strategies, which have been adopted as the core strategies since 2012. In 2013, PTT has been monitoring individual project updates and defining of approaches to solve problems and overcome obstacles in an effort to drive each project to tangible success.
- PTT Group's New Initiatives are summarized below:
 - PTT Group Portfolio for both the upstream petroleum and gas business and the downstream petroleum business in 4 dimensions: the stress is on establishment of PTT Group's continued business growth at an average of 8% until 2020; establishment of national energy security over the long term to accommodate rising demand through adequate supply sourcing of LNG and investment expansion in energy networks; maintenance of PTT Group's financial ranking on a par with that of Thailand; and maintenance of performance at a leading tier, as measured by returns on investment, which should be at 20% in 2020.
 - Mobilizing People to Globalize: PTT has devised an incentive plan for senior executives and a plan to groom new-generation employees for overseas posting.



▪ PTT Group CSV: PTT Group values business growth hand in hand with the strengthening of Thai society in a sustainable way. To Achieve the goal, it has developed a social responsibility plan to link up with business directions in the following ways:

- Educational development to encompass all target groups and establish connection with PTT Group, namely RAIST and RASA.

- Community and social development: this is achieved by planning and designing projects to address the needs of communities around PTT Group's sites to minimize conflicts and business risks, while growing successful project outcomes for community strengths, including a project on community development, which is an extension of the 84 Tambon Forest Conservation Project.

- Natural resource and environmental development: This is achieved by continued reforestation and urban tree-planting as planned, including maintenance of the 1 million rai of afforested land under the Carbon Sink approach—all done to strengthen PTT Group's networks.

• Investment strategies in member countries of ASEAN (AEC): This grooms PTT Group for the inauguration of the ASEAN Economic Community in 2015. The strategic plan fosters energy security for the region, while driving regional economic growth for competitiveness with other regions. In 2013 AEC Country Champions were appointed from each country for explicit business implementation. It also saw investment expansion in Myanmar, such as service stations. Moreover, the assistance to Myanmar including the awarding of 40 vocational scholarships and one master's degree scholarship.

• Specific directions and strategies of business units and supporting functions.



PTT Group's financial management

With a market capitalization of over Baht 816,902 million, or 7.1% of total market capitalization at the year-end, PTT is the largest company on SET. If all listed companies under PTT Group are included, the market capitalization would exceed Baht 2,077,050 million, or about 18.1% of SET's total market capitalization. PTT Group continues to grow steadily. To ensure a strong financial status and discipline with credit ratings compatible with industry peers, financial management must therefore be efficient and well-disciplined, and disclosure of information to all investors must be equitable and transparent. To achieve the goal, PTT has applied its treasury and credit policy as a guideline in managing the finances of PTT and PTT Group.

In 2013, PTT managed its financial portfolio, including cash liquidity, risk management on exchange rates and interest rates to reduce costs, and/or add value to the corporation by taking the following actions:

- Issued financial derivatives to lower risks arising from long-term loans, which resulted in a reduction of the loan cost by about Baht 150 million (only for the first tranche of interest payment).

- Managed its foreign-exchange risks in its commercial transactions in the import, export, international sales, and procurement of crude oil to the refineries under PTT Group, valued at US\$ 36,920 million, and added value to the Group of about Baht 1,050 million.



Performance management and improvement of management efficiency

PTT pays full attention to the development of organizational capability toward becoming a high-performance organization through continuous improvement of its organizational efficiency and business processes to achieve the benchmark of world-class management under the criteria of the Thailand Quality Award (TQA). The TQA criteria shares its basis with The Malcolm Baldrige National Quality Award (MBNQA) of the US, which is universally accepted and the prototype award emulated by several countries worldwide. A goal has been set to win the Thailand Quality Class (TQC) across the organization by 2014 and a TQA in 2018. In 2013, PTT laid down a TQA platform, while developing a TQA Application Report for OTQA (Office of Thailand Quality Award) with a focus on continual improvement of management quality, ranging from revision of PTT Leadership System, preparation of a Leader's Actions manual for executives, to a focus on performance tracking through agenda-based tracking, fact-based, and benchmarking. These actions support decision-making, while seeking opportunities for quantum-leap improvement of the Group, favoring innovations in tandem with personnel capacity-building, business design process development in response to TAGNOC and international business expansion. Meanwhile, a committee responsible for systematizing PTT's overall customer management was appointed to

help PTT systematically and efficiently satisfy customers' needs.

This year, PTT earned Outstanding State Enterprise Awards, sponsored by the Ministry of Finance, namely the Outstanding Innovation Award in a fourth straight year for "PTT Novel Co-processing Technology for Bio-dehydrogenated Diesel". This is the world's first innovative technology to transform the molecular structure of vegetable oil into that of high-quality synthetic biodiesel.





Product innovations

This year, PTT Group came up with PTT HyForce Premium Diesel, a new-formula synthetic fuel exclusive to PTT based on the same technology for generation of synthetic jet fuels, which certified by the Euro 5 standard for the first time in Thailand, it is marked by strong engine performance from acceleration.

Meanwhile, PTT Research & Technology Institute came up with the PTT DIESEL CNG kit, a technology made possible by the principle of Dual Fuels - Premixed Charge Compression Ignition developed by PTT's researcher. A technology license was sold to Sammitr Green Power Co., Ltd., on July 25, 2013.

In conjunction with the Oil Business Unit, PTT Research & Technology Institute established a network of electric vehicle chargers. This year, a unit was launched at The Crystal PTT service station on August 16. Another charger unit was installed on the entrance ramp to PTT's visitor parking building at Head Office in November, and the Laem Chabang service station charger was launched in December. Under installation are the Bang Sai service station and the GSP (Rayong) service station units.

Growing Together for the Energy of Thailand



Determined to be a good corporate citizen, PTT Group has illustrated its responsibility for the quality of life at all its sites. As a further step in building up sustainability for society, PTT Group has adopted the Creating Shared Value (CSV) concept into its knowledge management and applied it for technological development, innovation, and improvement of people's well-being through various activities designed to bolster CSV for the organization, communities, society, and the nation. Some pilot projects were initiated in 2013 as an introduction of CSV before having it incorporated into all of the Group's business processes.



Over many decades of dedication to society, PTT Group has earned confidence and trust from communities and is now recognized at the national and international levels. Recently, the Group has maintained its ranking on Dow Jones Sustainability Indices (DJSI). This is the result of the three-dimensional sustainable development strategy, including educational development, social and community development, and natural resource and environmental conservation. These tasks will be reevaluated and enhanced to deliver a pronounced CSV success. Tasks in these development areas will still be carried on to achieve genuine CSV.



Creating values...through educational and human resource development

Learning Triad for Sustainability

PTT Group, as an agency in charge of energy affairs, is bound with the responsibility for strengthening national energy security and economy. To ensure that both the country and the organization can forge ahead in the international arena, the Group recognizes that human resource development is requisite. Knowledgeable people, particularly in science and technology areas, can contribute to improvement in the future. Therefore, PTT Group has opted for the Learning Triad for Sustainability strategy to create solid learning power to groom Thailand for the AEC integration in 2015.

The first strategy involves developing science and technology with a focus on both the studies and personnel by optimizing knowledge within PTT Group. To this end, it founded "Rayong Institute of Science & Technology" (RAIST) and "Rayong Science Academy" (RSA), of which the first semester will be scheduled in the 2015 academic year. The Group was bestowed with a special opportunity from HRH Princess Maha Chakri Sirindhorn to join her entourage by visiting to leading science and technology institutes in South Korea, which proved beneficial for designing the curriculum during 2013. A public hearing was also held to collect opinions from local residents. Regarding construction of the two institutes, one at the school level and the other one at the undergraduate level, is set to start in early 2014. Moreover, an open house to meet the country's prominent mathematicians and scientists' was held to introduce these two institutes to over 300 students with keen interest and skills in mathematics and science. The event is meant for inspiring students and parents with the value and significance of researchers and scientists for national development.

The second strategy is the Thailand Energy Academy (TEA), founded by the Ministry of Energy. PTT takes part in supporting the strategy to equip opinion leaders from the public and private sectors, as well as the media, academics, and the general public with a proper understanding of energy matters because energy is an essential factor to serve the public's basic needs and is a tool to drive the business and industrial sectors toward energy sustainability.



The third strategy is the establishment of PTT Leadership and Learning Institute (PLLI) to develop human resources to full potential, focusing on leadership development and life-long learning encouragement. This is to groom potential future leaders for the Group. The training programs, designed to fit all groups of employees - from new recruits to senior managers - cover development of core competency, functional competency, and global competency. For the senior executive level, PLLI has training curricula co-developed with Harvard Business School, particularly for PTT Group. PLLI will take charge in driving the Group toward its goal of being a Thai Premier Multinational Energy Company.

PTT Group is convinced that by keeping the Learning Triad for Sustainability strategy in good balance, Thailand will grow further strongly out of the capability of Thai youths and Thais.





Providing educational opportunities

- PTT constantly grants educational support to needy students in the form of scholarships and learning materials to schools and universities located around its sites and along gas pipeline routes across the country. In 2013, a total of 2,000 scholarships, worth altogether Baht 6.6 million, were granted.

Developing learning centers and building educational infrastructure

- The 26th and 27th school buildings, of two floors and eight classrooms each, were constructed for Ban Chaimongkhon School, Nakhon Ratchasima, and Wat Ban Chang School, Rayong. Also, the 32nd and 33rd PTT Thai Energy for Thai libraries were erected for Kut Peng School, Ratchaburi, and Wat Pho Ratsatthatham, Ubon Ratchathani.

Driving forward youths' innovation capability

- PTT Youth Camp 2013 (5th year) - The theme of the year 2013 was 'Innovation Creates the Next'. The 'Bio Battery: a thin biological battery using an electrolyte solution obtained from local plants' entry, belonging to Map Ta Phut Phanphittayakhan School, Rayong, emerged the winner of the upper-secondary level category in the invention contest for a trophy from HRH Princess Maha Chakri Sirindhorn. Moreover, PTT and Thailand National Electronics and Computer Technology Center (NECTEC) jointly sponsored the winning project to represent Thailand at the International Sustainable World (Energy, Engineering, Environment) Project Olympiad (I-SWEEP) in the US. It was a chance to present Thai youths' innovation power at a global level.

- PTT Group Energy Plus Project - This project equipped the young generation with knowledge and understanding of alternative energy development to ensure energy sustainability. Over 8,000 children from 14 schools in Rayong formed the target group.

- **Petro Camp to Petro Champ Project** - This project provided knowledge about the petrochemical industry and application of science and technology to one's living, as well as to communities and the environment. Students in Rayong were selected for scholarships to pursue their college studies in the petrochemical industrial field. Four scholars have now graduated, while 28 are studying.

- **PTT Group V-Youth Camp** - This project nurtures public mind in Rayong children. After joining the camp, the children are expected to take part in social and community development. Over 200 children had participated in the camp activities in the previous year.

- **PTT Comic Contest, 3rd year** - In addition to providing knowledge and understanding of energy, the contest reminds the public that energy, which is vital for survival, is depleting. Comic lovers are always welcome to join by sending in comic strips for contest. The project has been well received, evident in the higher number of entries.

Promotion and development of art and culture studies

- PTT and Silpakorn University have joined hands in holding the PTT Art Contest for 28 consecutive years. In 2013 the theme was 'The Power of Nature', garnering as many as 519 entries. The project has been extended to the provinces, joining Chiang Mai University, Khon Kaen University, and Thaksin University in organizing improvised drawing contests under the PTT Youth Art Project. Three upcountry sessions were held this year.

Sports skill development at youth and professional levels

- The Company offers sponsorship to various sports events, including PTT Junior Championship, ATP - PTT Thailand Open, WTA - PTT Pattaya Open, PTT Golf Junior Open Championship, and PTT Group Cup youth football, PTT Rayong Football club, and Thai chess competition.





Moving forward...through social and community development

Development of a learning center for sufficiency path and community's energy innovation

- PTT keeps providing knowledge about self-reliance on the sufficiency path by upgrading the sufficiency path learning center into a sustainable learning center. The Company joined 23 communities in mapping out a 'Pilot Plan for Development of Tambon's Sufficiency Path Learning Center' to guide efficient administration of learning centers. The number of learning sites has been increased to 226, dictated by each area's resources and contexts, such as learning sites for biogas production from animal waste, community health system management, organic farming, household accounting, and garbage bank, while the number of learning curricula has been increased to 104. Role models, of which the number has risen to 396, are modified from 'knowledge possessors' to 'knowledge transferors'. A total of 2,575 households living on the sufficiency path were developed and became new volunteers to help make the sufficiency path sustainable. The knowledge has been expanded, evident in the over 66,000 persons having been provided with the sufficiency path learning. With support from community people, it looked into 'villagers' research' and translated it into community development programs in various areas. The project also promotes self-reliant communities in energy by leveraging PTT's renewable energy expertise to develop practical alternative energy technology considered suitable for each community context.

- Finally, the Company helped building strong communities by providing support for OTOP product development, while expanding sales channels in PTT service stations through a support project known as OTOP by PTT. This generated income for communities near PTT Laem Chabang station located on the inbound highway to Chon Buri.

Development of pleasant urban areas

PTT took part in community development at all its sites through various activities:

- Raising quality of life

- One activity in this area involved adjustment of the landscape of community areas around PTT's own Head Office by improving road conditions, drainage systems, and public areas. Included in the mission were four pilot projects to revamp the 'protection strips' between communities and its sites upcountry. In doing so, PTT based the design on the Miyawaki Method, an ecological afforestation technique of Prof. Dr. Akira Miyawaki. Public hearings collected community views on the development of over eight rai of green area in communities surrounding PTT's Lampang Petroleum Depot into the community's Happiness Center.

- In Rayong, PTT joined locals in improving the landscape of an over 11-rai public area around Wat Map Ta Phut. The project involved construction of a multipurpose building, adjustment of a common area for holding community activities, and cooperation with Map Ta Phut Municipality and Map Kha Patthana Municipality on systematic waste management.

- Also in Rayong, PTT and local residents of Ban Chang Municipality, Rayong, jointly studied a drinking water business, with a business development plan to be drawn up afterward.





Promotion of good health and pleasant environment

- This year PTT ran a 'Community Sharing' clinic at four operating sites, providing free medical service to employees and community people alike. PTT also ran a 'Mobile Clinic' project to provide basic medical service and knowledge about health for communities surrounding its sites across the country, with 9,225 persons using the service this year. As for the environment, the 'Green Rayong' project was initiated with an emphasis on adding green surroundings to encourage healthy living through a tree-planting activity called 'One Company, One Green Area'. A total of 25,450 trees were planted in collaboration with community people on a forest area of 124 rai. Since 2007, a total area of 404.5 rai has been turned into forest areas, which can absorb as much as 1,725 tons of carbon dioxide. It also launched a 'PTT Group's Rayong Wanarom Eco-forest' on the protection strip of PTT Eco IZ project in the Asia Industrial Estate, Amphoe Ban Chang, Rayong, as a prototype eco-forest to provide knowledge about local plants and biodiversity. The HRH Princess Maha Chakri Sirindhorn Herb Garden was also opened to the public. Serving as a community green area since 2005, the herb garden has already welcomed 379,156 visitors and generated an income of over Baht 23.6 million from the sale of community products.

- On the sports front, the PTT Group Cup sports event has played a part in developing the youths' football skill. As many as 12 young players who had joined this project managed to advance to the national team, while another 39 players to national and regional football associations. As well, a total of 156 young players were enrolled in secondary schools and universities through the talented students program.

- The PTT Group Marathon 2013 Project, initiated for promoting health and tourism of Rayong, attracted 3,000 runners.

- PTT provides constant cooperation with industrial groups in Rayong through the Community Partnership Association in raising community people's standard of living in parallel with development of Rayong into an eco-industrial town.

Safety assurance for the community

- Leveraging in-house knowledge, the Company set up LPG expert team of inspectors of cooking gas cylinders at 1,700 households surrounding 11 PTT sites across the country, while providing knowledge about the safe use of LPG and teaching basic firefighting techniques. In addition, 32,000 traffic cones were donated to police stations to ease the traffic problem. In parallel, PTT joined the Land Transport Department in organizing the 'Safe Driving with Traffic Discipline' training, attended by 426 young generation motorists, who were taught safe driving and car maintenance.

Value creation...through natural resource and environmental conservation

Sustainable eco-afforestation

- Under PTT Group's Green Roadmap, 60,531 rai of land was reforested by the PTT Reforestation Institute this year. Still, the Company and communities have constantly followed up the one-million-rai reforestation project earlier initiated to honor HM the King on the occasion of the 50th anniversary of his accession to the throne through various projects, namely forest fire prevention volunteer training (of which four sessions were held for 550), forest protection training (of which four sessions were held for 150 local volunteers), PTT forest protection training for youths (of which three sessions were held for 304). The Company also introduced the 'Afforestation in the City' project on PTT's 12 rai of land on Sukhaphiban 2 Road, Prawet district, Bangkok, to provide more lung areas for the city using the Miyawaki Method. Another initiative was the 'Volunteer Afforestation for Sustainability-One Team, One Rai' project, under which PTT executives and staff planted trees on five rai of land this year. The project is bound with a program to continuously monitor the growth of the trees planted.

Application of the knowledge obtained from research for community learning

- This year, PTT joined the National Science and Technology Development Agency (NSTDA) in running a Biodiversity Research and Training Program (BRT) to exploit research findings that involve biodiversity





for creating awareness of natural resource and environmental conservation in target areas, involving 4,000 people. The program was implemented through subsequent projects, namely a project to develop Phu Nong Pling Forest into a learning center of Tambon Huai Khayeng, Amphoe Thong Pha Phum, Kanchanaburi, and a nature study center of the West of Thailand, along with a project to expand the findings of the Khanom Beach research. It also took part in developing educational programs for local students through initiatives, namely 'Young Tour Guide Project at Phu Nong Pling', 'Khanom Rak Ban Koed Youth Camp', and 'PTT Youth Camp Rak Thalay Thai' to encourage the young generation to cherish natural resources and local ecology. Learning media were also devised for the communities, such as a set of Phu Nong Pling manual, Khanom, Wealth Founded on Bioresources manual, as well as information leaflets.

Development of ecological learning center

- PTT joined communities in managing learning centers and eco-tourism sites through such activities as improvement of the Phu Nong Pling nature study route, Amphoe Thong Pha Phum, Kanchanaburi, management of the Learning Center at the Sirinath Rajini Center for Mangrove Forest Studies, Prachuap Khiri Khan, which PTT jointly managed with the center's management committee. The center received over 65,000 visitors throughout the year. Besides, PTT provided training for 60 young tour guides to equip them with knowledge and skills about eco-tourism and encouraged them to take part in mangrove conservation. Another activity was the support for research to assess the fertility of mangrove areas and the use of social mechanisms to develop the area into a mangrove ecology learning center.

Soil and water conservation network

- PTT carried on with the Development and Campaign for Vetiver Application under HM the King's Initiative Project in its eighth consecutive year. As many as 44 pieces of work from the project earned awards in recognition of the promotion of vetiver planting and vetiver products. A special event was held for the 2,210 members of the Network of Vetiver Conservationists to exchange knowledge about using vetiver for soil and water conservation. PTT also worked with communities and a group of academics on the application of vetiver with proper engineering methods for landslide

prevention in 13 risky areas across the country. The cooperation involves, for example, planting vetiver in wooden boxes to prevent erosion from waves, reinforcing mountain slopes close to community areas to prevent landslides, and using bamboo gratings to cover the soil where vetiver is planted.

Volunteer mind in the organization to enhance social responsibility

Assistance for disaster victims

- PTT provided 75,000 disaster relief bags worth Baht 33.1 million to flood victims in various areas around the country and donated 30,000 blankets worth over Baht 3.6 million to people suffering from the cold. It also sent a number of relief bags to help over 1,000 households hit by the Yolanda storm on Bantayan Island through the Mission of Hope Project under the PTT Philippines Foundation.

Support PTTGC in tackling the oil spill at Ao Phrao

- Over 600 executives and staff of PTT volunteered to help PTTGC tackling the crude oil spill incident this year at Ao Phrao (Phrao Bay), Samed Island, Rayong, and took part in a rehabilitation program for affected communities on the island.

Support for social development

- PTT brought the Baht 500,000 donated by toilet users at PTT stations under the Restroom 20 project, which charged Baht 20 for each toilet use, to support the construction of toilets and re-landscaping of Kho Tan Khlong 27 School in Phra Nakhon Si Ayutthaya, as well as the construction of a clinic with first-aid equipment, provided at Ban Khao Chi Childcare Center, Chon Buri. Finally, Rayong Science School Foundation presented Baht 10 million for the construction of a school building and a shelter for novices at Plook Rak Kaeo Phandin School, Amphoe Cha-am, Phetchaburi, to encourage Buddhism studies among youths.

PTT's staunch stewardship of society, communities, and the environment is recognized widely, thus earning its Best Corporate Social Responsibility Awards, which is part of SET Awards 2013. Having won the award for three consecutive years, PTT is at all times ready to partner Thais, while providing sustainable energy and passing on innovation and knowledge to future generations.



SSHE for Corporate Excellence



Operating under the PTT Group SSHE (Security, Safety, Health, and Environment) Management Framework, PTT values efficiency improvement of the internal management system to lower risks associated with activities, work processes, and production processes throughout the supply chain while posting excellent performance under PTT Group's strategic objectives. This year PTT modified key processes to make its SSHE management even more effective while bolstering confidence in systematic management efficiency and effectiveness.



Policy management for more effective implementation

| Key action | Objective | Progress |
|--|---|---|
| <ul style="list-style-type: none"> Revise PTT Group SSHE Strategic Target 2020 | Clarity and deployment of targets down to units and companies in PTT Group | <ul style="list-style-type: none"> Revised and made the strategic targets clearer Energy efficiency target (one of the Green Roadmap (Green Process) strategies deployed to units and major companies in PTT Group. This year, a few performance targets were set for KPIs such as KPIs for Safety and Health, greenhouse gas emission, and energy consumption. |
| <ul style="list-style-type: none"> Expand application of PTT Group SSHE Management Standard (PTT Group SSHE MS) | Systematic SSHE management by PTT and PTT Group under uniform standards and directions, a key foundation for the extension of Operational Excellence Management Standard (OEMS) application | <ul style="list-style-type: none"> Expanded to units and companies in PTT Group including BSA, EnCo, Natural Gas for Vehicles Unit, and PTTRTI Requirements and practical guidelines annexed with OEMS for implementation. |
| <ul style="list-style-type: none"> Manage project to control, prevent, and lower key SSHE risks | Clear process development; setting of long-term goals, roadmaps, strategies, and responsible parties to ensure efficient, goal-achieving control, prevention, and lowering of key risks | <ul style="list-style-type: none"> This year, Corporate SSHE has undergone many projects to control and prevent major risks. The 24 key risk projects included greenhouse gases, efficient energy consumption, water management, and biodiversity managed. Please refer to Sustainability Report 2013 for progress details on key risk management. |

| Key action | Objective | Progress |
|---|---|--|
| <ul style="list-style-type: none"> Develop/improve additional corporate standards and procedures | <p>Written work procedures deployed for implementation throughout the organization.</p> | <p>Key standards and procedures developed/improved, including</p> <ul style="list-style-type: none"> PTT Group's automotive transport safety management Criteria and standards for environmental certification labels for PTT Group's products and services PTT's and PTT Group's goal-setting standards for security, safety, health, and the environment PTT Group's assessment manual for emergency and crisis drills PTT Group's severe incident management |

Revision of processes for management review, audit/assurance, and assurance of accuracy and credibility of performance data

| Key action | Objective | Progress |
|---|---|--|
| <ul style="list-style-type: none"> Revise performance outcomes by PTT Group QSHS Policy Committee and PTT's QSHS Committee | <p>Process improvement; revision of SSHE management effectiveness and efficiency under PTT Group SSHE Management Framework; screening of goals and strategic objectives</p> | <ul style="list-style-type: none"> Committee structure amended to cover units relevant to management and governance of PTT Group Clear agenda-based meetings defined for greater quality and efficiency revision Established SSHE Forum to drive operating tasks Seven meetings held this year; a minimum of one annual revision meeting held by the management of the BU, Unit, or of the company |

Key action

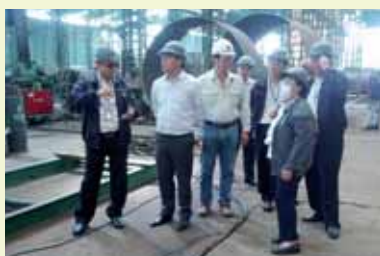
Objective

Progress

- Develop protocol standard and operating procedures for SSHE assessment audit

Set up protocol, develop assessment procedure, and revise for a clearer operation process to entrust SSHE management that it will be effective and efficient and developed continuously.

- Protocol and procedures defined, with audit frequency fixed at a minimum of three years under the PTT Group SSHE MS, to be conducted by a corporate panel and subject to site/company risks
- A total of 24 SSHE audits this year by corporate PTT and PTT Group



- Amend standards, processes, and tools for KPI data collection and reporting for SHE & GHG (greenhouse gases) performance for PTT Group to match the nature of business and management and to be in line with the latest international standards

Complete KPIs under international standards, covering all sites under PTT Group's management and supervision policy; above all, accurate and verifiable data

- Amendment of standards and reporting tools for Web application phase II completed
- Additional data collection expanded for PTT and PTT Group for 180 sites/plants
- Workshops launched for PTT Group SSHE personnel development for knowhow, skills, and experience in SHE performance data quality assurance.



Supervision with a focus on network establishment and participation of PTT Group

| Key action | Objective | Progress |
|---|---|--|
| <ul style="list-style-type: none"> Define policy on SSHE supervision in PTT Group under PTT Way of Conduct | <p>Communication of policy, framework/guidelines regarding the supervising of PTT Group companies</p> | <ul style="list-style-type: none"> Set up policy by collaborating with the 13 functions, Communication and expansion of policy deployment to companies |
| <ul style="list-style-type: none"> With QSHE units of PTT and PTT Group, set PTT Group SSHE Strategic Initiatives for 2014 | <p>Initiatives supporting achievement of PTT Group SSHE Target 2020</p> | <ul style="list-style-type: none"> Topics and framework for initiatives completed by SSHE Forum taskforce, driven and monitored by representatives of QSHE units and PTT Group companies |
| <ul style="list-style-type: none"> Promote SSHE knowledge network for PTT Group | <p>Sustainable integration of synergy of SSHE knowledge and personnel of PTT Group</p> | <ul style="list-style-type: none"> With Quality Management Department, developed taxonomy and portal as key foundation of knowledge management. SSHE instructor pool and auditor pool set up |

For more detailed information of SSHE performance outcomes, please refer to Corporate Sustainability Report 2013.



Financial Status and Performance

PTT and its subsidiaries' performance

Unit: million Baht

| | Y2012 | Y2013 | % Increase/ (Decrease) |
|--|----------------|---------------|---------------------------|
| Sales & services | 2,793,833 | 2,842,688 | 1.7% |
| Earnings before finance costs, income tax, depreciation and amortization including other non-operating income and expense (EBITDA) | 227,843 | 228,972 | 0.5% |
| Share of net income from investment in associates | 27,015 | 27,079 | 0.2% |
| Gain (loss) on foreign exchange | 7,434 | 305 | (95.9%) |
| Earning before interest and tax (EBIT) | 162,788 | 152,657 | (6.2%) |
| Income taxes | 46,516 | 47,692 | 2.5% |
| Net income | 104,608 | 94,652 | (9.5%) |

In 2013, sales revenue of PTT and its subsidiaries was Baht 2,842,688 million, increasing by 1.7% from Baht 2,793,833 million in 2012 from an increase in sales volume mainly from oil business, even the average Dubai crude oil price decreased from US\$ 109.1 per barrel in 2012 to US\$ 105.5 per barrel in 2013. Earnings before finance costs, income taxes, depreciation and amortization expenses, and other non-operating income and expenses (EBITDA) rose by Baht 1,129 million or 0.5% from Baht 227,843 million to Baht 228,972 million principally due to the better performance of PTT Exploration and Production Public Company Limited (PTTEP) and international trading business. In 2013, share of gain from investments in associates of PTT and its subsidiaries was Baht 27,079 million, slightly increasing by Baht 64 million compared with last year due to the better performance of gas and oil associates. On the other hand, the performance of refining and petrochemical associates marginally declined. There were foreign exchange losses in many refineries as a result of the Baht depreciation against US\$ while there were exchange gains in the previous year; even though, Gross Refining Margin (GRM) increased from higher stock gains in 2013, compared with stock

losses last year. Additionally, the lower performance of petrochemical associates was partly affected by the Baht depreciation against US\$, together with PTT Global Chemical Public Company Limited (PTTGC) LDPE plant shut down, incident in Gas Separation Plant unit 5 (GSP unit 5) causing PTTGC to lower its production, and PTTGC's expenses from oil spill incident, despite higher spread margins of Aromatics and Olefins products compared with 2012, mainly from better spread margin of Benzene, HDPE and Polypropylene.

The foreign exchange gains of PTT and its subsidiaries in 2013 were Baht 305 million, decreasing by Baht 7,129 million from 2012. The income taxes of PTT and its subsidiaries were Baht 47,692 million, increasing from 2012 by Baht 1,176 million or 2.5%. Consequently, the net income of PTT and its subsidiaries decreased by Baht 9,956 million or 9.5% from Baht 104,608 million in 2012 (or Baht 36.59 per share) to Baht 94,652 million in 2013 (or Baht 33.07 per share); even though, in 2012, PTTEP reported impairment loss on Montara assets amounting to Baht 6,366 million and PTT International Company Limited (PTTI) recognized impairment loss from its investment in EMG amounting to Baht 3,972 million.

Non-recurring items of PTT and its subsidiaries in 2013:

| Time | Non-recurring item |
|-----------|---|
| January | The amalgamation of PTT Utility Company Limited (PTTUT) and Independent Power (Thailand) Company Limited (IPT) was completed. The name of the merged company is Global Power Synergy Company Limited (GPSC). Moreover, PTT Asahi Chemical Co., Ltd. (PTTAC) has started its commercial operation. |
| July | PTTGC shut down its LDPE plant for 77 days. |
| August | There was an accident incurring from the lightning strike on the Waste Heat Recovery Unit or WHRU of GSP Unit 5, resulting in its cease of operation. Anyway, in October 2013, GSP Unit 5 has officially resumed its operation at 50% capacity. However, PTT has both Property Damage and Business Interruption insurance coverage. |
| September | PTT has established PTT Regional Treasury Center (PTT RTC) in Singapore to centralize treasury operation of PTT group to enhance ability to comprehensively support overall financial management of PTT Group. |
| November | PTT has transferred power business assets of PTT and its subsidiaries to GPSC in accordance to PTT's strategic direction in conducting PTT Group power business through GPSC. |

Even there were political demonstrations, PTT business operations are still running as normal without an impact due to an activation of PTT Business Continuity Management (BCM).

PTT and its subsidiaries' financial performance comparison by business group

Unit: million Baht

| | Y2012 | Y2013 | % Increase/ (Decrease) |
|---|-----------|-----------|---------------------------|
| Dubai crude price (US\$/bbl) | 109.1 | 105.5 | (3.3%) |
| Sales & services | 2,793,833 | 2,842,688 | 1.7% |
| • Exploration & Production | 212,537 | 224,973 | 5.9% |
| • Natural gas ^{1/} | 510,684 | 529,330 | 3.7% |
| • Oil ^{2/} | 608,371 | 617,305 | 1.5% |
| • International Trading ^{3/} | 1,635,520 | 1,655,735 | 1.2% |
| • Petrochemical ^{4/} | 83,406 | 93,054 | 11.6% |
| • Coal ^{5/} | 28,739 | 24,978 | (13.1%) |
| • Others ^{6/} | 4,348 | 4,027 | (7.4%) |
| • Elimination | (289,772) | (306,714) | (5.8%) |
| EBITDA | 227,843 | 228,972 | 0.5% |
| • Exploration & Production | 152,098 | 161,273 | 6.0% |
| • Natural gas | 52,267 | 45,098 | (13.7%) |
| • Oil | 15,929 | 13,361 | (16.1%) |
| • International Trading | (3,846) | (2,143) | 44.3% |
| • Petrochemical | 2,698 | 2,041 | (24.4%) |
| • Coal | 7,703 | 5,809 | (24.6%) |
| • Others | 1,164 | 1,697 | 45.8% |
| • Elimination | (170) | 1,836 | n.m. |
| EBIT | 162,788 | 152,657 | (6.2%) |
| • Exploration & Production | 109,406 | 110,922 | 1.4% |
| • Natural gas | 38,862 | 31,176 | (19.8%) |
| • Oil | 13,366 | 10,716 | (19.8%) |
| • International Trading | | | |
| - Excluding Effect of FX | (3,861) | (2,156) | 44.2% |
| - Including Effect of FX | 3,811 | 3,686 | (3.3%) |
| • Petrochemical | 1,895 | 769 | (59.4%) |
| • Coal | 3,598 | (591) | n.m. |
| • Others | (310) | (17) | 94.5% |
| • Elimination | (168) | 1,838 | n.m. |
| Depreciation and amortization expenses | 65,055 | 76,315 | 17.3% |
| Finance costs | 19,747 | 20,394 | 3.3% |
| Gain (loss) on foreign exchange | 7,434 | 305 | (95.9%) |
| Income taxes | 46,516 | 47,692 | 2.5% |
| Net income | 104,608 | 94,652 | (9.5%) |
| Earnings per share (Baht/share)^{7/} | 36.59 | 33.07 | (9.6%) |

Notes: 1/ Including the natural gas business, the consolidation of PTT Natural Gas Distribution Co., Ltd. (PTTNGD), PTT LNG Co., Ltd. (PTTLNG), the proportionate consolidation of Trans Thai-Malaysia (Thailand) Co., Ltd. (TTM(T)), Trans Thai-Malaysia (Malaysia) Sdn. Bhd. (TTM(M)) and District Cooling System and Power Plant Co., Ltd. (DCAP). On December 24, 2013, the Company sold its investments in Combined Heat and Power Producing Company Limited (CHPP) and Thai Solar Renewable Co., Ltd. (TSR), 100% and 40% shareholdings held by PTT, respectively, to Global Power Synergy Co., Ltd. (GPSC), in according with the approval of the board director meeting No. 9/2013 on September 27, 2013.

- 2/ Including the PTT oil business, the consolidation of PTT (Cambodia) Co., Ltd. (PTTCL), Subic Bay Energy Co., Ltd. (SBECL), PTT Tank Terminal Co., Ltd. (PTT TANK), PTT Retail Business Co., Ltd. (PTTRB) and the consolidated Thai Lube Blending Company Limited (TLBC) due to the 100% TLBC's shareholding acquisition by PTTRB and PTT, and PTT Oil Myanmar CO., Ltd. (PTTOM) (100% share holding held by PTT).
- 3/ Including the international trading business and the consolidation of PTT International Trading Pte. Ltd. (PTTI).
- 4/ Including the consolidation of PTT Polymer Marketing Co., Ltd. (PTTPM), PTT Polymer Logistics Co., Ltd. (PTTPL) and PTT PMMA Co., Ltd. (PTTPMMA) (100% shareholding held by PTT) and the proportionate consolidation of PTT Asahi Chemical Co., Ltd. (PTTAC), HMC Polymers Co., Ltd. (HMC) and PTT MCC BioChem Co., Ltd. (PTTMCC).
- 5/ Including Sakari Resources Ltd. (SAR) and International Coal Holding Limited (ICH) (94.58% and 100% shareholdings, respectively, held by PTT Mining Limited (PTTML), a 100% shareholding subsidiary of PTT International Company Limited (PTTI)).
- 6/ Including the consolidation of Energy Complex Co., Ltd. (EnCo), Business Services Alliance Co., Ltd. (BSA), PTT Green Energy Pte. Ltd. (PTTGE), PTT International Company Limited (PTTI), and PTT Regional Treasury Center Pte. Ltd. (PTTRTC) (100% shareholding held by PTT).
- 7/ Basic earnings per share is calculated by dividing net income attributable to ordinary shareholders by the weighted average number of ordinary shares which are held by third parties during the periods.

Upstream Business

• Petroleum Exploration and Production Business: PTT Exploration and Production Public Co., Ltd. (PTTEP)

In 2013, sales revenue of PTTEP was Baht 224,973 million, increasing by Baht 12,436 million or 5.9% from 2012, mainly due to

1. The average sales volume increased mainly from the Bongkot project. The South Bongkot project started its production as required by the Gas Sales Agreement in June 2012. Additionally, the Artificial lift technique of the S1, the Vietnam 16-1, the PTTEP Australasia and the Natuna Sea A projects also contribute a higher sales volume. On the other hand, sales volume of the Arthit project decreased because of lower gas volume bought from PTT.

2. The average selling prices rose by 1.1% from US\$ 64.9 per BOE in 2012 to US\$ 65.6 per BOE in 2013.

EBITDA in 2013 was Baht 161,273 million, increasing by Baht 9,175 million or 6.0% from 2012 due to an increase in average sales volume and average selling price as aforementioned, together with the decrease in the petroleum exploration expenses by Baht 1,279 million from lower seismic cost of the PTTEP Australasia, the A4/48 & A5/58 and the Myanmar M11 projects.

EBIT in 2013 was Baht 110,922 million, increasing by Baht 1,516 million or 1.4% from 2012 mainly due to an increase in EBITDA as aforementioned. However, the depreciation and amortization expenses escalated

mainly due to an increase in the number of completed assets and higher production rates of the Bongkot and the S1 projects as well as an increase in the number of completed assets of the Contract 4, the MTJDA-B17, and PTTEP Australasia project. However, depreciation and amortization expenses of the Vietnam 16-1 project decreased due to higher proved reserves and proved developed reserves revision.

• Natural Gas Business Unit

Sales revenue of Natural Gas Business Unit was Baht 529,330 million in 2013, increasing by Baht 18,646 million or 3.7% from 2012 due to the followings:

Natural Gas Supply sales

• The average natural gas sales volume increased in 2013 from higher demand of natural gas mainly from the power producers, especially SPP, together with the average natural gas selling prices which rose in all customer groups, except for industrial customers in relation to lower fuel oil price.

GSPs' product sales volume

• The sales volume of products from gas separation plants declined from the lower utilization rates of the gas separation plants as a result of an incident from lightning strike on WHRU of GSP Unit 5 on August 14, 2013 while the average product selling prices of the gas separation plants increased in relation to the global reference prices.

The details of reference product prices for the calculation of GSPs' products selling prices are as follows:

Unit: US\$ per Ton

| | Q4/2012 | Q3/2013 | Q4/2013 | Inc. (Dec.) | | 2012 | 2013 | Inc. (Dec.) |
|---|---------|---------|---------|-------------|-------|-------|-------|-------------|
| | | | | YoY | QoQ | | | |
| LPG ^{1/, 4/} | 998 | 825 | 964 | (3.4%) | 16.8% | 916 | 871 | (4.9%) |
| Ethylene ^{2/} | 1,286 | 1,325 | 1,427 | 11.0% | 7.7% | 1,229 | 1,352 | 10.0% |
| Propylene ^{2/} | 1,248 | 1,336 | 1,367 | 9.5% | 2.3% | 1,266 | 1,327 | 4.8% |
| High Density Polyethylene ^{2/} | 1,393 | 1,489 | 1,535 | 10.2% | 3.1% | 1,380 | 1,487 | 7.8% |
| Polypropylene ^{2/} | 1,462 | 1,516 | 1,537 | 5.1% | 1.4% | 1,445 | 1,516 | 4.9% |
| Naphtha ^{3/} | 863 | 837 | 864 | 0.1% | 3.2% | 863 | 842 | (2.4%) |

Notes: 1/ Contract price (CP)

2/ South East Asia Spot Price

3/ MOP Singapore (MOPS)

4/ LPG price is controlled by the Government via the Committee on Energy Policy Administration ("the Committee"). LPG ex-refinery price was fixed at Baht 10.996 per kilogram. However, on August 27, 2009, the Committee approved the new LPG ex-refinery price to be capped at US\$ 332.7549 per ton with floating foreign exchange rate. The adjustment of the exchange rate will be based on the average exchange rate in the previous month.

EBITDA and EBIT of Natural Gas Business in 2013 were Baht 45,098 million and Baht 31,176 million, respectively, decreasing from 2012 by Baht 7,169 million and Baht 7,686 million or 13.7% and 19.8%, respectively. The main reasons were the lower profit of natural gas sold to industrial customers due to the drop in selling prices relative to the reference fuel oil price and higher feed costs. The profit of products from gas separation plants also decreased in relation to the rise in feed costs. Additionally, the sales volume dropped as a result of unplanned shutdown of GSP Unit 5. Furthermore, the loss from NGV business increased in relation to an increase in sales volume and feed cost. As of December 31, 2013, the NGV retail price was Baht 10.50 per kilogram, except for public transportation receiving Baht 2.00 per kilogram compensation from PTT.

Downstream Business

• Oil Business Unit

Sales revenue of oil business in 2013 was Baht 617,305 million, increasing by Baht 8,934 million or 1.5% from 2012 because the sales volume increased mainly from aviation as well as higher gasoline sales volume as a result of the first car policy. Nonetheless, the average Dubai crude oil price decreased from US\$ 109.1 per barrel in 2012 to US\$ 105.5 per barrel in 2013.

EBITDA in 2013 was Baht 13,361 million which decreased by Baht 2,568 million or 16.1% from 2012. In addition, EBIT was Baht 10,716 million which decreased by Baht 2,650 million as a result of the drop in EBITDA as aforementioned, mainly from the decrease in diesel and lower gasoline margins from higher ethanol cost.

• International Trading Business Unit

Sales revenue of international trading business group was Baht 1,655,735 million in 2013, which increased by Baht 20,215 million or 1.2% from 2012 due to the rise in sales volume of PTTT while the sales volume of PTT's international trading business declined mainly from the drop in sales volume of crude oil and condensate from the out-in transactions. Furthermore, the oil selling prices decreased in accordance with global oil market prices.

EBITDA in 2013 had Baht 2,143 million losses, which was lower from losses in 2012 by Baht 1,703 million. However, EBIT, which included effect on foreign exchange, was Baht 3,686 million gains in this period, decreasing from 2012 by Baht 125 million. This was resulted mainly from the lower gains on exchange rate in relation to the Baht depreciation, despite the rise in condensate margin.

• Petrochemical Business Unit

Sales revenue of petrochemical subsidiaries and jointly controlled entities of PTT in 2013 was Baht 93,054 million, increasing by Baht 9,647 million or 11.6% from 2012. This was resulted from the rise in petrochemical sales volume and average selling price of PTTPM by 13.5% and 6.2%, respectively, as well as the production start-up of PTTAC since January 1, 2013.

EBITDA in 2013 was Baht 2,041 million, decreasing by Baht 657 million or 24.4% from 2012. In addition, EBIT was Baht 769 million, decreasing by Baht 1,126 million or 59.4% from 2012. This was resulted mainly from a decrease in product spread of HMC, the jointly controlled entity that produces and distributes Polypropylene and Propylene products, due to the change in feedstock price formula. Additionally, an increase in depreciation and amortization expenses from PTTAC production start-up since January 1, 2013.

• Coal Business

In 2013, sales revenue of coal business was Baht 24,978 million, decreasing by Baht 3,761 million or 13.1% from 2012 mainly due to the drop in average selling price, which decreased by 17.1% from US\$ 87.7 per ton in 2012 to US\$ 72.7 per ton in 2013. Nevertheless, the sales volume increased in 2013 mainly due to a rise in sales volume 15.4% of Sebkun mine from the start-up of new pits operation in Northern Lease.

EBITDA in 2013 was Baht 5,809 million, which decreased by Baht 1,894 million or 24.6% from 2012 due to the drop in sales revenue as aforementioned. Nonetheless, EBIT in 2013 had Baht 591 million losses, which decreased by Baht 4,189 million from Baht 3,598 million gains in last year as a result of the decrease in EBITDA as aforementioned and the rise in deferred stripping cost.

Net income was Baht 94,652 million in 2013, decreased by Baht 9,956 million or 9.5% from 2012.

Net income of PTT and its subsidiaries in 2013 was Baht 94,652 million, decreasing from 2012 by Baht 9,956 million or 9.5% due mainly to a decrease in performance of PTT's natural gas business in relation to higher feed costs and loss from the NGV business. Nonetheless, the performance of PTTEP and the share of net income from investments in associates increased.

- In 2013, the share of net income from investments in associates slightly increased by Baht 64 million from Baht 27,015 million in 2012 to Baht 27,079 million, mainly caused by the better performance of gas and oil associates.

- The performance of refining business associates slightly decreased from previous year mainly from Thai Baht depreciation against US\$ resulting in losses on foreign exchange rate in many refining associates, while they had gains on foreign exchange rate in 2012. However, the performance of refining business associates, stripping out losses on foreign exchange rate, the performances increased as PTT Group refineries' GRM (including stock gain/loss and hedging gain/loss, excluding PTTGC's refining unit) increased from US\$ 4.35 per barrel in 2012 to US\$ 4.75 per barrel in 2013 due to a rise in stock gains despite the decrease of spread margin of finished products in 2012. However, market GRM dropped in almost all products, especially fuel oil, caused by the declining demand in relation to economic slowdown.

- The performance of petrochemical associates slightly decreased because of losses on exchange rate in 2013 from Thai Baht depreciation against US\$ together with incident in GSP unit 5 causing PTTGC to lower its production. Moreover there were expenses from oil spill incident in 2013, despite the higher spread margins of Aromatics and Olefins products compared with 2012 mainly from better spread margin of Benzene, HDPE and Polypropylene.

- In 2013, there was no recognition of impairment losses on investments and assets. Nevertheless, in 2012, PTTI recognized impairment losses of its investment in EMG amounting to Baht 3,972 million and PTTEP recognized impairment loss on Montara assets amounting to Baht 6,366 million.

- In 2013, PTT and its subsidiaries had the gain on foreign exchange of Baht 305 million, decreasing by Baht 7,129 million or 95.9% from Baht 7,434 million in 2012.

- In 2013, PTT and its subsidiaries' finance costs increased by Baht 648 million or 3.3% from Baht 19,747 million in 2012 to Baht 20,394 million in 2013 mainly from the issuance of PTT's debentures of Baht 32,000 million and the issuance of PTTEP's debenture of US\$ 500 million.

- The corporate income taxes in 2013 were Baht 47,692 million, increasing by Baht 1,176 million or 2.5% from 2012.

Details of net income from investments in associates are as follows:

Unit: million Baht

| | 2012 | 2013 | % Inc. (Dec.) |
|--------------------------|---------------|---------------|---------------|
| Refining associates | 8,788 | 8,648 | (1.6%) |
| Petrochemical associates | 17,121 | 16,959 | (0.9%) |
| Oil associates | 544 | 609 | 11.9% |
| Gas associates | 435 | 724 | 66.4% |
| Other associates | 127 | 139 | 9.4% |
| Total | 27,015 | 27,079 | 0.2% |

The analysis of PTT and its subsidiaries' consolidated financial position as of December 31, 2013, compared with December 31, 2012.

Unit: million Baht

| | Dec 31, 2012 | Dec 31, 2013 | % Inc. (Dec.) |
|--|------------------|------------------|---------------|
| Assets | | | |
| Current Assets | 472,146 | 523,144 | 10.8% |
| Available-for-sales investments, investments in associates and other long-term investments | 250,813 | 260,877 | 4.0% |
| Property, plant and Equipments, net | 650,561 | 740,649 | 13.8% |
| Other non-current assets | 255,991 | 277,052 | 8.2% |
| Total Assets | 1,629,511 | 1,801,722 | 10.6% |
| Liabilities | | | |
| Current Liabilities | 341,060 | 360,464 | 5.7% |
| Long-term loans (including current portion) | 437,344 | 468,507 | 7.1% |
| Other non-current liabilities | 121,211 | 149,572 | 23.4% |
| Total Liabilities | 899,615 | 978,543 | 8.8% |
| Equity | | | |
| Total equity attributable to equity holders of the company | 603,920 | 682,647 | 13.0% |
| Non-controlling interests | 125,976 | 140,532 | 11.6% |
| Total Equity | 729,896 | 823,179 | 12.8% |
| Total Liabilities and Equity | 1,629,511 | 1,801,722 | 10.6% |

Assets

As of December 31, 2013, total assets of PTT and its subsidiaries were Baht 1,801,722 million, increasing by Baht 172,211 million or 10.6% compared with December 31, 2012. This increase was mainly from the net effect of the following:

- An increase of Baht 90,088 million or 13.8% in property, plant and equipment was primarily from an increase in petroleum exploration and production assets of PTTEP in Zawtika, PTTEP Australasia, Bongkot, Arthit, and Natuna Sea A projects, resulted from the acquisition of Natuna B.V. of PTTEP in December 2013. In addition,

PTT has invested in Nakonsawan pipeline and the fourth transmission pipeline projects.

- An increase of Baht 50,998 million or 10.8% in current assets was mainly from cash and cash equivalent and trade accounts receivable within credit terms, increasing by Baht 20,759 million and Baht 34,287 million, respectively. This was primarily from the net effect of cash provided by operating activities of PTT and PTTEP, cash outflow from the additional investment in petroleum exploration and production assets of PTTEP, and dividend payment for the second half-year performances

of 2012 and the first half-year performances of 2013 of PTT and PTTEP. Nevertheless, current investments and other receivable decreased by Baht 3,722 and Baht 2,110 million, respectively.

- An increase of Baht 21,061 million or 8.2% in other non-current assets was mainly from the additional investment in petroleum exploration and production assets which were in exploration projects of PTTEP and goodwill from the acquisition of Natuna B.V. Moreover, inventories increased due to higher percentage of legal oil reserve from 5% to 6%, according to the Notice of the Department of Energy Business B.E. 2556 (2013).

- An increase of Baht 10,064 million or 4.0% in available-for-sale investments, investments in associates and other long-term investments was mainly from share of gain from investments in associates for the performance of 2013 by Baht 27,079 million. In addition, there was an increase in share capital of associates amounting to Baht 2,911 million, which was mainly from Global Power Synergy company limited (GPSC) (a 30.1% shareholding associate of PTT) and Xayaburi Power Company Limited (XPCL), as well as difference currency translations of Baht 2,070 million. However, there were dividends received from associates amounting to Baht 15,373 million and the disposal on investment amounting to

Baht 6,439 million. PTT disposed the investment in PPCL (a 40% shareholding associate of PTT) to PTTGC, the investment in XPCL and Bangpa-in Cogeneration Limited (BIC) (a 25% shareholding associate of PTT), Combined Heat and Power Producing Co., Ltd. (CHPP), Thai Solar Renewable Co., Ltd. (TSR) to GPSC, and the investment in B.Grimm BIP (a 23% shareholding associate of PTT) to B.Grimm Power.

Liabilities

As of December 31, 2013, PTT and its subsidiaries had total liabilities of Baht 978,543 million, increasing by Baht 78,928 million or 8.8%, mainly from the followings: Long-term loans (including the current portion within 1 year) were Baht 468,507 million, increasing by Baht 31,163 million or 7.1%. The increase was mainly from the issuance of the Baht debentures of Baht 32,000 million and the foreign currency debentures of US\$ 310 million, equivalent to Baht 9,135 million, of PTT. In addition, PTTEP had the debentures issuance of US\$ 500 million, equivalent to Baht 15,363 million. However, there were redemptions of Baht debentures of PTT and PTTEP amounting to Baht 24,550 million and Baht 5,000 million, respectively. The maturities of long-term loans and debentures are as follows:

Unit: million Baht

| Maturity (since Dec 31, 2013) | PTT | PTTEP | PTTI | TTM(T) | PTTAC | HMC | EnCo | PTTPL | DCAP | TTM(M) | PTTNGD | Total |
|--------------------------------------|-------------------|-------------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|---------------|---------------|---------------|-------------------|
| Within 1 year (December 31, 2014) | 28,113.71 | 11,698.80 | 2,772.75 | 738.31 | 697.17 | 573.42 | 450.00 | 300.00 | 130.81 | 59.03 | 100.80 | 45,634.80 |
| Over 1 year - 2 years | 34,552.83 | 24,540.27 | 3,043.50 | 644.10 | 699.04 | 573.33 | 450.00 | 300.00 | 130.81 | 27.87 | 75.60 | 65,037.35 |
| Over 2 years - 5 years | 92,512.84 | 48,841.66 | - | 1,932.29 | 2,108.66 | 3,308.91 | 1,350.00 | 225.00 | 392.44 | 83.62 | - | 150,755.42 |
| Over 5 years | 152,192.07 | 46,927.66 | - | 4,365.24 | 1,352.99 | - | 1,400.00 | - | 156.32 | 141.00 | - | 206,535.28 |
| Total | 307,371.45 | 132,008.39 | 5,816.25 | 7,679.94 | 4,857.86 | 4,455.66 | 3,650.00 | 825.00 | 810.38 | 311.52 | 176.40 | 467,962.85 |

Note: Excluding liabilities under finance leases of Baht 543.98 million.

The outstanding loans (including long-term loans, debentures and bonds due within one year and later than one year) as of December 31, 2013 consisted of loans in Baht currency and foreign currency. Details of which are as follows:

Unit: million Baht

| Long-term loans | PTT | PTTEP | PTTI | TTM(T) | PTTAC | HMC | EnCo | PTTPL | DCAP | TTM(M) | PTTNGD | Total |
|---|-------------------|-------------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------|---------------|---------------|---------------|-------------------|
| Baht currency | 181,399.28 | 19,195.44 | - | - | - | 2,241.38 | 3,650.00 | 825.00 | 810.38 | - | 176.40 | 208,297.88 |
| Foreign currency | 125,972.17 | 112,812.95 | 5,816.25 | 7,679.94 | 4,857.86 | 2,214.28 | - | - | - | 311.52 | - | 259,664.97 |
| Total | 307,371.45 | 132,008.39 | 5,816.25 | 7,679.94 | 4,857.86 | 4,455.66 | 3,650.00 | 825.00 | 810.38 | 311.52 | 176.40 | 467,962.85 |
| Proportion of long-term foreign currency loans to total long-term loans (%) | 40.98% | 85.46% | 100.00% | 100.00% | 100.00% | 49.70% | - | - | - | 100.00% | - | 55.49% |

As of December 31, 2013, the loans amounting to Baht 6,000 million were guaranteed by the Ministry of Finance.

Other non-current liabilities increased by Baht 28,362 million or 23.4% mainly from increases in provision for remuneration for the renewal of petroleum production of Bongkot project, provision for decommissioning costs of MTJDA - B17 and Zawtika projects, and deferred tax liabilities from the effect of foreign exchange rate of 2013, and Natuna B.V. acquisition of PTTEP.

The increase of Baht 19,404 million or 5.7% of current liabilities was primarily from increases in accounts payable and income tax payable by Baht 16,441 and 3,493 million, respectively. The rise was mostly from corporate income taxes and petroleum income taxes of PTTEP.

Equity

As of December 31, 2013, PTT and its subsidiaries had total shareholders' equity of Baht 823,179 million, increasing by Baht 93,283 million or 12.8% principally from an increase in retained earnings of Baht 57,504 million which resulted from an increase of Baht 94,652 million in net income of PTT and its subsidiaries for 2013. However, there were payments of dividends for the second half-year performances of 2012 and the first half-year performances of 2013 amounting to Baht 37,127 million, other comprehensive income, and non-controlling interests, increasing by Baht 21,222 million and Baht 14,556 million, respectively.

Liquidity

For the year ended December 31, 2013, PTT and its subsidiaries had net increase in cash and cash equivalents amounting to Baht 20,759 million, while cash and cash equivalents at the beginning of the period was Baht 136,924 million. As a result, cash and cash equivalents at the end of the period was Baht 157,683 million. Details of cash flow by activities are as follows:

Unit: million Baht

| | Amount |
|---|----------|
| Net cash provided by operating activities | 165,327 |
| Net cash used in investing activities | (95,364) |
| Net cash used in financing activities | (55,790) |
| Effects of exchange rates on cash and cash equivalents | 3,538 |
| Currency translation differences | 3,048 |
| Net increase in cash and cash equivalents during the period | 20,759 |
| Cash and cash equivalents at the beginning of the period | 136,924 |
| Cash and cash equivalents at the end of the period | 157,683 |

In summary, PTT and its subsidiaries' financial status are strong, evidenced through liquidities, debt to equity ratios, and returns on equity.

PTT and Its Affiliates

| E&P Business Group | | Percentage |
|---|---------------|------------|
| PTT Exploration and Production Public Co., Ltd. | PTTEP | 65.29 |
| Gas Business Group | | Percentage |
| Trans Thai-Malaysia (Thailand) Co., Ltd. | TTM(T) | 50.00 |
| Trans Thai-Malaysia (Malaysia) Sdn.Bhd. | TTM(M) | 50.00 |
| PTT Natural Gas Distribution Co., Ltd. | PTTNGD | 58.00 |
| District Cooling System and Power Plant Co., Ltd. | DCAP | 35.00 |
| Thai Oil Power Co., Ltd. | TP | 26.00 |
| Ratchaburi Power Co., Ltd. | RPCL | 15.00 |
| PTT LNG Co., Ltd. | PTTLNG | 100.00 |
| Nava Nakorn Electricity Generating Co., Ltd. | NNEG | 30.00 |
| Global Power Synergy Co., Ltd. | GPSC | 30.10 |
| Oil Business Group | | Percentage |
| PTT (Cambodia) Limited | PTTCL | 100.00 |
| Subic Bay Energy Co., Ltd. | SBECL | 100.00 |
| PTT Retail Business Co., Ltd. | PTTRB | 100.00 |
| Vietnam LPG Co., Ltd. | VLPG | 45.00 |
| Thai Lube Blending Co., Ltd. | TLBC | 48.95 |
| KELOIL-PTT LPG Sdn.Bhd. | KPL | 40.00 |
| Petro Asia (Thailand) Co., Ltd. | PA (Thailand) | 35.00 |
| Petro Asia (Maoming) Co., Ltd. | PA (Maoming) | 20.00 |
| Petro Asia (Sanshui) Co., Ltd. | PA (Sanshui) | 25.00 |
| Thai Petroleum Pipeline Co., Ltd. | THAPPLINE | 36.44 |
| Intoplane Services Co., Ltd. | IPS | 16.67 |
| Bangkok Aviation Fuel Services Public Co., Ltd. | BAFS | 7.06 |
| Fuel Pipeline Transportation Co., Ltd. | FPT | 0.00024 |
| PTT Tank Terminal Co., Ltd. | PTT TANK | 100.00 |
| PTT Oil Myanmar Co., Ltd. | PTTOM | 100.00 |

| International Investment Business Group | | Percentage |
|---|---------|------------|
| PTT International Co., Ltd. | PTTI | 100.00 |
| PTT Green Energy Pte. Ltd. | PTTGE | 100.00 |
| International Trading Business Group | | Percentage |
| PTT International Trading Pte. Ltd. | PTTT | 100.00 |
| Petrochemical Business Group | | Percentage |
| PTT Global Chemical Public Co., Ltd. | PTTGC | 48.89 |
| PTT Polymer Marketing Co., Ltd. | PTTPM | 50.00 |
| PTT Asahi Chemicals Co., Ltd. | PTTAC | 48.50 |
| HMC Polymers Co., Ltd. | HMC | 41.44 |
| PTT Polymer Logistics Co., Ltd. | PTTPL | 100.00 |
| PTT Maintenance & Engineering Co., Ltd. | PTTME | 40.00 |
| PTT MCC Biochem Co., Ltd. | PTTMCC | 50.00 |
| PTT Energy Solutions Co., Ltd. | PTTES | 40.00 |
| PTT PMMA Co., Ltd. | PTTPMMA | 100.00 |
| Refining Business Group | | Percentage |
| Thai Oil Public Co., Ltd. | TOP | 49.10 |
| IRPC Public Co., Ltd. | IRPC | 38.51 |
| Star Petroleum Refining Co., Ltd. | SPRC | 36.00 |
| Bangchak Petroleum Public Co., Ltd. | BCP | 27.22 |
| Other Business Group | | Percentage |
| Business Services Alliance Co., Ltd. | BSA | 25.00 |
| Energy Complex Co., Ltd. | EnCo | 50.00 |
| PTT ICT Solutions Co., Ltd. | PTTICT | 20.00 |
| Dhipaya Insurance Public Co., Ltd. | TIP | 13.33 |
| PTT Regional Treasury Center Pte. Ltd. | PTTRTC | 100.00 |

Revenue Structure of PTT and Subsidiaries by Product Line

| Product/ Service | Operated by | % Shareholding of the company | 2011 (Revised) | | 2012 (Revised) | | 2013 (Audited) | |
|---|--|-------------------------------------|-------------------|--------|-------------------|--------|-------------------|--------|
| | | | Million Baht | % | Million Baht | % | Million Baht | % |
| 1. Natural Gas Products | PTT Plc. (Gas Business Unit) | | 379,772.34 | 15.34 | 473,042.64 | 16.62 | 490,580.58 | 17.01 |
| | PTT Plc. (Oil Business Unit and International Trading Business Unit) | | 60,085.70 | 2.43 | 91,229.81 | 3.21 | 83,948.22 | 2.91 |
| | PTT Exploration and Production Plc. (PTTEP) | 65.29 | 74,865.50 | 3.02 | 94,781.65 | 3.33 | 101,955.11 | 3.54 |
| | PTT Natural Gas Distribution Co., Ltd. (PTTNGD) | 58.00 | 7,422.83 | 0.30 | 8,690.18 | 0.31 | 10,154.87 | 0.35 |
| | Combined Heat and Power Producing Co., Ltd. (CHPP ¹⁾) | - | 157.49 | 0.01 | 174.86 | 0.01 | 182.13 | 0.01 |
| | Less PTTEP's gas revenue paid by PTT Plc. | | (72,778.30) | (2.94) | (89,693.85) | (3.16) | (97,325.70) | (3.38) |
| Total Revenue from Natural Gas Products | | | 449,525.56 | 18.16 | 578,225.29 | 20.32 | 589,495.21 | 20.44 |
| 2. Oil Products | PTT Plc. (Oil Business Unit and International Trading Business Unit) | | 1,574,696.71 | 63.62 | 1,769,343.68 | 62.18 | 1,646,289.35 | 57.09 |
| | PTT Exploration and Production Plc. (PTTEP) | 65.29 | 91,000.14 | 3.68 | 113,069.79 | 3.97 | 118,381.95 | 4.11 |
| | Less PTTEP's crude revenue paid by PTT Plc. | | (66,586.62) | (2.69) | (74,056.06) | (2.60) | (84,399.51) | (2.93) |
| | PTT International Trading Pte. Ltd. (PTTT) | 100.00 | 124,965.17 | 5.05 | 148,385.84 | 5.22 | 322,417.32 | 11.18 |
| | PTT (Cambodia) Limited (PTTCL) | 100.00 | 6,770.38 | 0.27 | 7,977.18 | 0.28 | 7,330.44 | 0.25 |
| | Subic Bay Energy Co., Ltd. (SBECL) | 100.00 | 19,531.81 | 0.79 | 22,172.38 | 0.78 | 21,172.93 | 0.73 |
| | PTT Retail Business Co., Ltd. (PTTRB) | 100.00 | 36,527.72 | 1.47 | 38,772.21 | 1.36 | 38,247.88 | 1.33 |
| Total Revenue from Oil Products | | | 1,786,905.31 | 72.19 | 2,025,665.02 | 71.19 | 2,069,440.36 | 71.76 |
| 3. Petrochemical Products | PTT Plc. (Oil Business Unit and International Trading Business Unit) | | 71,752.67 | 2.90 | 59,374.79 | 2.09 | 46,579.53 | 1.61 |
| | PTT Polymer Marketing Co., Ltd. (PTTPM) | 50.00 | 63,458.11 | 2.56 | 70,916.80 | 2.49 | 76,300.43 | 2.65 |
| | HMC Polymers Co., Ltd. (HMC) | 41.44 | 10,417.14 | 0.42 | 10,721.30 | 0.38 | 10,741.38 | 0.37 |
| | PTT Asahi Chemical Co., Ltd. (PTTAC) | 48.50 | - | - | 620.39 | 0.02 | 4,828.15 | 0.17 |
| Total Revenue from Petrochemical Products | | | 145,627.92 | 5.88 | 141,633.28 | 4.98 | 138,449.48 | 4.80 |
| 4. Mining Products | PTT International Co., Ltd. (PTTI) | 100.00 | 30,811.91 | 1.24 | 28,738.50 | 1.01 | 24,977.75 | 0.87 |
| 5. Other Products | PTT Green Energy Pte. Ltd. (PTTGE) | 100.00 | 356.84 | 0.01 | 1,246.14 | 0.05 | 532.08 | 0.02 |
| | Business Services Alliance Co., Ltd. (BSA) | 25.00 | - | - | 4.59 | - | 8.60 | - |
| Total Revenue from Other Products | | | 356.84 | 0.01 | 1,250.73 | 0.05 | 540.68 | 0.02 |

| Product/ Service | Operated by | % Shareholding of the company | 2011 (Revised) | | 2012 (Revised) | | 2013 (Audited) | |
|---|---|-------------------------------------|---------------------|---------------|---------------------|---------------|---------------------|---------------|
| | | | Million Baht | % | Million Baht | % | Million Baht | % |
| 6. Utilities Products | District Cooling System and Power Plant Co., Ltd. (DCAP) | 35.00 | 584.19 | 0.02 | 926.45 | 0.03 | 1,002.38 | 0.04 |
| | Thai Solar Renewable Co., Ltd. (TSR ^{2/}) | - | - | - | - | - | 65.73 | - |
| | Energy Complex Co., Ltd. (EnCo) | 50.00 | 40.47 | 0.01 | 44.54 | - | 48.50 | - |
| Total Revenue from Utilities Products | | | 624.66 | 0.03 | 970.99 | 0.03 | 1,116.61 | 0.04 |
| 7. Revenue from Non-Core Business | PTT Plc. (Oil Business Unit and International Trading Business Unit) | | 1,903.30 | 0.08 | 3,207.89 | 0.11 | 4,109.00 | 0.14 |
| | PTT Retail Business Co., Ltd. (PTTRB) | 100.00 | 4,099.25 | 0.17 | 4,564.07 | 0.16 | 4,765.56 | 0.17 |
| | PTT (Cambodia) Limited (PTTCL) | 100.00 | - | - | 1.15 | - | 6.79 | - |
| Total Revenue from Non-Core Business | | | 6,002.55 | 0.25 | 7,773.11 | 0.27 | 8,881.35 | 0.31 |
| 8. Revenue from Services | PTT Exploration and Production Plc. (PTTEP) | 65.29 | 3,780.18 | 0.15 | 4,685.26 | 0.17 | 4,635.63 | 0.16 |
| | Trans Thai-Malaysia (Thailand) Co., Ltd. (TTM(T) ^{3/}) | 50.00 | 1,638.39 | 0.07 | 1,716.42 | 0.06 | 1,682.38 | 0.06 |
| | Trans Thai-Malaysia (Malaysia) Sdn.Bhd. (TTM(M)) | 50.00 | 147.65 | 0.01 | 145.96 | 0.01 | 151.42 | 0.01 |
| | PTT Polymer Logistics Co., Ltd. (PTTPL) | 100.00 | 926.36 | 0.04 | 1,123.84 | 0.04 | 1,154.85 | 0.04 |
| | Energy Complex Co., Ltd. (EnCo) | 50.00 | 518.42 | 0.02 | 553.69 | 0.02 | 568.55 | 0.02 |
| | Business Services Alliance Co., Ltd. (BSA) | 25.00 | 685.86 | 0.03 | 685.81 | 0.02 | 817.70 | 0.03 |
| | PTT Retail Business Co., Ltd. (PTTRB) | 100.00 | 213.80 | 0.01 | 305.71 | 0.01 | 395.40 | 0.01 |
| | PTT (Cambodia) Limited (PTTCL) | 100.00 | - | - | - | - | 0.26 | - |
| | PTT Tank Terminal Co., Ltd. (PTT TANK) | 100.00 | 360.68 | 0.01 | 359.45 | 0.01 | 380.37 | 0.01 |
| Total Revenue from Services | | | 8,271.34 | 0.34 | 9,576.14 | 0.34 | 9,786.56 | 0.33 |
| Total Revenue from Products and Services | | | 2,428,126.09 | 98.10 | 2,793,833.06 | 98.19 | 2,842,688.00 | 98.57 |
| 9. Others | | | | | | | | |
| 9.1 Other Revenue | | | 16,575.26 | 0.67 | 17,178.96 | 0.60 | 13,834.85 | 0.48 |
| 9.2 Gain/loss from Foreign Exchange | | | 1,099.42 | 0.04 | 7,434.06 | 0.26 | 304.37 | 0.01 |
| Total Other Revenue | | | 17,674.68 | 0.71 | 24,613.02 | 0.86 | 14,139.21 | 0.49 |
| 10. Share of net income/loss from investment under equity method | | | 29,463.28 | 1.19 | 27,014.79 | 0.95 | 27,078.77 | 0.94 |
| Grand Total | | | 2,475,264.05 | 100.00 | 2,845,460.87 | 100.00 | 2,883,905.98 | 100.00 |

Notes: 1/ PTT wholly owned CHPP until December 24, 2013 before disposing of such equity to Global Power Synergy Co., Ltd. (GPSC).

2/ PTT owned 40% of the shares in TSR from May 3 to December 24, 2013, before disposing of such equity to GPSC.

3/ Effective from January 1, 2013, TTM(T) switched its operating denomination from the Baht to the US dollar. Since this represented a change in a change in accounting policy, the financial statements were amended retroactively in 2012.

Connected Transactions

PTT's connected transactions resulted from the following contractual agreements:

1. Transactions between PTT and state enterprises

• Transaction

The Cabinet resolution dated November 26, 2002, required government agencies and state enterprises buying 10,000 liters of fuel and more must do so from either PTT Plc. or Bangchak Petroleum Plc. only. PTT sold fuels to the following state enterprises: Electricity Generating Authority of Thailand (EGAT), Bangkok Mass Transit Authority (BMTA), and State Railway of Thailand (SRT). Should a state enterprise owe PTT outstanding payments, PTT is entitled to levy interests.

2. Transactions between PTT and subsidiary PTTEP Plc.

• Transaction

PTTEP and its subsidiaries produce and sell crude oil, natural gas, condensate, LPG, and bitumen. In 2013, PTT was the major buyer (86% by volume) of these. As for natural gas, the two reached a long-term deal of 25 - 30 years, stipulating annual minimum contractual quantities. Both companies were engaged in crude oil and condensate agreements, whereas PTT sold jet fuels and high-speed diesel to PTTEP under world market prices. These prices were identical to those sold to PTT by PTTEP's joint-venture partners or were standard reference, competitive prices under sensible conditions.



3. Transactions between PTT and refining subsidiaries

• Transaction

PTT signed crude oil and petroleum product supply agreements with its refining subsidiaries at supply rates corresponding to its own equity interests as summarized below. PTT also engaged in hedging through derivative contracts with these subsidiaries to ease price volatility impacts. However, price risk management is subject to the policy of each company.

Agreement with Thai Oil Plc. (TOP)

PTT secures crude oil and buys refined products equivalent to 49.99% of TOP's refining capacity at market prices. Through a written notice sent at least 12 months in advance, either party may revoke this agreement. Alternatively, either party may revoke the agreement if it considers the agreement to have been violated.

PTT secured natural gas for TOP's use in its refinery as required by the agreement between them at regular market prices under an eight-year contract (2005 to 2013) and a 15-year contract (2007 to 2021) under regular market prices.

Agreement with Star Petroleum Refining Co., Ltd. (SPRC)

SPRC's shareholders are required to secure crude oil supply at supply rates corresponding to its own equity interests. PTT secures an equivalent of 36% of SPRC's refining capacity at market prices, and takes delivery of refined products from SPRC at no less than 36% of 70% of its 126,000-bbl/d capacity at domestic market prices. For any surplus volume, PTT and Chevron (Thai) Co., Ltd. - as shareholders - have the first right of refusal to buy them at domestic market prices before any sale to a third party.

PTT secures for the refinery's consumption natural gas volumes required by an agreement between them at regular market prices under a ten-year contract (2009 to 2019).

Agreement with Bangchak Petroleum Plc. (BCP)

PTT secures crude oil supply for BCP under a feedstock supply agreement and a product offtake agreement to take at least 30% of the latter's capacity output (excluding jet fuels and fuel oil) at market prices. Both agreements are for 12 years from the commercial operation date of the Product Quality Improvement project in 2011.

PTT secured natural gas for BCP's use in its refinery under a ten-year agreement, with effect from August 3, 2009. The price is as stated in the agreement under regular business conditions.

PTT entered into an agreement with BCP to buy electricity and steam on February 25, 2008. PTT built a cogeneration plant with a steam generation capacity of 90 tons per hour and a power generation capacity of 19.7 megawatts (MW) for sale to BCP, with a commercial operation date in June 2010 and sales prices as stated in the agreement and conforming to regular business conditions.

PTT signed a 15-year petroleum and gas terminal (depot) service agreements with BCP, effective January 1, 2009, to December 31, 2023. Service fees are as stated in the agreement.

Agreement with IRPC Plc. (IRPC)

PTT secures crude oil supply at market prices for IRPC under a one-year feedstock supply agreement (term and spot). The contract is to be made year by year.

PTT has a contract for petroleum products with IRPC under market prices, effective January 1, 2013, with possible annual extensions.

PTT also made another agreement for the service of IRPC's Chumphon Depot for loading, storage, and distribution of oil, effective January 1, 2013, with possible annual extensions.

PTT has a gas sales agreement with IRPC for the consumption of gas in combined-cycle gas turbine engines, effective June 9, 2009, for 10 years at market prices.

PTT engaged in hedging through derivative contracts made with IRPC to ease the impacts of crude and product price volatility.

4. Transactions between PTT and affiliates in the petrochemical business group

Transactions and agreement with PTT Global Chemical Plc. (PTTGC)

PTTGC was founded on October 19, 2011, through the amalgamation of PTT Chemical Plc (PTTCH) and PTT Aromatics and Refining Plc. (PTTAR) under the Public Company Act B.E. 2535 (1992). The new company inherited all the assets, properties, and liabilities of the two companies on December 31, 2011, and continues the operation of the two companies as summarized below.

Refining business:

PTT secures feedstock supply for PTTCH's production processes, namely natural gas, ethane, propane, and LPG under a 15-year agreement, effective from 1995 and extendable for five years.

In 1991, Aromatics (Thailand) Plc. (ATC) transferred to PTT its privileges and obligations under a 15-year light naphtha and raffinate supply agreement with PTTCH. PTT later concluded another feedstock supply agreement and a gas sales agreement with PTTCH, effective from 1999, for 12 years (extendable for five years) for the feedstock, and for 20 years (extendable for four years) for the gas.

In 1995, PTT signed an NGL supply agreement with PTTCH, effective for 15 years from the plant's start-up. In 2004, PTT amended the agreement to increase the supply volume to 380,000 - 470,000 tons/year. Due to expire on May 31, 2021, the agreement is extendable for five years.

In 1999, PTT signed a 15-year ethane supply agreement with PTTCH, effective from August 1, 2005 for 15 years (extendable for five years).

In 2004, PTT concluded an LPG supply agreement made with PTTCH, under which PTT would supply an additional 13,000 tons/month of LPG as feedstock for the olefins capacity expansion project managed by PTTCH, which completed the upgrading in 2007.

In 2006, PTT entered into a 15-year ethane feedstock supply agreement with PTT Polyethylene Co., Ltd., a subsidiary of PTTCH, under which the price of ethane varies with that of film-grade HDPE in Southeast Asian markets. The agreement took effect from the plant's start-up in 2010.

In 2008, PTT amended its agreement for supplying ethane, propane, and LPG to PTTCH, with effect from August 1, 2008, and an unchanged contractual period. Under the agreement, the price structure of the ethane feedstock varies with that of film-grade HDPE in Southeast Asian markets – reflecting the entire petrochemical chain and the HDPE market produced by PTTCH since 2004. Similarly, the price structures of propane and LPG vary with that of film-grade PP.

In 2010, PTT extended its LPG supply agreement with PTTCH for 20,000 tons/month, with effect from June 1, 2010, for one year. PTT also made an LPG supply agreement with PTTCH for 28,000 tons/month, with effect from November 25, 2010, for one year (extendable for one year).

In 2012, an amendment was made to the prices of ethane, propane, and LPG. The agreement with PTTGC was extended to 2020 and the agreements with terms beyond 2020 remained unchanged. Price amendment was also made to PTTPE's ethane supply, with effect from August 1, 2012. Under this master amendment, the price structure under the contract remains intact, that is, the price structure of ethane feedstock varies with that of film-grade HDPE in Southeast Asian markets, and that of propane and LPG vary with that of film-grade PP. The assumption, however, was amended to reflect current circumstances, resulting in a higher product value as well as a higher contribution to the Oil Fund by the petrochemical sector, which uses propane, butane, and LPG as feedstock at Baht 1 per kilogram, which PTTGC has remitted to this fund as required by the public sector since January 13, 2012.

PTT signed a gas sales agreement with PTTAR for the consumption of gas in fueling the latter's aromatics processes. The 10-year agreement to supply natural gas to AR2 is due to expire in June 2015; the agreement to supply the gas to AR3, in April 2018.

PTT concluded long-term supply agreements for all the main products of PTTAR, which directly supplies such products to customers. These agreements are take-or-pay, whereby PTT guarantees minimum sale volumes for the products and obtains marketing fees from PTTAR. Also, the "Take and Pay" agreement specifies the offtake volumes guaranteed by PTT without guaranteeing distribution for the surplus volumes beyond take-or-pay. PTT has another product distribution agreement with PTTAR, namely that for condensate residue, light

naphtha, and LPG, under which PTTAR would directly supply these to PTT's customers. For the first two products, the agreement covered 15 years, and for LPG, 10 years, effective from 1997 under an evergreen basis after 2007, that is, the agreement would be regarded as automatically extended unless otherwise notified in advance.

PTT supplies condensate to PTTAR's production processes under a 20-year agreement, effective from 1997, whereby the annual volume is 4.6 - 6.1 million tons/year.

Refining and Petroleum Product Supply Business Group:

PTT secures crude oil supply for PTTAR under an 18-year feedstock supply agreement with effect from February 1, 2009. Under the agreement, PTT is to secure crude oil and all other feedstock for PTTAR at market prices under the grades and volumes needed by PTTAR. PTT buys refined products from PTTAR at no less than 70% of the latter's refined products at domestic market prices under an 18-year agreement from February 9, 2006, beyond which the contract is assumed to remain valid unless otherwise notified in advance.

PTT signed a 18-year New Complex Product Offtake Agreement with PTTAR, effective from February 9, 2006, beyond which the agreement is assumed to remain valid unless otherwise notified in advance. Under the contract, PTT is to buy from PTTAR all products derived from the Upgrading Complex. At least half of these products are to be based on domestic market prices.

PTT signed a gas sales agreement with PTTAR for the consumption of gas in product refining and another one for use in power generation, which is due to expire in 2018.

Transactions and agreement with HMC Polymers Co., Ltd. (HMC)

PTT concluded a feedstock supply agreement with HMC in 2006. A long-term propane feedstock supply agreement spans 15 years from the plant's start-up in 2010, with five-year extension at a time, under which the price of propane varies with that of Southeast Asia's PP (film grade).

In 2009, the propane qualifications were amended and the delivery point at GSP was moved to HMC. The propane price structure was therefore amended to reflect the delivery cost and pipeline transport charges included, resulting in a higher product value.

In 2013, PTT clearly defined the effective date (January 19, 2013) and expiry date (January 18, 2028) of the agreement, with five years extendable each time; the propane price was revised with effect from December 1, 2012, and still varies with that of PP (film grade). The assumption, however, was amended to reflect current circumstances, resulting in a higher product value as well as a higher contribution to the Oil Fund by the petrochemical sector, which uses propane, butane, and LPG as feedstock at Baht 1 per kilogram, which HMC has remitted to this fund as required by the public sector since January 13, 2012.

Transactions and agreement with PTT Asahi Co., Ltd. (PTTAC)

PTT signed a 15-year propane supply agreement in 2008 with PTTAC for its feedstock. The agreement will take effect from the plant's start-up, with five-year extension each time. The price structure varies with that of Southeast Asia's film-grade PP.

In 2013, an amendment was made to the price of propane to cover the contribution to the Oil Fund by the petrochemical sector, which uses propane, butane, and LPG as feedstock at Baht 1 per kilogram, which PTTAC has remitted to this fund as required by the public sector since January 13, 2012.

Transactions and agreement with PTT Energy Solutions Co., Ltd. (PTTES)

PTT signed a 5-year technical service agreement with PTES at an annual lump-sum fee, to be revised annually in line with the consumer price index announced by the Ministry of Commerce. The agreement is due to expire on August 31, 2016.

Policy on future connected transactions

PTT's future connected transactions will be conducted as part of its normal course of business, without special favors or transfer of benefits between PTT, its subsidiaries, associated companies, related companies, or shareholders. Pricing will continue to be on an arm's length basis, and the prices of products supplied by PTT's subsidiaries will be market-based. Disclosure of connected transactions will conform to the announcement of the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET), and to the accounting standard on information disclosure about related parties or businesses, announced by the Federation of Accounting Professions.

Review of Business Assets

As of December 31, 2013, the core assets employed by PTT and its subsidiaries in their businesses commanded a net value (after accumulated depreciation and allowance for impairment) of Baht 740,649 million, with Baht 124,898 million in net intangible assets and Baht 35,219 million in net mining properties. For details, please see the notes to the financial statements for PTT and its subsidiaries ended December 31, 2013: item 16 (property, plant, and equipment - net), item 17 (intangible assets - net), and item 18 (mining properties - net).

Risk Factors

Thanks to its continued risk management efforts, PTT managed risk factors reasonably well in the past year. Emerging risk factors have been identified and managed under the current year's risk management plan. PTT continues to revise this Risk Factors section to better reflect risks apparent to investors. Below are the key risk factors.

1. Strategic Risks

1.1 Risks from business strategy implementation

For a continued and sustainable business growth, PTT has set a goal of becoming a Thai premier multinational energy company along with its international venture goals. To this end, strategic plans have been defined by each business unit with a focus on preserving its competitiveness, investment expansion to supplement business value, internationalization of businesses through investment in properties, mergers and acquisitions of entities capable of competing but are faced with problems during crises, and investment in new related businesses.

Fierce competition, global and domestic economic recovery still fraught with uncertainty, oil price volatility, investors' expectations, and the diverse needs of its stakeholders - all these could prevent PTT from achieving these



goals and business strategies due to the energy demand uncertainty, petroleum and petrochemical product price fluctuation, investment risks resulting from overseas investment and in new businesses. These could impact PTT's overall performance and returns on investment.

To cope with this, PTT has initiated a Top Executive Thinking Session (TTS) and a Strategic Thinking Session among PTT senior executives to define and review the vision, directions, and business strategies under prevailing economic and energy circumstances, and a business plan in the form of scenario planning, in which assumptions are made for different economic growth figures and oil prices and for PTT Group to command plans for future changes and uncertainty. In addition, monthly performance monitoring is in place, and at least every quarter PTT Group senior executives meet to monitor group performance and share views on the adjustment of business plans and short-term strategies to ensure confidence in meeting such goals.

1.2 Risks from improvement of organizational capability to accommodate business operation under economic uncertainty and business growth opportunities

Thanks to PTT Group's vision of focusing on continued, sustainable growth in a bid to become a Thai premier multinational energy company, the group has expanded swiftly over the past few years, with investment in emerging businesses, expansion abroad, and business expansion for greater growth. The current group businesses, marked by diversity, are linked to a chain. Compounded by volatile economic circumstances, resulting in demand uncertainty of the markets and prices, the company encountered human resource management risk in which it might fail in planning human resource to match the business expansion.

To ease such personnel risks, PTT has relied on two career management mechanisms. First, for the management group, the PTT Group format is applied under the care of an executive and management development committee, which accommodates the needs for senior executives in both quantity and quality. Second, for other employees, it takes the form of line management with a similar approach to the first, supervised by a career advisory panel; here, a career management consultation committee ensures that, for each career path, a manpower requirement plan is prepared, in which key positions are stated, and individual development plans are prepared and implemented. PTT's Young People to Globalize (YP2G) Project grooms personnel for overseas or domestic posting, or both. PTT Leadership and Learning Institute (PLLI), in the meantime, was founded to groom personnel for their highest potential by focusing on leadership development and promoting lifelong learning. These moves ensure that PTT will consistently command an adequate supply of quality executives and employees.

2. Business Risks

2.1 Risks from gas supply sourcing

This year PTT kept up its sourcing negotiation efforts for additional gas supplies from domestic deposits (onshore and in the Gulf of Thailand) and import LNG from sellers in various regions to meet the current gas demand and the demand called for by future economic circumstances.

Each Gas Sales Agreement (GSA) specifies a minimum annual contractual quantity to be bought by PTT; otherwise, PTT must pay in advance for the volume not taken in a given year under the "take-or-pay" condition. However, PTT may take this pre-paid gas in later years (known as make-up gas) if it has already paid

the minimum contracted amount for the year in question. Such take-or-pay sums were paid by PTT under the terms of the Yadana and Yetagun GSAs of Myanmar. PTT has taken delivery of all Yetagun make-up gas, with only that from Yadana still outstanding.

In addition, for spot-cargo LNG and short-term purchase agreements, if PTT fails to take delivery as stated in the agreement, the seller can sell it to others. Under this scenario, PTT risks having to pay the discrepancy in price to the seller if the sales prices prove lower than that specified in the agreement with PTT.

The current global and domestic economic uncertainty, oil and LNG price volatility, and various factors which affect the demand of natural gas usage, including future gas demand, may differ from projections. Besides, risks arise from uncertain completion dates of gas transmission pipelines or those of new gas-fired power plants, declining domestic gas reserves, regional gas supply negotiations, an LNG market that does not favor desired supply sourcing (in volume or quality), the inability to take pre-paid gas or to secure enough gas supply to accommodate rising demand, and the volatility of the oil price (which in turn affects gas prices). These risks could affect PTT's performance.

To cope with these risks, PTT monitors gas supply and demand movement while closely coordinating with the sellers and the buyers in order to prepare the efficient gas supply plans for the long term, and regularly reviews them as well as negotiating with the sellers and customers to identify solutions to possible crises. To date, however, gas demand has always exceeded minimum contract quantities, thus enabling PTT to accrue volumes for future use in which could lowering its minimum offtakes under the annual agreements ("carry forward" gas) specified in certain GSAs.

2.2 Risks from PTT's feedstock and product price volatility

Domestic and international product costs and sales prices of natural gas, condensate, crude oil, petroleum products, and petrochemicals of PTT and PTT Group are referenced to posted prices for each period and subject to volatility of the world market. So, PTT Group's performance is inevitably affected.

To lower these risks, PTT Group management has appointed an oil price risk management team, tasked with analyzing world oil price movement and optimizing risk management of feedstock and product prices jointly within the group. Today, to manage price risks, the group is engaged in hedging through short-term and long-term derivative contracts with business partners. Each transaction involving derivatives abides by PTT's policy on price risk management hand in hand with the PTT's cost of feedstock and sales volume of products targets for suitable risk management in line with PTT Group's business plans to ease the impacts of price volatility on PTT Group's performance. Also, in place is a structure and process for supervising risk management and checking balances on a par with international standards.

2.3 Risks from government actions creating potential impacts on PTT's businesses

PTT has retained its state enterprise status, with the Ministry of Finance serving as its major shareholder and the Ministry of Energy as its supervisor. It is also engaged in the energy business under the supervision of the National Energy Policy Council (NEPC) under the National Energy Policy Council Act, B.E. 2535 (1992). Therefore, the public sector can still in effect supervise PTT to ensure alignment with national energy, economic, and social policies. In addition, NEPC, because of the above-mentioned act, can propose policy and national energy administration plan recommendations to the cabinet, apart from deciding criteria and conditions for energy pricing in line with such policies and plans. Under an act designed to resolve and prevent fuel shortages of 1973, the prime minister can issue orders containing measures for the sale of all fuels to resolve and prevent fuel shortages. In short, such policy formulation and energy-related measures of the state may directly impact PTT's businesses, including the price control of LPG and NGV.

2.4 Risks from PTT's performance being partly subject to PTT Group's performance

PTT has achieved steady business growth as a result of its investment in assorted companies, while

focusing on forging link-ups of integrated businesses (meaning upstream petroleum to downstream), as well as investment in new related businesses, both domestic and overseas. Besides, to date PTT Group companies have undergone mergers and acquisitions, joint investment, capacity expansion, and process improvement to supplement product values. Such business expansion has inevitably subjected PTT's performance to those of PTT Group companies. However, Group companies are facing risks arising from the nature of businesses, including volatile product and feedstock prices, success in petroleum exploration and production, oil and natural gas spills, the down cycles of petrochemical and refining businesses, competitors from the Middle East with lower production costs, and risks from changes in laws and regulations. These could hurt PTT's financial status and performance. To lower these risks, PTT has focused on a Group management approach with good corporate governance on which to base its sustainable business growth and its maximization of value for PTT Group through value addition by the Supply Chain Management Project (SCM). PTT has also investigated mergers of similar businesses in search of greater value, lower costs, and greater competitiveness in the world market.

2.5 Risks from overseas investment

PTT's foreign energy investment plan is carried out through PTT Group companies, building on current businesses and enhancing long-term growth prospects. PTT intends to grow its businesses internationally through existing investments and new ventures. Risks from overseas investment could arise from several factors, including the economic circumstances of target countries and their trade partners, change of government, investment promotion policies, other laws and regulations on taxes, investment, foreign exchange volatility, product price volatility, the capability of companies to engage in new ventures, and greenfield project investments, which usually require long lead time and massive supporting capital.

To ease these risks, PTT has investigated and analyzed details of laws, public policies, and taxes, as well as the above-mentioned risk factors, to assess potential impacts on businesses. The findings of such

assessment are then incorporated with the feasibility of investment. PTT has put in place a system and an internal unit to track its performance and assess the risks of invested projects, as well as constantly accelerating organizational competency development and personnel capability to accommodate its overseas businesses and investment.

3. Operation Risks

3.1 Risks from operations

Many hazards are inherent to the exploration, production, transportation, and storage of natural gas, crude oil, petrochemical products, and petroleum products including their distribution and delivery to customers. PTT is exposed to assorted threats, including natural catastrophes, fires, explosions, contamination or dissipation of hydrocarbons, threats of political instability, together with terrorist activities and other unexpected hazards. These could prove detrimental to PTT's personnel, assets, environment, business operation, reputation, financial standing, and business opportunities.

To lower the likelihood and impacts of such threats, PTT requires all executives and employees to anticipate, assess, develop management plans to control, monitor, and prevent risks and threats to operations, while assessing impacts on stakeholders if core processes are interrupted, either under normal circumstances or in crises. This implies measures to control, prevent, manage, monitor, and systematically improve situations under the PTT Group Business Continuity Management System Standard (BCMS), developed from the ISO 22301 standard and PTT Group Security, Safety, Health and Environment Management Standard (PTT Group SSHE MS), which was in turn based on TIS/OHSAS 18001 and ISO 14001, with modified guidelines to suit PTT Group's nature of businesses and culture. They serve as the common criteria for business units, support units, and affiliates to develop and link up with the system to prevent value-adding activities throughout PTT's business chain from being disrupted. Also, like other companies in the petroleum and petrochemical industries, PTT has subscribed to insurance policies to safeguard its major operating assets against risks and business interruption.

Note that PTT has also been directly affected by the ongoing domestic political rallies, with no clear end in sight. PTT is constantly alert for business continuity management to maintain its business execution and the interests of its stakeholders.

3.2 Risks from environmental and safety regulations

PTT's business operations must conform to relevant legislation and regulations on environmental impacts and safety, which are bound to get increasingly tough. If such new laws are promulgated or if changes are made to the enforcement policy, they may shackle PTT's operation or sharply raise operating costs. Besides, risks could arise in the time required and conditions for the approval of the environmental impact assessment (EIA) or the environmental and health impact assessment (EHIA) reports, including the participation process and community acceptance, which could cause project delays - including acceptance of PTT's businesses at all its sites. These could therefore affect its future businesses and income generation.

To address these risks, PTT requires all sites to strictly monitor, measure, and assess the compatibility of compliance with applicable laws and regulations. If certain sites tend to deviate from such compliance, they will urgently map out corrective and preventive measures. In addition, in place are the monitoring and analysis of the impacts of changes in environmental and safety laws and regulations on its operation. PTT also closely coordinates with government agencies in order to apply available information to develop work plans and response measures, and ensures ongoing community relations activities in operating areas with a constant focus on community participation.

3.3 Risks from project operation

Key factors supporting PTT's successful business expansion include a continued rise in gas consumption and the ability to expand its gas transmission system, PTT's management of gas delivery to meet customers' desired quality, and creation of value to sustain rising

gas demand. In addition, PTT's business expansion is limited by the reach of its gas transmission system to customers, the maintenance of gas transmission systems for the longest service life, its gas separation capacity, and the success in building PTT Group's petrochemical plants. Development of projects could fall behind schedules for various reasons, including the complicated procurement procedures under public policy, contractors' lack of financial liquidity, political uncertainty, procurement of equipment with long lead time and transport time, communities' and landlords' cooperation, raw-material costs, currency exchange rates, and climate variation. So, if projects are delayed, PTT's financial standing and performance outcomes will be affected.

PTT takes seriously the administration of critical-path matters, including the acceleration of construction contractor hiring, close monitoring of construction equipment purchases, preparation of mitigating measures for environmental impacts, constant monitoring of new legislation and regulations, monitoring and analysis of impacts on project execution, development of people participation plans, and preparation of contingency plans and measures to ease potential implications of delayed project completion.

4. Financial Risks

4.1 Risks from volatility of the Baht

Changes in the exchange rate between the Baht and the US dollar directly and indirectly affect the bulk of PTT's revenue and affect PTT's net accounting profits/losses, since PTT and its subsidiaries are exposed through outstanding foreign loans. Therefore the fluctuation of the Baht and the government's economic, monetary, and treasury policies could affect PTT's overall financial and performance.

To ease these risks, PTT has balanced its foreign-currency loans with its foreign-currency revenue (that is, taking a natural hedge), while managing its foreign-currency deposits, leveraging financial derivatives to convert such loans (the participating swap)

and purchasing forward foreign currencies to match the quantity of foreign currencies required for repayment and for commercial transactions. PTT has also developed a treasury and credit policy as an effective, uniform guideline for PTT Group, which includes terms of reference for instituting assorted risk management practices.

4.2 Risks from financial support to affiliated companies

To promote constant growth, PTT invests in new projects, expands its businesses, or adjusts its operation. Sometimes such investment may be undertaken through new companies or link-ups with strategic partners or through PTT Group companies, or all of these. Some of these companies may still in their early stages or may not yet be financially strong, so shareholders or PTT will still need to extend cost overrun support to allow them to operate under strategies and business policies of PTT Group as a whole. Some of these companies may need cash deficiency support during commercial operation, which may result from force majeure, thus calling for financial help from the shareholders. PTT will consider extending loans or commercial credit, or both, to individual affiliates in the belief that such a policy and action would foster sustainable strength for PTT Group.

In extending such financial support to these affiliates, through whether subordinated loans, commercial credit, or loans from the shareholders, PTT cannot guarantee that these companies can repay such loans or credit, that they will not face financial woes again, or that they will not need financial support from PTT again - all these could harm PTT's performance and financial standing. Besides, if PTT or any member of PTT Group becomes a default party under any agreement on shareholder support, some creditors may accelerate debt repayment. Therefore, PTT cannot guarantee that it will not raise its own shareholding, raise its shareholding to more than half, or take over such a company if such action is considered more beneficial. If this should happen, the Thai accounting standards require PTT to consolidate the financial statements of

the company with those of PTT, effective from the date of such control. In short, such consolidation puts PTT's overall financial standing at stake.

4.3 Risks from acquisition of funds for plan execution

The businesses of PTT - in particular, petroleum exploration and production, natural gas transmission systems, gas separation plants, and the petrochemical businesses - require massive, pre-paid capital investment. Although PTT closely monitors and manages business risks, the actual investment capital required may deviate from project plans due to factors beyond its control, thus potentially affecting its project successes and capital costs.

Thanks to PTT's business conduct that focuses on fostering long-term growth and good corporate governance, it has continuously grown. PTT plans to invest in prudent business expansion, with due regard for sources of capital, particularly capital structuring that will enable it to maintain essential financial ratios at suitable levels on a par with peer industries. Continuous monitoring of factors for the sourcing of investment capital has assured PTT that it can secure sufficient and suitable funds for future business expansion.

Capital Structure

PTT's Securities

Common shares

As of December 31, 2013, PTT's registered capital amounted to Baht 28,572,457,250, consisting of 2,857,245,725 common shares at Baht 10 per share. These shares represented Baht 28,562,996,250 in paid-up capital, and 2,856,299,625 common shares.

Bonds and debentures

As of December 31, 2013, PTT's domestic loans amounted to Baht 6,000 million in the form of PTT bonds, guaranteed by the Ministry of Finance, together with bonds and debentures not guaranteed by the ministry, worth Baht 159,754 million, for a total of Baht 165,754 million. Foreign loans were in the form of PTT debentures of US dollar and yen denominations, not guaranteed by the ministry, equivalent to Baht 99,186 million. A summary of these bonds and debentures appears below.

| Bond and Debenture | Amount (Million Baht) | Redemption Date | Guarantee |
|--|--------------------------|---------------------------------|-----------|
| PTT bonds guaranteed by the Ministry of Finance | | | |
| • Domestic bonds | 6,000 | 2013 - 2020 | None |
| PTT debentures not guaranteed by the Ministry of Finance | | | |
| • Domestic debentures ^{1/ 4/} | 159,754 | 2013 - 2110 | None |
| • Foreign debentures ^{2/ 3/ 4/} | 99,186 | 2014, 2017, 2022, 2035, 2042 | None |
| Total | 258,940 | | |
| Grand total | 264,940 | | |

Notes:

1/ Fitch Rating's national rating of long-term PTT debentures at 'AAA (tha)' with a stable outlook.

2/ Moody's international rating of foreign PTT debentures at 'Baa1' with a stable outlook.

3/ S&P's international rating of foreign PTT debentures at 'BBB+' with a stable outlook.

4/ See details of domestic and foreign PTT debentures.

Domestic, unsecured, unsubordinated debentures

| Symbol | Amount (Million Baht) | Annual Coupon Rate (%) (Payment Frequency) | Maturity Period (Years) / Redemption Schedule |
|----------|--------------------------|---|--|
| PTTC14DA | 2,946 | (Year 1 - 3) 5, (Year 4 - 7) 5.95 (every six months) | Seven / 2014 |
| PTTC15OA | 2,550 | (Year 1 - 3) 5, (Year 4 - 5) 5.50, (Year 6 - 7) 6 (every six months) | Seven / 2015 |
| PTTC15OB | 2,600 | (Year 1 - 3) 5, (Year 4 - 5) 5.50, (Year 6 - 7) 6 (every six months) | Seven / 2015 |
| PTTC153A | 6,000 | 4.86 (every six months) | Eight / 2015 |
| PTTC156A | 4,040 | 4.75 (every six months) | Ten / 2015 |
| PTTC15NA | 5,000 | 7.40 (every six months) | Ten / 2015 |
| PTTC15OC | 1,951 | 3.80 (every six months) | 3 years, 8 months and 20 days / 2015 |
| PTTC165A | 3,000 | (Year 1 - 6) 5, (Year 7 - 12) 5.95 (every six months) | Twelve / 2016 |
| PTTC165B | 2,970 | 6.17 (every six months) | Ten / 2016 |
| PTTC167A | 17,100 | (Year 1 - 5) 4.25, (Year 6 - 7) 5.25 (every six months) | Seven / 2016 |
| PTTC16OA | 8,000 | 5.79 (every six months) | Ten / 2016 |
| PTTC17DA | 1,500 | 5.87 (every six months) | Ten / 2017 |
| PTTC17DB | 1,000 | (Year 1 - 4) 3.20, (Year 5 - 6) 4.20, (Year 7) 5 (every six months) | 7 years and 15 days / 2017 |
| PTTC18DA | 500 | 5.91 (every six months) | Eleven / 2018 |
| PTTC18NA | 9,049.47 | (Year 1 - 4) 4, (Year 5 - 6) 4.40, (Year 7) 5.50 (every six months) | 6 years, 9 months and 19 days / 2018 |
| PTTC195A | 1,000 | 5.90 (every six months) | Fifteen / 2019 |
| PTTC195B | 15,000 | (Year 1 - 4) 4.10, (Year 5 - 6) 5.10 (every six months) | 6 years, 11 months and 24 days / 2019 |
| PTTC195C | 10,000 | (Year 1 - 4) 4.10, (Year 5 - 6) 5.10 (every six months) | 6 years, 9 months and 15 days / 2019 |
| PTTC208A | 4,118 | 5.95 (every six months) | Fifteen / 2020 |
| PTTC20NA | 22,000 | 4.75 (every six months) | 6 years, 11 months and 19 days / 2020 |
| PTTC215A | 1,030 | 6.53 (every six months) | Fifteen / 2021 |
| PTTC239A | 10,000 | 5.12 (once at the end of redemption period) | Ten / 2023 |

| Symbol | Amount (Million Baht) | Annual Coupon Rate (%) (Payment Frequency) | Maturity Period (Years) / Redemption Schedule |
|----------|--------------------------|--|---|
| PTTC243A | 15,000 | (Year 1 - 5) 5, (Year 6 - 8) 6.20, (Year 9 - 15) 6.80 (every six months) | Fifteen / 2024 (redeemable after Year 8) |
| PTTC247A | 9,400 | (Year 1 - 5) 4.25, (Year 6 - 10) 5.50, (Year 11 - 15) 5.75 (every six months) | Fifteen / 2024 (redeemable after Year 10) |
| PTTC10DA | 4,000 | 5.9 (every six months) | 100 years / 2110 (redeemable after Year 50 and Year 75, and as defined in the terms on rights and duties of the issuers and the holders) |

Foreign, unsecured, unsubordinated debentures

| Symbol | Amount (Million Baht) | Annual Coupon Rate (%) (Payment Frequency) | Maturity Period (Years) / Redemption Schedule |
|-------------------------|--------------------------|---|--|
| USD bond, 2004 | 13,179.76 | 5.75 (every six months) | Ten / 2014 |
| USD bond, 2005 | 11,532.29 | 5.875 (every six months) | Thirty / 2035 |
| Samurai bond, 2007 | 9,572.13 ^{1/} | 2.71 (every six months) | Ten / 2017 |
| USD Bond, 2012 | 16,474.70 | 3.375 (every six months) | Ten / 2022 |
| USD Bond, 2012 | 19,769.64 | 4.50 (every six months) | Thirty / 2042 |
| PTTC14DA swapped to USD | 2,965.45 ^{2/} | 4.74 on average (every six months) | Seven / 2014 |
| PTTC14DB swapped to USD | 3,255.60 ^{3/} | 1.375 on average (every six months) | Four / 2014 |
| PTTC14DB swapped to USD | 3,158.20 ^{4/} | LIBOR plus 0.715 (every six months) | Four / 2014 |
| PTTC172A swapped to USD | 2,617.68 ^{5/} | LIBOR plus 1.04 (every six months) | Seven / 2017 |
| PTTC17DB swapped to USD | 3,283.99 ^{6/} | 1.375 on average (every six months) | Seven / 2017 |
| PTTC18NA swapped to USD | 9,404.41 ^{7/} | LIBOR plus 1.187 (every six months) | 6 years, 9 months and 19 days/ 2018 |
| PTTC222A swapped to USD | 3,972.20 ^{8/} | LIBOR plus 1.05 (every six months) | Twelve / 2022 |

Notes:

- 1/ PTT entered into a cross-currency swap from yen-denominated debentures worth Yen 36,000 million to dollar-denominated ones worth US\$ 290.51 million and used financial derivatives to conduct a switchable swap and a cross-currency swap linked to LIBOR as follows: US\$ 96.84 million at a fixed rate of 4.975% per year, convertible by a derivative into a floating rate at LIBOR + 0.65% per year; another US\$ 96.84 million at a floating rate of LIBOR + 0.20% per year if LIBOR exceeds 4.25% per year, or 5.5% per year if LIBOR is less or equivalent to 4.25% per year; and another US\$ 96.84 million at a fixed rate of 5.37% per year, convertible by a derivative to LIBOR + 0.20 per year.
- 2/ PTT entered into a cross-currency swap partly from baht-denominated debentures worth Baht 3,054 million to dollar-denominated ones worth US\$ 90 million at a fixed interest rate averaging 4.74% per year, thus leaving Baht 2,946 million in baht-denominated loans.
- 3/ PTT entered into a cross-currency swap partly from baht-denominated debentures worth Baht 3,000 million to dollar-denominated ones worth US\$ 98.81 million at a fixed interest rate averaging 1.375% per year.
- 4/ PTT entered into a cross-currency swap partly from baht-denominated debentures worth Baht 3,000 million to dollar-denominated ones worth US\$ 95.85 million at a floating interest rate of 6mLIBOR + 0.715% per year.
- 5/ PTT entered into a cross-currency swap from baht-denominated debentures worth Baht 2,636 million to dollar-denominated ones worth US\$ 79.45 million at a floating interest rate of 6mLIBOR + 1.04% per year.
- 6/ PTT entered into a cross-currency swap from baht-denominated debentures worth Baht 3,000 million to dollar-denominated ones worth US\$ 99.67 million at a fixed interest rate averaging 1.375% per year.
- 7/ PTT entered into a cross-currency swap from baht-denominated debentures worth Baht 6,000 million to dollar-denominated ones worth US\$ 285.42 million at a floating interest rate of 6mLIBOR + 1.187% per year.
- 8/ PTT entered into a cross-currency swap from baht-denominated debentures worth Baht 4,000 million to dollar-denominated ones worth US\$ 120.55 million at a floating interest rate of 6mLIBOR + 1.05% per year.

PTT Warrants

PTT has issued and offered 60,000,000 warrants to the President, the management, PTT employees, and employees of PTT Group companies seconded to PTT, consisting of two batches:

- PTT-W1 (40,000,000 units), offered in 2005 with the last exercise date on August 31, 2010.
- PTT-W2 (20,000,000 units), offered in 2006 with the last exercise date on September 28, 2011.

The warrants were all exercised, and no new ones have been issued.

Bill of Exchange

As of December 31, 2013, none was outstanding.

Shareholders

Below was PTT's shareholding structure as of September 23, 2013, the book closing date for 2013 interim dividend payment.

| Item | Shares (in million) | Value (Million Baht) | % |
|--|------------------------|-------------------------|--------|
| Registered Capital | 2,857.2 | 28,572 | - |
| Paid-Up Capital as of September 23, 2013 | 2,856.3 | 28,563 | 99.967 |
| • Ministry of Finance | 1,459.9 | 14,599 | 51.111 |
| • Vayupak Fund 1 by MFC Asset Management Plc. | 217.9 | 2,179 | 7.629 |
| • Vayupak Fund 1 by Krung Thai Asset Management Plc. | 217.9 | 2,179 | 7.629 |
| • Institutional and Public Investors | 960.6 | 9,607 | 33.631 |
| Unpaid Capital | 0.9 | 9 | 0.033 |

PTT's top 16 shareholders as of September 23, 2013, were

| No. | Name | Shares | % |
|--------------|--|----------------------|--------------|
| 1. | Ministry of Finance | 1,459,885,575 | 51.11 |
| 2. | Vayupak Fund 1 by MFC Asset Management Plc. | 217,900,000 | 7.63 |
| 3. | Vayupak Fund 1 by Krung Thai Asset Management Plc. | 217,900,000 | 7.63 |
| 4. | Thai NVDR Co., Ltd. | 117,449,972 | 4.11 |
| 5. | Chase Nominees Limited 42 | 72,277,101 | 2.53 |
| 6. | HSBC (Singapore) Nominees Pte. Ltd. | 61,308,199 | 2.14 |
| 7. | State Street Bank Europe Limited | 32,979,034 | 1.15 |
| 8. | State Street Bank and Trust Company | 32,030,417 | 1.12 |
| 9. | GIC Private Limited - C | 26,696,800 | 0.93 |
| 10. | Nortrust Nominees Ltd. - NTO SEC Lending Thailand | 23,928,239 | 0.83 |
| 11. | Social Security Office (2 cases) | 23,793,100 | 0.83 |
| 12. | Chase Nominees Limited | 20,035,548 | 0.70 |
| 13. | Nortrust Nominees Ltd. | 16,601,243 | 0.58 |
| 14. | The Bank of New York Mellon | 15,145,934 | 0.53 |
| 15. | The Bank of New York Mellon | 14,671,617 | 0.51 |
| 16. | The Bank of New York (Nominees) Limited | 14,653,005 | 0.51 |
| Total | | 2,367,255,784 | 82.87 |

Notes:

1. Number 5, 6, 10, 12, 13 and 16 were nominee accounts. PTT's investigation at Thailand Securities Depository Co., Ltd. (TSD), found that the ultimate shareholders' names could not be disclosed. However, the Ministry of Finance remained the single majority shareholder on behalf of the state, which in part dictated PTT's management policy. The ministry nominated directors to the Board for approval by the shareholders. Other substantial shareholders, including the six above-mentioned ones, did not exercise any influence over PTT's management policy formulation, for example, nominating directors.
2. Shareholders of Thai NVDR Co., Ltd., who held non-voting depositary receipts in item 4, were ineligible for voting at shareholders' meetings except when exercising their voting rights on delisting the shares from SET.

Dividend Policy

PTT's dividend policy

PTT pays out no less than 25% of its net income as dividends after deducting all provisional reserves required by law and by PTT. While the net income is based on the consolidated financial statements, dividend payment is subject to future investment plans, necessity, and suitability. Once the Board has decided on annual dividend payment, it seeks approval from the shareholders' meeting. An exception is for interim dividend payment, for which the Board can approve such payment and report to the next shareholders' meeting.

Subsidiaries' dividend policy

Concerning subsidiaries' dividend policy, each subsidiary may decide dividend payment by taking into account its remaining cash flow in relation to the investment capital. If the cash flow is substantial enough after legal provisions, the subsidiary may proceed with payment.

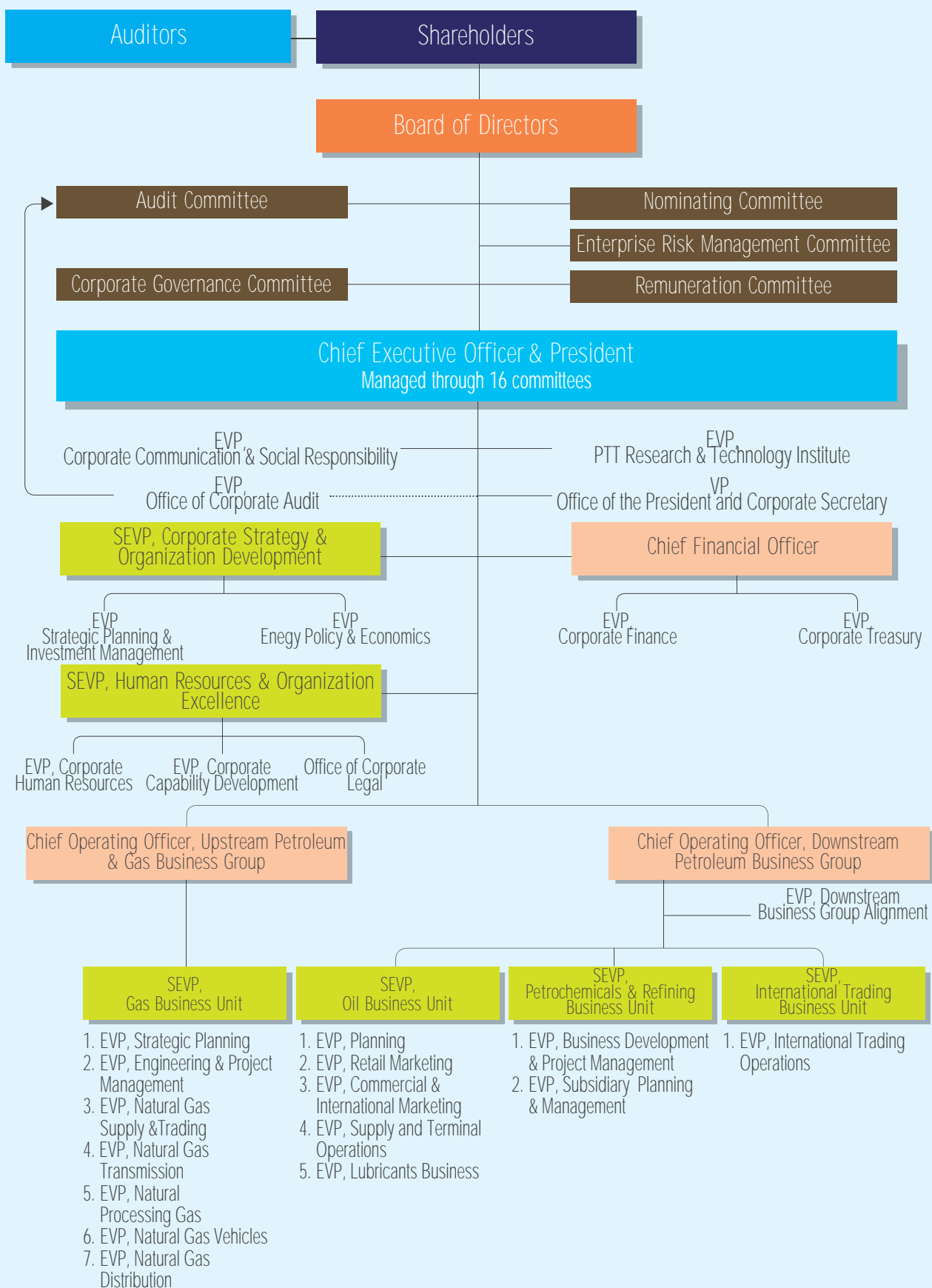
PTTEP Plc's dividend policy

Barring other necessity, the Board's policy is to propose to the meeting of the shareholders for dividend payments at no less than 30% of PTTEP's net income after deducting its annual income tax each year, with occasional interim dividend payment. PTTEP allows no subsidiary to pay dividends.

Management Structure

Responsibility of the Board of Directors

The organization structure of PTT as of December 31, 2013 comprises the Board of Directors and five Committees appointed to screen matters of significance: Audit Committee, Nominating Committee, Corporate Governance Committee, Remuneration Committee, and Enterprise Risk Management Committee. PTT's President and CEO is the top executive that manages PTT through 16 management committees.



Composition of the Board of Directors

Under PTT's Regulations, the Board consists of:

- 5 - 15 persons
- A minimum of three independent directors (PTT's CG requires that independent directors account for not less than a third of the Board.)
- At least one director must be knowledgeable in accounting and finance.

According to the certification of the Ministry of Commerce dated January 8, 2014, the present Board of PTT Plc. consists of 15 directors:

- 14 non-management directors (ten of whom are independent directors, which exceeds half of the Board)
- One management director.

The current Board of Directors consists of

| No. | Name | Position | Appointed Date |
|-----|--|--|--------------------|
| × | Mr. Norkun Sitthiphong (resigned on February 1, 2013) | Chairman of the Board (from January 18, 2008 - December 24, 2010 and from April 29, 2011 - February 1, 2013) | April 10, 2009 |
| × | Mr. Vichet Kasemthongsri (resigned on June 26, 2013) | Independent director/ Chairman of the Board (from February 22, 2013) | January 18, 2013 |
| 1. | Mr. Parnpree Bahiddha-Nukara | Independent director (from June 29, 2013/ Chairman of the Board from July 5, 2013) | June 29, 2013 |
| 2. | Mr. Boonsom Lerdhirunwong | Independent director/ Chairman of Audit Committee | April 21, 2012 |
| 3. | Mr. Athapol Yaisawang | Independent director/ Chairman of Nominating Committee/ Member of Enterprise Risk Management Committee | November 25, 2013 |
| 4. | Mr. Arkhom Termittayapaisith | Independent director/ Chairman of Remuneration Committee | October 11, 2011 |
| 5. | Prof. Dr. Thosaporn Sirisumphand | Independent director/ Chairman of Corporate Governance Committee/ Chairman of Enterprise Risk Management Committee | April 27, 2013 |
| 6. | Mr. Waroonthep Watcharaporn | Independent director/ Member of Audit Committee | October 11, 2011 |
| 7. | Mr. Insorn Buakeow | Independent director/ Member of Audit Committee | April 10, 2012 |
| 8. | Mr. Montri Sotangkul | Independent director/ Member of Audit Committee | November 4, 2011 |
| 9. | Mr. Watcharakiti Watcharothai | Independent director/ Member of Nominating Committee/ Member of Corporate Governance Committee | April 10, 2009 |
| 10. | Mr. Sihasak Phuangketkeow | Independent director/ Member of Remuneration Committee/ Member of Corporate Governance Committee | December 23, 2011 |
| 11. | Mr. Somchai Sujjapongse | Director/ Member of Remuneration Committee/ Member of Enterprise Risk Management Committee | June 29, 2013 |
| 12. | Mr. Prasert Bunsumpun | Director/ Member of Enterprise Risk Management Committee | April 11, 2013 |
| 13. | Mr. Suthep Liumsirijareen | Director | February 23, 2013 |
| 14. | Mr. Chitrapongse Kwangsukstith | Director | October 25, 2011 |
| 15. | Mr. Pailin Chuchottaworn | Director and Secretary of the Board/ Member of Nominating Committee (President and CEO) | September 10, 2011 |

Notes: For 2013, the Board appointed new directors to replace those that either completed their terms or resigned as follows:

- No. 1, Mr. Parnpree Bahiddha-Nukara was appointed director on June 29, 2013, and became Chairman of the Board on July 5, 2013, replacing Mr. Vichet Kasemthongsri, who resigned on June 26, 2013.*
- No. 3, Mr. Athapol Yaisawang replaced Mr. Chulasingh Vasantasingh, who resigned on November 15, 2013.*
- No. 5, Prof. Dr. Thosaporn Sirisumphand replaced Gen Warawat Indradat, who resigned on April 12, 2013.*
- No. 11, Mr. Somchai Sujjapongse replaced Mrs. Benja Louichareon, who resigned on June 26, 2013.*
- No. 12, Mr. Prasert Bunsumpun replaced Mr. Krairit Nilkuha, who completed his term on April 11, 2013.*
- No. 13, Mr. Suthep Liumsirijareon replaced Mr. Norkun Sitthiphong, who resigned on February 1, 2013.*

Authority and Responsibilities of the Board

Authority of the Board:

- The Board is authorized to supervise and manage PTT under applicable laws, objectives, regulations, and resolutions of shareholders' meetings.
- The Board is to elect one director to serve as Chairman. If suitable, one Vice Chairman or more may be elected.
- The Board is to elect one director to serve as President and Secretary of the Board, if suitable.

Duties and Responsibilities of the Board The Board is to:

- Carry out its duties under the Company's Regulations including ensuring management of the Company under applicable laws, objectives, regulations and resolutions of shareholders' meetings.
- Define the Company's vision, directions, and strategies
- Endorse the Company's major strategies and policies, including objectives, financial targets and operating plans, budget, as well as monitor and ensure plan implementation and budgeting.
- Institute systems for corporate accounting, financial reporting, and financial auditing; institute efficient and effective internal control and internal audit systems.
- Supervise and remedy problems arising from conflicts of interest and connected transactions.
- Define comprehensive risk management guidelines and ensure an efficient risk management system or process.

- Ensure a suitable compensation system or mechanism for senior management to induce short-term and long-term motivation.
- Assess the performance of the President and decide suitable compensation.
- Ensure suitable communication channels with each group of shareholders and stakeholders.
- Ensure accurate, clear, transparent, reliable, and high-quality disclosure of information
- Show leadership and lead by example.

Directors Authorized to Sign and Bind for the Company

According to PTT's Regulations of January 8, 2014, the directors whose signatures are recognized as binding PTT consist of either (1) Mr. Pailin Chuchottaworn, President & CEO, authorized to sign and affix the Company's seal, or (2) Mr. Chitrapongse Kwangsukstith and Mr. Watcharakiti Watcharoathai are authorized to jointly sign and affix the Company's seal.

Appointment and Dismissal of Directors

1. The Board consists of 5 - 15 persons, elected at shareholders' meetings. It consists of a minimum of three independent directors, and at least half of the directors are to reside in the Kingdom, and at least one must be qualified in accounting and finance. All directors must be qualified by law and the Company's regulations. Since 2004, the Board decided that independent directors are to make up at least half of the Board, a requirement which remains in effect today. As of February 1, 2014, it had 10 independent directors,

all of whom resided in Thailand. Six directors are experts in accounting and finance: Mr. Somchai Sujjapongse, Mr. Arkhom Termittayapaisith, Mr. Montri Sotangkul, Mr. Boonsom Lerdhirunwong, Mr. Prasert Bunsumpun and Mr. Pailin Chuchottaworn.

2. The shareholders' meetings are to elect qualified directors who have previously been nominated by the Nominating Committee under the following criteria:

(1) Each shareholder has one vote per share held

(2) Each shareholder exercises all votes applicable under (1) in electing one or more persons as directors, but cannot allocate only part of the votes to any candidate

(3) Candidates with the highest votes are to be appointed directors up to the number open at a given meeting.

(4) If candidates get equal votes, which makes the number of successful candidates exceed that of directors to be elected, the Chairman of that meeting will cast a decisive vote.

3. At every AGM, one-third of the directors are to be dismissed. If this number of directors is not a multiple of three, then the number of dismissal will be made closest to one-third of those due for dismissal. The names of the directors to be dismissed during the first and second year after PTT was listed are to be drawn by lots. For subsequent years, those with the longest terms will be dismissed.

4. If a post is vacated because of reasons other than term completion, the Board may elect a qualified person without the prohibitions stipulated under PTT's Regulations to fill the post at the next Board meeting, except when the remaining term of the vacated director is less than two months. A new director must get at least three-quarters of the votes by the remaining directors and shall stay in office only for the remaining term of the former.

5. Any director wishing to leave the post must tender his/her resignation to the Company. Such resignation will take effect from the date the resignation letter reaches the Company.

6. In voting for the dismissal of directors from office before the expiry of their terms, a three-quarter vote of eligible shareholders present at the meeting is required, and the number of shares represented by the three-quarter votes account for at least half of the total number of shares represented by the eligible shareholders present at the meeting.

Qualifications for Directors

Directors must be duly qualified and be without the prohibitions stated in the Public Limited Company Act and the Standard Qualifications for Directors and State Enterprise Officers Act (No. 6) of 2007, as well as relevant Cabinet resolutions, including:

- Up to 65 years of age
- A maximum of three state-enterprise directorships, including appointments due to their positions and those due to acting assignments.
- Independent directors must be qualified under the SET's announcement governing the characteristics and scope of operation of audit committees.
- Have never been sentenced to imprisonment, except for violations of the law by negligence or petty crimes.
- Do not hold a political position, except for a director position required by law.
- Do not belong to a political party or work for one.
- Have never been expelled, dismissed, or made to leave a position because of malfeasance.
- Do not hold shares of the state enterprise in question or a shareholder of a juristic person where the state enterprise in question holds shares. Exceptions apply to directors of state enterprises who are not government officials, government employees, or wage earners with positions or position salaries of centralized governments, provincial governments, local governments or other government units. Also, such state-enterprise directors can hold no more than 0.5% of the paid-up capital of the state enterprise in which they serve as directors or juristic persons where the state enterprise in question holds shares.

- Are not position holders in the juristic person where the state enterprise in question holds shares. Exceptions apply when the board of directors of that state enterprise appoints them as directors or other positions in the juristic person.

- Are not directors, management team members or authorized managers or hold vested interests in a juristic person that serves as a concessionaire, a joint venture, or ones with vested interests in the affairs of the state enterprise in question. Exceptions apply for the board chairman, director, or manager assigned by that state enterprise.

According to the Corporate Governance Guidelines (the 3rd edition), position holding of directors are stated as following:

1. Directors can hold position in no more than 3 state enterprises and/or entity that state enterprise hold shares of.

2. Directors can hold position in no more than 5 companies registering in the Stock Exchange of Thailand. Please note that by holding posts according to No. 2., directors must not obstruct No. 1 as well. Therefore, directors can hold a total of 5 positions.

3. Independent directors and directors of specific committees cannot hold position over 9 consecutive years.

Board Meeting

Board meetings are planned for the entire year. For 2013, the meetings are to be held on the fourth Friday of each month. Additional meetings may be called to discuss special items as necessary. The Office of the President and Corporate Secretary will issue a meeting notice along with the meeting agenda and relevant supplementary documents contained in a CD

to each director seven days ahead of the meeting to allow the directors enough time to prepare them for the meeting.

Currently, Board meetings have been made paperless (electronics), for which meeting agenda are put on CD, and the meetings are conducted through iPad application software for speed and convenience, while considerably reducing accompanying documents. It also shortens the process and provides speed in the delivery of the agenda and facilitates decision-making of the management with efficient information access.

In 2013, PTT held 17 Board meetings (12 regular and 5 special ones), and one Board meeting in absence of the management on guidelines for monitoring compliance with the Board's resolutions, and one independent directors' meeting—an open discussion on whether a risk management committee can be establishment at the executive level, and guidelines for efficient performance of directors/independent directors (recommendations, problems and obstacles). At the meetings, directors openly and freely expressed their views.

The Board has set a policy that meeting documents on particular agenda items will not be forwarded to directors with potential conflict of interests with PTT on such agenda items, and such directors will abstain from voting and attending that portion of the meeting. The minutes of each meeting for each agenda will be properly documented with all recommendations and, after the adoption from the Board was given, will be filed for auditing purposes and reference by directors and related persons. By and large, each Board meeting lasted three hours. Details about directors' meetings were summarized as follows:

Summary of PTT Board of Meeting Attendance in 2013

| Name | 1/2013 | Special 1/2013 | 2/2013 | 3/2013 | 4/2013 | 5/2013 | 6/2013 | Special 2/2013 | 7/2013 | Special 3/2013 | Special 4/2013 | 8/2013 | 9/2013 | Special 5/2013 | 10/2013 | 11/2013 | 12/2013 |
|-------------------------------------|-----------------------------|----------------|---------------------------|--------|-------------------------------|--------|------------------------|----------------|--------|----------------|----------------|--------|--------|----------------|---------|------------------------|---------|
| 1. Mr. Norkun Sitthiphong | / | / | Resigned February 1, 2013 | | | | | | | | | | | | | | |
| 2. Mr. Vichet Kasemthongsri | Appointed January 18, 2013 | / | / | / | / | / | Resigned June 26, 2013 | | | | | | | | | | |
| 3. Mr. Parnpree Bahiddha-Nukara | Appointed June 29, 2013 | | | | | | | / | / | / | / | / | / | / | / | / | / |
| 4. Mr. Chulasingh Vasantasingh | / | x | / | x | x | / | / | / | / | / | / | / | / | / | / | Resigned Nov. 15, 2013 | |
| 5. Mr. Athapol Yaisawang | Appointed November 25, 2013 | | | | | | | | | | | | | | | | / |
| 6. Mr. Boonsom Lerthirunwong | / | / | / | / | / | x | / | / | / | / | / | / | / | / | / | / | / |
| 7. Mr. Arkhom Termittayapaisith | / | / | / | / | x | / | / | / | x | / | x | / | x | x | / | / | / |
| 8. Gen. Warawat Indradat | / | / | / | / | Resigned April 12, 2013 | | | | | | | | | | | | |
| 9. Prof. Dr. Thosaporn Sirisumphand | Appointed April 26, 2013 | | | | | / | / | / | x | / | x | / | / | / | / | / | / |
| 10. Mr. Waroonthep Watcharaporn | x | / | / | / | / | / | / | / | / | x | x | / | / | / | / | / | / |
| 11. Mr. Insorn Buakeow | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 12. Mr. Montri Sotangkul | / | x | / | / | / | / | / | / | / | x | x | x | / | x | x | / | / |
| 13. Mr. Watcharakiti Watcharothai | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 14. Mr. Sihasak Phuanketkeow | / | / | / | x | / | / | x | x | / | x | x | / | x | x | / | / | / |
| 15. Mrs. Benja Louichareon | / | / | / | / | / | / | Resigned June 26, 2013 | | | | | | | | | | |
| 16. Mr. Somchai Sujjapongse | Appointed June 29, 2013 | | | | | | | / | / | / | x | x | / | x | / | / | / |
| 17. Mr. Krairit Nilkuha | / | / | / | / | Term completed April 11, 2013 | | | | | | | | | | | | |
| 18. Mr. Prasert Bunsumpun | Appointed April 11, 2013 | | | | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 19. Mr. Suthep Liumsirijareon | Appointed February 23, 2013 | | | / | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 20. Mr. Chitrapongse Kwangsukstith | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |
| 21. Mr. Pailin Chuchottaworn | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |
| Total attendance | 13 | 13 | 14 | 13 | 12 | 14 | 12 | 14 | 13 | 13 | 9 | 13 | 13 | 11 | 14 | 14 | 15 |
| Total directors | 14 | 15 | 14 | 15 | 14 | 15 | 13 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 14 | 15 |

* Reasons for meeting absence are from prior overseas or official engagement. Absence letter of the directors was forwarded to the Chairman ahead of the meeting.

Attendance Record of the Board and the Committees Meeting for the Year 2013 (5 committees)

| Name | Meeting Attendance | | | | | | Appointment during the Year |
|-------------------------------------|-------------------------------|----------------------------|--|--------------------------------|----------------------------------|---|---|
| | Board of Directors (Total 17) | Audit Committee (Total 18) | Corporate Governance Committee (Total 5) | Nominating Committee (Total 7) | Remuneration Committee (Total 1) | Enterprise Risk Management Committee (established October 25, 2013) | |
| 1. Mr. Parnpree Bahiddha-Nukara | 10/10 | - | - | - | - | - | June 29, 2013 (replacing Mr. Vichet Kasemthongsri) |
| 2. Mr. Boonsom Lerdhirunwong | 16/17 | 17/18 | - | - | - | - | - |
| 3. Mr. Athapol Yaisawang | 1/1 | 2/2 | - | - | - | No official meeting held | November 25, 2013 (replacing Mr. Chulasingh Vasantasingh) |
| 4. Mr. Arkhom Termpittayapaisith | 12/15 | - | - | - | 1/1 | - | - |
| 5. Prof. Dr. Thosaporn Sirisumphand | 10/12 | - | 4/4 | - | - | No official meeting held | April 27, 2013 (replacing Gen. Warawat Indradat) |
| 6. Mr. Waroonthep Watcharaporn | 14/17 | 18/18 | - | - | - | - | - |
| 7. Mr. Insorn Buakeow | 17/17 | - | - | 3/3 | - | - | - |
| 8. Mr. Montri Sotangkul | 11/17 | - | - | - | - | - | - |
| 9. Mr. Watcharakiti Watcharothai | 17/17 | - | 5/5 | 7/7 | - | - | - |
| 10. Mr. Sihasak Phuangketkeow | 10/17 | - | 4/5 | - | - | - | - |
| 11. Mr. Somchai Sujjapongse | 7/10 | - | - | - | - | No official meeting held | June 29, 2013 (replacing Mrs. Benja Louichareon) |
| 12. Mr. Prasert Bunsumpun | 13/13 | - | - | - | - | No official meeting held | April 11, 2013 (replacing Mr. Krairit Nilkuha) |
| 13. Mr. Suthep Liumsirijareen | 14/14 | - | - | - | - | - | February 23, 2013 (replacing Mr. Norkun Sitthiphong) |
| 14. Mr. Chitrapongse Kwangsukstith | 17/17 | - | - | - | - | - | - |
| 15. Mr. Pailin Chuchottaworn | 17/17 | - | - | 7/7 | - | - | - |

Attendance Record of Retired / Resigned Directors for the Year 2013 (6 persons)

| Name | Meeting Attendance | | | | | | Appointment during the Year |
|--------------------------------|-------------------------------|----------------------------|--|--------------------------------|----------------------------------|---|-----------------------------|
| | Board of Directors (Total 17) | Audit Committee (Total 18) | Corporate Governance Committee (Total 5) | Nominating Committee (Total 7) | Remuneration Committee (Total 1) | Enterprise Risk Management Committee (established October 25, 2013) | |
| 1. Mr. Vichet Kasemthongsri | 5/5 | - | - | - | - | - | - |
| 2. Mr. Chulasingh Vasantasingh | 12/15 | 16/16 | - | - | - | - | - |
| 3. Gen. Warawat Indradat | 4/4 | - | 1/1 | - | - | - | - |
| 4. Mrs. Benja Louichareon | 6/6 | - | - | - | 1/1 | - | - |
| 5. Mr. Krairit Nilkuha | 4/4 | - | - | 3/3 | 1/1 | - | - |
| 6. Mr. Norkun Sitthiphong | 2/2 | - | - | - | - | - | - |

Note: A total of 17 Board meetings were held during the year: 12 regular meetings and five extraordinary meetings, as well as one Board meeting in the absence of the management and one meeting of the independence directors.

** Reasons for meeting absence are from prior overseas or official engagement. Absence letter of the directors was forwarded to the Chairman ahead of the meeting.*

Corporate Management ('The Management')

Management team members as of February 1, 2014, are:

| Name | Position |
|--|--|
| 1. Mr. Pailin Chuchottaworn | President & CEO |
| 2. Mr. Surong Bulakul | Chief Financial Officer |
| 3. Mr. Nuttachat Charuchinda ^{1/} | Chief Operating Officer, Upstream Petroleum & Gas Business Group |
| 4. Mr. Sarun Rungkasiri ^{2/} | Chief Operating Officer, Downstream Petroleum Business Group |
| 5. Mr. Supattanapong Punmeechaow | Senior Executive Vice President, Corporate Strategy |
| 6. Mr. Pitipan Teparitimgorn | Senior Executive Vice President, Corporate Management |
| 7. Mr. Charcrie Buranakanonda | Senior Executive Vice President, Gas Business Unit |
| 8. Mr. Chavalit Punthong ^{3/} | Senior Executive Vice President, Oil Business Unit |
| 9. Mr. Atikom Terbsiri ^{4/} | Senior Executive Vice President, Petrochemicals and Refining Business Unit |
| 10. Mr. Sarakorn Kulatham | Senior Executive Vice President, International Trading Business Unit |
| 11. Mr. Tevin Vongvanich | Senior Executive Vice President, seconded to President and CEO, PTT Exploration and Production Plc. |
| 12. Mr. Bowon Vongsinudom ^{5/} | Senior Executive Vice President, seconded to President and CEO, PTT Global Chemical Plc. |
| 13. Mr. Veerasak Kositpaisal | Senior Executive Vice President, seconded to CEO, Thai Oil Plc. |
| 14. Mr. Sukrit Surabotsopon ^{6/} | Senior Executive Vice President, under Chief Operating Officer, Downstream Petroleum Business Group, seconded to President, IRPC Plc. |
| 15. Mr. Pamin Pantawesak ^{7/} | Senior Executive Vice President, under Chief Operating Officer, Downstream Petroleum Business Group, seconded to President, PTT Phenol Co., Ltd. |
| 16. Mr. Wirat Uanarumit | Executive Vice President, Corporate Finance |
| 17. Ms. Prisana Prahankhasuek | Executive Vice President, Corporate Accounting |

Notes: 1/ Appointed on October 1, 2013, replacing Mr. Wichai Pornkeratiwat, who retired.

2/ Appointed on October 1, 2013, replacing Mr. Nuttachat Charuchinda, who was appointed Chief Operating Officer, Upstream Petroleum & Gas Business Group.

3/ Appointed on October 1, 2013, replacing Mr. Sarun Rungkasiri, who was appointed Chief Operating Officer, Downstream Petroleum Business Group.

4/ Appointed on October 1, 2013, replacing Mr. Sukrit Surabotsopon, who was seconded to IRPC Plc.

5/ Appointed on October 1, 2013 to second as President and CEO, PTT Global Chemical Plc.

6/ Appointed on October 1, 2013, replacing Mr. Atikom Terbsiri who was appointed Senior Executive Vice President, Petrochemicals and Refining Business Unit, PTT Plc.

7/ Appointed Senior Executive Vice President on October 1, 2013, and was seconded to PTT Global Chemical Plc. and act as President, PTT Phenol Co., Ltd.

Duties and Responsibilities of the President & CEO

Under PTT's Regulations, the President & CEO has the authority and responsibility to manage PTT's business as assigned by the Board. The business is to be managed strictly, prudently, and with integrity under the plans or budget approved by the Board, and must be in the best interests of PTT and its shareholders.

The President & CEO's authority and responsibility include the following duties:

- Operate and/or manage day-to-day business.
- Hire, appoint, remove, transfer, promote, demote, reduce the salary or wages of, and take disciplinary action against employees and contractors, as well as dismissing employees or contractors under the Board's regulations.
- Ensure the preparation and submission of business policies, including operating plans and budget estimates, to the Board for approval, and report performance against them to the Board every three months.
- Ensure the implementation of the policies, plans, and budget approved by the Board.

The Board authorizes the President & CEO to manage PTT's business under the following scope of authority:

- Manage business under all objectives, regulations, policies, rules, specifications, directives, and resolutions of the Board or shareholders' meetings, or both.

- Order, contact, command, implement, and sign juristic acts, agreement, orders, announcements, or any correspondence with government agencies, state enterprises, or other parties, and engage in any necessary and suitable action to facilitate this duty.

- Command all employees and contractors, including hiring, appointing, removing, promoting, demoting, cutting the salary or wages of, taking disciplinary action, and dismissing any employee or contractor under the rules, regulations, and directives of the Board. For employees or contractors serving as advisors, senior executive vice presidents or equivalent upward, prior approval of the Board is required. The President & CEO is also authorized to specify employment conditions for employees and contractors, and issue rules governing PTT's operations, provided that they do not conflict with the rules, regulations, and directives of the Board.

- Assign the power of attorney and/or delegate specific tasks to other persons, provided that the action complies with the document concerning the power of attorney or rules, regulations, or directives of the Board and/or PTT.

The authority and duties of the President & CEO are invalid in case of conflicts of interest with PTT in any form resulting from the President & CEO's exercise of the authority. This year no such cases have arisen.

The Management Committee

The Management Committee was appointed on October 1, 2001, with the mandate of operating PTT's business. As of February 1, 2014, the committee consists of 10 members as follows:

| Name | Position |
|--|----------------------|
| 1. President & CEO | Chairman |
| 2. Chief Financial Officer | Member |
| 3. Chief Operating Officer, Upstream Petroleum & Gas Business Group | Member |
| 4. Chief Operating Officer, Downstream Petroleum Business Group | Member |
| 5. Senior Executive Vice President, Corporate Management | Member |
| 6. Senior Executive Vice President, Gas Business Unit | Member |
| 7. Senior Executive Vice President, Oil Business Unit | Member |
| 8. Senior Executive Vice President, Petrochemicals and Refining Business Unit | Member |
| 9. Senior Executive Vice President, International Trading Business Unit | Member |
| 10. Senior Executive Vice President, Corporate Strategy and Organization Development | Member and Secretary |

The Vice President, Office of the President & Corporate Secretary, served as Assistant Secretary.

The Management Committee meets at least once a month. This year there were altogether 42 meetings.

Duties and Responsibilities

- Provide advice and recommendations to the President & CEO on significant issues on corporate strategy and business directions, investment plans, budgets, allocation of resources to PTT and its affiliates, and ensure that the operation of PTT affiliates is uniform

- Rank decisions made by the Board to ensure effective implementation.

- Screen meeting agendas before presenting to the Board.

- Rank significant matters about the allocation of human and financial resources of PTT and its affiliates

- Jointly resolve significant issues about PTT affiliates before the meeting of the Board of each affiliated company.

- Establish standards for the systems of business administration, human resources and information, as well as the organizational structure of PTT and its affiliates

- Establish a policy on human resource management.

In addition, PTT appointed 15 committees to oversee specific internal areas of work for accurate, suitable, efficient, and effective implementation as follows:

1. Enterprise Plan Committee
2. Corporate Finance and Accounting Committee
3. PTT Plc Credit Committee
4. Risk Management and Internal Control Committee
5. Corporate Human Resource Committee
6. Quality, Security, Safety, Health, and Environment Committee
7. Corporate Social Responsibility Committee
8. Petroleum Procurement Committee
9. Upstream Petroleum and Gas Business Group Synergy Management Committee
10. Downstream Petroleum Business Group Synergy Management Committee
11. Oil Business Strategic Plan Committee
12. Gas Business Strategic Plan Committee
13. Petrochemicals and Refining Strategic Plan Committee
14. International Trading Business Unit Risk Management Committee
15. Innovation Promotion Committee.

In managing PTT Group, committees were established to drive the strategies and operations of the companies to achieve their goals:

1. PTT Group Management Committee
2. Minor PTT Group Management Committee
3. PTT Group Strategic Plan Committee, International Trading Business Unit
4. PTT Group Sustainability Operation Committee
5. PTT Group Knowledge Management Committee
6. PTT Group Internal Audit Committee
7. PTT Group Quality, Security, Safety, Health, and Environment Committee
8. PTT Group Business Information Technology Policy Committee
9. PTT Group Technology Committee
10. PTT Group Policy & Strategic Sourcing Committee

Corporate Secretary

To comply with the CG principles of listed companies under the category of directors' responsibility and the terms of the Securities and Exchange Act, the Board appointed a Corporate Secretary to provide the Board with legal advice and reminds them of assorted regulations that they need to know and comply with; hold meetings; supervise assorted Board activities to enable them to perform efficiently and effectively for the maximum benefit to PTT; prepare and maintain critical documents, including directors' registration, Board meeting notices and minutes, annual reports; issue shareholders' meeting notices and minutes, and keep reports on connected transactions reported by directors or the management

This year Mrs. Sumon Rungkasiri served as Corporate Secretary till November 30, 2013, and was appointed PTT Executive Vice President, Energy Economics and Policy. The Board therefore appointed Ms. Wantanee Charerk, Vice President, Office of the President and Corporate Secretary, to also serve as Corporate Secretary, with effect from December 1, 2013.

PTT Corporate Secretary:



Mrs. Sumon Rungkasiri

(2011 - November 30, 2013)

Age 58

(%) Share Possession

None

Education

- Bachelor of Political Sciences (Public Administration), Thammasart University
- Master's Degree in Public Administration, National Institute of Development Administration (NIDA)

Company Secretary Training Record

- Company Secretary Program (CSP) 31/2009, Board Reporting Program (BRP) 7/2012 from the Thai Institute of Directors Association (IOD)
- Executive Development Program (EDP), Class 10/2010, from the Thai Listed Companies Association
- Wharton Executive Leaders 2010 from NIDA
- Top Executive Program in Commerce and Trade: TEPCoT Class 6/2013

Professional Experience

| | |
|----------------|---|
| 2006 - 2011 | : Vice President, Corporate Affairs, IRPC Plc. |
| 2011 - 2013 | : Vice President, Office of the President and Corporate Secretary, PTT Plc. |
| 2012 - 2013 | : Chairman, Thai Company Secretary Club |
| 2013 - Present | : EVP, Energy Policy Economics, PTT Plc. |

Related Important Position Held

None

Relationship with Executives

Spouse is Mr. Sarun Rungkasiri, PTT's executive



Mrs. Wantanee Juruke
(December 1, 2013 - Present)

Age 54

(%) Share Possession 0.000903

Education

- Bachelor of Arts (German), Chiang Mai University
- Master of Business Administration, Kasetsart University

Company Secretary Training Record

- From the Thai Institute of Directors Association (IOD): Company Secretary Program (CSP) 2/2002, Effective Minutes Taking (EMT) 1/2006, Board Reporting Program (BRP) 9/2013, and Company Reporting Program (CRP) 4/2013
- Company Secretaries, Trueeventus, the Philippines (2013)

Professional Experience

- 2002 - 2005 : Specialist, Office of the President and Corporate Secretary, PTT Plc.
- 2006 - 2013 : Team Leader, Office of the President and Corporate Secretary, PTT Plc.
- 2013 - Present : Vice President, Office of the President and Corporate Secretary, PTT Plc.

Related Important Position Held None

Relationship with Executives None

Compensation of Directors and the Management

With the oversight of the Remuneration Committee, PTT fairly and reasonably specifies the compensation paid to directors, taking into account each director's responsibility, its financial performance, and compatibility with industry peers. Compensation consists of meeting allowances and bonuses. Directors appointed to the committees receive additional allowances for additional responsibilities. Directors' compensation rates approved by shareholders are as follows:

Directors' Compensation

• Board's Compensation

The following compensation structure for the Board was approved at the 2013 AGM on April 11, 2013:

1. Meeting Allowances

1.1 Board meeting allowance consisted of:

- Retainer allowance of Baht 30,000 per month (same rate as last year)
- Meeting allowance of Baht 50,000 for each meeting (for those in attendance only), an increase of Baht 30,000 from 2012. Meeting allowance payments per year must not exceed 15.

1.2 Allowance for meetings of Committees consisted of:

1.2.1 Audit Committee

- Monthly allowance of Baht 15,000 each
- Meeting allowance of Baht 15,000 for each meeting (for those in attendance only), and the Secretary received a monthly allowance of Baht 7,500.

1.2.2 Allowance for the Nomination, Remuneration, and Corporate Governance Committees consisted of:

- Meeting allowance of Baht 24,000 for each meeting (for those in attendance only).

1.3 Allowance for the Chairman of each committee was 25% higher than for others.

• Directors' Bonuses in 2013

Bonus payouts to each director, at 0.05% of the net profit for 2013, corresponded to PTT's performance and net profit but not exceed Baht 3,000,000 per person (an increase of Baht 1,000,000 per person from 2012). The bonus was prorated to each director's term, with the Chairman receiving 25% more than individual directors.

Compensation Paid to Individual Directors in 2013

Unit: Baht

| No. | Name | Days of Service | Bonus | Meeting Allowance | Committee Meeting Allowance | Total Allowance | Total Compensation |
|--------------|----------------------------------|-----------------|----------------------|----------------------|-----------------------------|----------------------|----------------------|
| 1. | Mr. Parnpree Bahiddha-Nukara | 186 | 1,898,630.14 | 726,032.26 | 0.00 | 726,032.26 | 2,624,662.40 |
| 2. | Mr. Boonsom Lerthirunwong | 365 | 3,000,000.00 | 1,120,000.00 | 255,000.00 | 1,375,000.00 | 4,375,000.00 |
| 3. | Mr. Athapol Yaisawang | 37 | 304,109.59 | 108,500.00 | 37,500.00 | 146,000.00 | 450,109.59 |
| 4. | Mr. Arkhom Termpittayapaisith | 365 | 3,000,000.00 | 840,000.00 | 30,000.00 | 870,000.00 | 3,870,000.00 |
| 5. | Prof. Dr. Thosaporn Sirisumphand | 249 | 2,046,575.34 | 694,000.00 | 102,000.00 | 796,000.00 | 2,842,575.34 |
| 6. | Mr. Waroonthep Watcharaporn | 365 | 3,000,000.00 | 1,100,000.00 | 270,000.00 | 1,370,000.00 | 4,370,000.00 |
| 7. | Mr. Insorn Buakeow | 365 | 3,000,000.00 | 990,000.00 | 72,000.00 | 1,062,000.00 | 4,062,000.00 |
| 8. | Mr. Montri Sotangkul | 365 | 3,000,000.00 | 820,000.00 | 0.00 | 820,000.00 | 3,820,000.00 |
| 9. | Mr. Watcharakiti Watcharothai | 365 | 3,000,000.00 | 990,000.00 | 354,000.00 | 1,344,000.00 | 4,344,000.00 |
| 10. | Mr. Sihasak Phuanketkeow | 365 | 3,000,000.00 | 770,000.00 | 96,000.00 | 866,000.00 | 3,866,000.00 |
| 11. | Mr. Somchai Sujjapongse | 186 | 1,528,767.12 | 532,000.00 | 0.00 | 532,000.00 | 2,060,767.12 |
| 12. | Mr. Prasert Bunsumpun | 265 | 2,178,082.19 | 810,000.00 | 0.00 | 810,000.00 | 2,988,082.19 |
| 13. | Mr. Suthep Liumsirjarern | 312 | 2,564,383.56 | 876,428.57 | 0.00 | 876,428.57 | 3,440,812.13 |
| 14. | Mr. Chitrapongse Kwangsukstith | 365 | 3,000,000.00 | 990,000.00 | 0.00 | 990,000.00 | 3,990,000.00 |
| 15. | Mr. Pailin Chuchottaworn | 365 | 3,000,000.00 | 990,000.00 | 168,000.00 | 1,158,000.00 | 4,158,000.00 |
| Total | | | 37,520,547.94 | 12,356,960.83 | 1,384,500.00 | 13,741,460.83 | 51,262,008.77 |

Notes: No. 1, Mr. Parnpree Bahiddha-Nukara was appointed on June 29, 2013.
 No. 3, Mr. Athapol Yaisawang was appointed on November 25, 2013.
 No. 5, Prof. Dr. Thosaporn Sirisumphand was appointed on April 27, 2013.
 No. 11, Mr. Somchai Sujjapongse was appointed on June 29, 2013.
 No. 12, Mr. Prasert Bunsumpun was appointed on April 11, 2013.
 No. 13, Mr. Suthep Liumsirjarern was appointed on February 23, 2013.

Retired and Resigned Directors (2013)

Unit: Baht

| No. | Name | Days of Service | Bonus | Meeting Allowance | Committee Meeting Allowance | Total Allowance | Total Compensation |
|--------------|-----------------------------|-----------------|---------------------|---------------------|-----------------------------|---------------------|----------------------|
| 1. | Mr. Norkun Sitthiphong | 31 | 318,493.15 | 87,500.00 | 0.00 | 87,500.00 | 405,993.15 |
| 2. | Gen. Warawat Indradat | 101 | 830,136.99 | 181,000.00 | 24,000.00 | 205,000.00 | 1,035,136.99 |
| 3. | Mr. Krairit Nilkuha | 101 | 830,136.99 | 181,000.00 | 96,000.00 | 277,000.00 | 1,107,136.99 |
| 4. | Mrs. Benja Louichareon | 176 | 1,446,575.34 | 355,000.00 | 24,000.00 | 379,000.00 | 1,825,575.34 |
| 5. | Mr. Vichet Kasemthongsri | 159 | 1,561,643.84 | 382,923.39 | 0.00 | 382,923.39 | 1,944,567.23 |
| 6. | Mr. Chulasingh Vasantasingh | 319 | 2,621,917.81 | 951,875.00 | 300,000.00 | 1,251,875.00 | 3,873,792.81 |
| Total | | | 7,608,904.12 | 2,139,298.39 | 444,000.00 | 2,583,298.39 | 10,192,202.51 |

Notes: No. 1 Mr. Norkun Sitthiphong, Chairman, resigned on February 1, 2013.
 No. 2 Gen. Warawat Indradat, Director, resigned on April 12, 2013.
 No. 3 Mr. Krairit Nilkuha, Director, completed his term on April 11, 2013.
 No. 4 Mrs. Benja Louichareon, Director, resigned on June 26, 2013.
 No. 5 Mr. Vichet Kasemthongsri, Chairman, resigned on June 26, 2013.
 No. 6 Mr. Chulasingh Vasantasingh, Director, resigned on November 15, 2013.

Directors' Compensation Profile of 2010 - 2013

Unit: Baht

| Compensation | 2010 | | 2011 | | 2012 | | 2013 | |
|-------------------|--------|----------------------|--------|----------------------|--------|----------------------|--------|----------------------|
| | Person | Baht | Person | Baht | Person | Baht | Person | Baht |
| Meeting Allowance | 15 | 11,398,213.71 | 15 | 11,355,399.76 | 14 | 11,316,572.58 | 15 | 16,324,759.22 |
| Total Bonus | 15 | 29,657,534.24 | 15 | 28,802,739.73 | 14 | 30,122,950.82 | 15 | 45,129,452.06 |
| Total | | 41,055,747.95 | | 40,158,139.49 | | 41,439,523.40 | | 61,454,211.28 |

Compensation to Independent Directors Serving as Independent Directors of Subsidiaries in 2013

In 2013, The Board has one independent director on the Boards of PTT and PTTEP, a subsidiary.

Unit: Baht

| Name | Compensation | | Committee Meeting Allowance | Total |
|-----------------------|--------------|-------------------------------|-----------------------------|------------|
| | Bonus | Meeting and Monthly Allowance | | |
| Mr. Athapol Yaisawang | 134,740.62 | 80,000.00 | 0 | 214,740.62 |

Compensation to PTT's Independent Director who resigned during 2013 and is currently PTTEP's Independent Director

Unit: Baht

| Name | Compensation | | Committee Meeting Allowance | Total |
|-----------------------|--------------|-------------------------------|-----------------------------|--------------|
| | Bonus | Meeting and Monthly Allowance | | |
| Gen. Warawat Indradat | 2,515,158.32 | 800,000.00 | 130,000.00 | 3,445,158.32 |

Management's Compensation

• Management's Compensation

The Board defined the policy and criteria on management's compensation with correspond with PTT performance in accordance with the Performance Agreement (PA) under the assessment system of state enterprise stipulated by the Ministry of Finance. The President & CEO, all executives and management jointly defined Key Performance Indicators (KPIs) as operation directions and to be used in assessment of the President & CEO, executives and management. The Remuneration Committee decided on the remuneration which reflected performance management, taking into account practices and standards of leading companies with same nature of business, and submitted the principles and proposed remuneration to the Board for approval.

Compensation paid to the President & CEO and the PTT executives (excluded those seconded to PTT affiliates and those from PTT affiliates seconded to PTT) are as detailed below:

Total Compensation Paid to the Management

Unit: Baht

| Compensation | 2010 | | 2011 | | 2012 | | 2013 | |
|--------------|--------|----------------------|--------|----------------------|--------|----------------------|--------|----------------------|
| | Person | Baht | Person | Baht | Person | Baht | Person | Baht |
| Salary | 7 | 50,470,620.00 | 10 | 62,091,720.00 | 9 | 62,769,000.00 | 10 | 69,023,520.00 |
| Bonus | 7 | 22,183,379.00 | 6 | 24,581,820.00 | 9 | 23,993,379.77 | 10 | 30,772,449.50 |
| Total | | 72,653,999.00 | | 86,673,540.00 | | 86,762,379.77 | | 99,795,969.50 |

Provident Fund Contribution to the Management

Unit: Baht

| Compensation | 2010 | | 2011 | | 2012 | | 2013 | |
|----------------|--------|--------------|--------|--------------|--------|--------------|--------|--------------|
| | Person | Baht | Person | Baht | Person | Baht | Person | Baht |
| Provident Fund | 7 | 2,925,340.00 | 8 | 3,980,468.00 | 9 | 6,276,900.00 | 9 | 6,652,851.60 |

Additional Information on the Board and the Management

Records have shown no violation of the law within the past 10 years regarding:

- 1) Being sentenced for criminal charges, except for violations of traffic law, minor charges, or similar charges.
- 2) Being sentenced to bankruptcy or having assets controlled.
- 3) Serving as an executive or a person with authority in a company or partnership sentenced to bankruptcy or whose assets are controlled.

Employees

As employees are pivotal to its operations and that their quality is the key to its business success, PTT is committed to the development of human resource management systems compatible with technological advancement and international standards. It not only promotes both conscientious merit and business competence for its employees, but also encourages them to actively take part in public service activities. It is indeed through employees that PTT focuses on its development toward a sustainability organization to elevate competitiveness, respond to changes in the organization, and enhance energy security of the country.

Headcount and Compensation

As of December 31, 2013, the PTT employee headcount (including those seconded to PTT's affiliates) stood at 4,395. PTT has continued to set its manpower plan in line with its operations under uncertain economic conditions, with a focus on allocating resources where significant value supplementation is likely or where continuing investment is needed. PTT formulates human resource plans and earnestly develops the potential of all its employees, as well as streamlining its business procedures to enhance work efficiency.

The business-group headcounts from 2011 to December 31, 2013, are as follows:

Unit: Persons

| Business Unit | 2011 | | 2012 | | 2013 (1 Jan - 31 Dec) | |
|---|---------------------|-------------------|---------------------|-------------------|-----------------------|-------------------|
| | PTT | PTT Group | PTT | PTT Group | PTT | PTT Group |
| 1. Gas | 1,270 | - | 1,367 | - | 1,424 | - |
| 2. Oil | 1,387 | - | 1,296 | - | 1,496 | - |
| 3. Petrochemicals and Refining | 68 | - | 103 | - | 95 | - |
| 4. Support staff/secondees to PTT affiliates | 1,045 ^{1/} | 276 ^{2/} | 1,197 ^{1/} | 265 ^{2/} | 1,098 ^{1/} | 282 ^{2/} |
| 5. Subsidiaries and jointly-controlled entities | - | 17,964 | - | 20,551 | - | 24,969 |
| Total | 3,770 | 18,240 | 3,963 | 20,816 | 4,113 | 25,251 |

Notes: 1/ Excludes PTT secondees

2/ PTT secondees

Compensation for Personnel (excluding the President & CEO and Senior Management)

Unit: Baht

| Compensation | 2011 | 2012 | 2013 (1 Jan - 31 Dec) |
|-----------------------------|-------------------------|-------------------------|--------------------------|
| Salary | 3,044,018,589.00 | 3,311,831,273.00 | 3,549,202,456.00 |
| Bonus | 1,465,345,881.00 | 1,653,647,970.00 | 1,756,840,371.00 |
| Provident fund contribution | 293,871,121.00 | 318,714,613.00 | 415,284,584.00 |
| Others (if applicable) | 2,076,671,038.00 | 2,331,060,076.00 | 2,364,683,270.00 |
| Total | 6,879,906,629.00 | 7,615,253,932.00 | 8,086,010,681.00 |

Other Compensation

PTT has contributed employee welfare and other compensation apart from salary, bonus, and provident fund to management and all employees in keeping with economic conditions, cost of living, and other standards for peer companies, such as housing allowance, upcountry allowance, and overtime payment.

In 2013, PTT revised its salary structure to make it more competitive, provided strategies and policy to boost their motivation, both in monetary and non-monetary forms, such as flexible benefits, which give employees an opportunity to choose the welfare plans that suit their lifestyles, as well as human resource development policy, among others.

Human Resource System Development and Improvement

To become a sustainability organization, PTT keeps on developing and improving the process and mechanism for human resource management to ensure higher efficiency and realize the full potential of its employees, which will lead the company toward its goals. PTT employees are able to fully demonstrate their competence, advance in their careers, and continue to grow with PTT.

PTT has focused on participation across the board in designing business plans to suit its direction and targets, since this will efficiently align all components of the Company. To this end, it has instituted a process in which the senior management of PTT and its affiliates along with support staff jointly define a vision and directions before propagating the agreed items for other units to use in defining business strategies and business plans and come up with budget plans in broad alignment. All PTT employees defined individual objectives and KPIs cascaded through the ranks from the corporate, department, to the individual level.

Such objectives and indicators are defined by employees then serve as a framework and performance assessment standards to reflect individual performance.

PTT applies Career Management guidelines to prepare and promote the management and all employees with skills and knowledge to fit the PTT- designed model in coping with the missions and creating values for the organization. PTT has applied this model in developing its employees in all levels for greater efficiency by dividing employees into two professional groups with clear and efficient interconnected (senior management and staff) with a system on recruitment, assessment, and individual development plan in place.

- Senior management (equivalent to vice presidents upward) is subject to Group Leader Development, which sustains the needs of high-level executives in both quantity and quality. Management of this group is supervised by a panel of CEOs in PTT Group called the PTT Group Management Committee (PTTGMC) with responsibility for defining directions and the policy on development plan for senior management. Another team, called Human Resources Group Alignment & Coordination Management Committee (HRAC), provides counseling and recommendations to the Senior Vice President, Corporate Management, on decision-making regarding key coordination issues on human resource development strategies and directions of PTT's group to align with those of PTT.

- Staff (Division Manager or equivalent downward): This internal management is specific to PTT or a PTT Group company in developing employees to suit operation needs. The Corporate Human Resources Committee (HRC) was established to promote and monitor the career development plan to ensure that the goals are achieved. A Career Counseling Teams (CCT) for 14 professional groups takes charge of defining and developing individuals, providing counseling

and guidance, and monitoring and following up on the implementation. The development plan is a tool for employees to set their goals and development of their career paths and put value in their work in line with PTT's direction and goals. Such staff development can be undertaken through proper training via competency and success profiles or via job rotation in line with their career paths, which will enable them to develop skills in their new positions, as do suitable appointments and promotions for their responsibilities and potential. Finally, development of staff to suit their competencies and needs of both staff and the organization would in time lead PTT to its goals.

In 2013, PTT launched a "Young People to Globalization (YP2G)" to select qualified personnel to station overseas in line with PTT's strategies. These personnel will receive additional training from last year to prepare and develop them for the work. The Career and Competency Management was improved, the success profile of each position prepared and reviewed, competency assessment system and individual Development Plan (IDP) under COACH system improved, and the operation handbook on human resources career development revised to develop each staff member for his or her position and in line with PTT's business.

PTT implemented a Lifetime Learning Organization Mechanism and evolved its knowledge management system for essential, relevant information, while encouraging the management and all to do the same and update this regularly. It made this system available for all to facilitate learning and efficient problem-solving, while actively promoting employees' own potential development since this is a cornerstone "To become a Sustainability Organization, we rely on human intelligence. Learning is an ongoing, lifelong process". PTT provided training and development programs to its management and employees from their recruitment to retirement to enable and enhance their competence toward corporate directions and needs, so that they may become competent and righteous citizens of the organization and society.

Besides a human resource management system focusing on making employees both smart and responsive to its expectations, PTT valued its role of turning out conscientious people ready to participate in CSR while observing CG principles. PTT is convinced that achievement of competence and righteousness will foster steady and sustainable growth for itself.

The Summary of management and employees training hours

Unit: hours / person / year

| hours / person / year | 2011 | 2012 | 2013 |
|-----------------------|------|------|------|
| Employees | 44.0 | 60.1 | 63.0 |
| Management | 44.8 | 41.8 | 43.0 |

Unit: hours / person / year

| cost / person / year | 2011 | 2012 | 2013 |
|--------------------------|-----------|-----------|-----------|
| Management and Employees | 41,182.00 | 54,611.00 | 58,000.00 |

The Management and Staff in Search of the Same Goal

Communication between the management and staff at PTT comes in various forms. Needing to be aware of corporate business, obstacles, and potential repercussions, all employees should be allowed to share their views and take part in business efficiency improvement. Each year, besides the monthly labor relations committee meetings, PTT held joint consultation committee (JCC) meetings between its management team and staff of regional offices nationwide. In addition, the President & CEO not only continually held regular meetings with employees and attended meetings among the management and staff (both in and outside PTT), but also surveyed employees' satisfaction for views and suggestions for improvement. PTT is convinced that proper communication and information exchange among all will induce smooth relationship cooperation, thus moving the organization forward to its goals. Moreover, PTT surveyed basic human resource needs of the management and staff through the operation of numerous committees, such as the human resource management committee, PTT labor relations committee, and career path management committee. A survey of staff opinions was undertaken once by an external human resource management adviser. There was also cooperation with PTT Group to jointly develop a database of the management as well as development plans of senior management.

PTT Group Core Values

PTT's management and employees believe that the PTT Group Core Values, known as SPIRIT, will help PTT Group, the executives, and staff create a common work path, direction, and belief that align with the vision of PTT Group to become a sustainability organization. These core values serve as guidelines in formulating ideas and beliefs which influence work practice and behavior. Thus, SPIRIT is a key element to strengthen

the PTT culture supporting our decisions to establish mutual trust and a sense of belonging, while inspiring employees to be both smart and conscientious. SPIRIT consists of:

| | | |
|---|---|----------------------------|
| S | = | Synergy |
| P | = | Performance excellence |
| I | = | Innovation |
| R | = | Responsibility for society |
| I | = | Integrity & ethics |
| T | = | Trust & respect. |

Succession Planning

Because PTT is a state enterprise, the nomination and appointment of the President & CEO must follow the Standard Qualifications of Directors and State Enterprise Officer Act. Directors must have the qualifications as specified in Article 8 ter and the nominating procedures as specified in Article 8 quarter. The Board is to appoint a Nominating Committee, with five members duly qualified and without prohibitions under the laws, which nominates persons with appropriate knowledge, capability, and experience to fill the positions of PTT management. Candidates must be legitimately qualified and without prohibitions under the laws and are not PTT directors, except for management team members who are directors by title. They must not be older than 58 years old on the date of application submission. When the Nominating Committee selects appropriate candidates, it submits the results to the authority. The appointment must be completed within one year from the day the incumbent vacated the position. Each employment contract lasts up to four years for each term. If the Board wishes to hire a previous management team member after the completion of his term as specified in the hiring contract, it does not have to go through the nominating process, but it cannot hire the person for more than two consecutive terms.

In 2011, the Board recruited a new President & CEO to replace Mr. Prasert Bunsumpun, who completed his term under his employment contract on September 9, 2011. A New President & CEO Selection Committee was appointed under the Standard Qualifications of Directors and State Enterprise Act. A total of four candidates, three from PTT executives and one non-PTT person applied for the position. The selection process was conducted transparently under the guidelines on senior executive position selection under Article 8, paragraph 3 of the Standard Qualifications of Directors and State Enterprise Act (No. 6) B.E. 2550 (2007).

This committee proposed Mr. Pailin Chuchottaworn to the Board for consideration. The Board, on May 27, 2011, approved Mr. Chuchottaworn as the new President & CEO, replacing Mr. Bunsumpun, with effect from September 10, 2011, for a four-year term.

PTT has taken steps to develop its executives and prepared them for the nomination of the next President & CEO. PTT also prepared for the retirement of senior management team members in 2013 - 2017 under succession planning under PTT Group's policy/guidelines. A management pool has been developed, consisting of 354 management executives, and another potential pool for key areas.

PTT has, since 2007, set up a Group Leader Development Project (GLDP) to lay down a succession plan for personnel when the time comes for assuming higher positions that become vacant, namely:

- President
- Senior Executive Vice President (SEVP) or equivalent
- Executive Vice President (EVP) or equivalent
- Vice President (VP) or equivalent.

Core responsible management parties and units are as follows:

- PTT Group Management Committee (PTTGMC)
- Human Resources Alignment & Coordination Management Committee (HRAC)
- Corporate Human Resources Committee (HRC)

Performance in 2013

- Selection of SEVP pool members from EVPs
 - 80 pool members
(as of December 31, 2013)
 - 13 pool members already promoted
(2008 - 2013)
- Selection of EVP pool members from VPs (PTT Group)
 - 128 pool members
(as of December 31, 2013)
 - 8 pool members already promoted
(2008 - 2013)
- Selection of VP pool members from PTT division managers
 - 146 pool members
(as of December 31, 2013)
 - 63 pool members already promoted
(2009 - 2013).

Labor Disputes

No report of PTT's labor disputes was made during the past three years.

Corporate Governance

Corporate Governance Policy

In conducting its businesses, PTT recognizes that all shareholders own this company. What gives the shareholders trust and confidence in their investment with PTT is its policy and operations that preserve the basic lawful rights of the shareholders, or more, in addition to suitable, efficient, and most effective management that is consistently acceptable to investors and relevant parties.



Ever since the privatization into PTT Plc. and distribution of its shares on the Stock Exchange of Thailand (SET) in late 2001, it has valued corporate governance (CG) as its guiding principles. PTT regulations state: "The Company must have and implement a policy on its business ethics, including the ethics of its Board of Directors, senior executives, the management, and employees in compliance with good corporate governance practices as its code of conduct for the proper conduct of the organization with a high standard." PTT has issued its rules on good corporate governance in 2001 and published a handbook on principles of corporate governance in 2003 and delivered to each director, the management, and the employees to sign, acknowledge, and comply with. The handbook was revised in 2005, 2009 and 2013. The latest revision complied with SET's corporate governance principles of listed companies as well as suggestions and recommendations from IOD's Corporate Governance Assessment Report, which was revised in line with the ASEAN Corporate Governance Scorecard (ASEAN CG Scorecard) and good practices of leading international companies. The handbook was renamed "Corporate Governance, Ethical Standard, and Code of Business Conduct Handbook".

Essential provisions added to the handbook are:

1. Ethical standards that lend the handbook the status of "code of ethics" under the constitution
2. Mechanisms and good practices for CG for explicit conformance and punishment in case of violations or negligence
3. Code of conduct on treatment of creditors to cover all groups of stakeholders more clearly.

PTT has integrated CG in its vision, missions, and core values to enable it to grow in a sustainable way, to become a leading Thai Premier Multinational Energy company and a high-performance organization (HPO) with corporate social responsibility (CSR), able to provide appropriate returns to its stakeholders on corporate governance (CG) principles.

• **Good Corporate Governance Policy**

PTT duly reviewed its CG policy and handbook to suit prevailing economic and social circumstances and requires all directors, the management, and employees to acknowledge in writing and observe all policies at work to illustrate the commitment to practical application of such policy and business code of conduct to their jobs. The Board's policy on CG is as follows:

1. The Board, management, and all employees are committed to the six elements of CG: Accountability, Responsibility, Equitable Treatment, Transparency, Vision to Create Long-Term Value, and Ethics. An organization structure fairly balances the roles of the Board, the management, and the shareholders.
2. Directors must perform their duties independently with full commitment, responsibility, and independence. There is a clear division of responsibilities between the Chairman and the President & CEO.
3. Playing a key role in the formulation of the corporate vision, strategies, policies, and key plans with due regard for risk factors and suitable risk management, the Board must also ensure the credibility of the accounting system, financial statements, and accounting audits.

4. Leading the rest of PTT on ethics and CG, the Board must supervise the management and solution to any conflict of interest and connected transactions.

5. The Board may appoint committees to help it screen and scrutinize critical issues.

6. The Board must undergo annual self-assessment to obtain a framework for its performance assessment.

7. The Board must establish a code of conduct for itself, the management, employees and all contract employees to observe in addition to PTT's rules and regulations.

8. Disclosure of financial and non-financial information must be carried out adequately, credibly, promptly, and fairly for all shareholders and stakeholders. To investors and the general public, Investor Relations is responsible for such disclosure.

9. For fair treatment, PTT shareholders can access information through suitable communication channels with PTT.

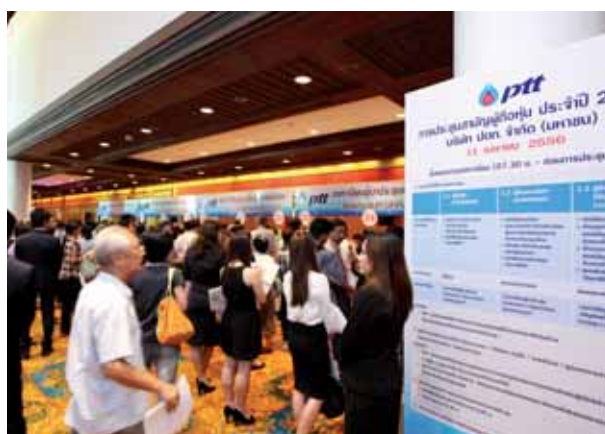
10. A proper selection procedure must be in place for the appointment of key management personnel under a fair and transparent nomination process.

PTT publicized the "Corporate Governance, Ethical Standard, and Code of Business Conduct Handbook", 3rd revision, on its website.

CG performance can be summarized as follows:

1. Rights of Shareholders

As the owners, the shareholders are entitled to dictate PTT's direction or decide on matters of significant impacts. Shareholders' meetings therefore serve as their key forums for the expression of views, asking of questions, and voting, apart from election of directors to supervise PTT's operation on behalf of the shareholders. Shareholders are entitled to attend shareholders' meetings, take adequate deliberation time, and acknowledge meeting minutes.



1.1 Shareholders' Meetings

As a rule, PTT schedules an annual general meeting of shareholders (AGM) within four months of the annual closing date of its accounting books. For urgent matters that affect or involve the shareholders' interests or involve conditions, regulations, or laws that require the shareholders' approval, it calls an extraordinary meeting of the shareholders.

In 2013, the AGM fell on April 11 with the venue being Queen Sirikit National Convention Center (Plenary Halls 1-3) in Bangkok. No extraordinary meeting was held this year.

1.2 Delivering Meeting Notices

For the 2013 AGM, the Board at the meeting No. 2/2556 on February 22, 2013, decided to call a shareholders' meeting on April 11, 2013. Its decision, meeting date, and meeting agenda was disclosed in details ahead of time by announcing on SET's website to alert the shareholders before sending meeting notices.

PTT assigned Thailand Securities Depository Co., Ltd. (TSD), its securities registrar, to mail meeting notices together with details of the agenda and accompanying documents, supplementary and supporting information for decision-making, opinions of the Board, complete minutes of the past meeting, the annual report, meeting documents, proxy forms with complete instruction, to the shareholders more than 14 days ahead of the meeting date. The meeting notices were sent on March 22, 2013, and three days ahead of the meeting, the invitation was announced through one Thai and one English newspaper, each for three consecutive days (April 5 - 7, 2013), to allow the shareholders enough time to prepare themselves for the meeting.

The AGM meeting notice and supporting documents were made available at PTT's website (www.pttplc.com) 30 days ahead of the meeting date (starting March 8, 2013).

1.3 On the Meeting Date

Before the meeting, the chairman of the meeting introduces the directors, management team members, the external auditor and the legal adviser who acts as a moderator. After explaining PTT's rules on voting and vote counting for individual agenda items, the chairman must clearly address how to vote on each agenda item. Once information has been provided for each item, the chairman gives the floor to all attendants to express opinions or recommendations and ask questions, giving adequate time for debate. The chairman and the management are to address and answer all questions clearly and precisely, treating all questions with due respect. For the election of directors, individual votes are required.

The chairman ensures that the meeting proceeds according to the order of the agenda and does not add an item without notifying shareholders in advance. If the meeting should decide to change the order of the agenda, it would need at least two-thirds of the vote of the shareholders in attendance. Alternatively, the shareholders with at least one-third of all the sold shares may ask the meeting to consider other matters not mentioned in the meeting notice. At the 2013 AGM, the order of the agenda was not changed, and there was no request to consider any other matter.

At every meeting, the minutes must be completely and accurately recorded with the vote tally of each applicable agenda item. As a rule, shareholders' meetings last 3 - 4 hours. The 2013 AGM began at 9.30 a.m., with registration beginning at 7.30 a.m. At the meeting's opening, a total of 5,663 shareholders registered, of whom 2,301 were shareholders and 3,362 were proxy holders, holding a total of 2,367,261,074 shares, accounting for 82.88% of the total shares sold, which exceeded one-third of all the sold shares of 2,856,299,625 with the following attendees:

Board of Directors

| | |
|------------------------------------|---|
| 1. Mr. Vichet Kasemthongsri | Chairman |
| 2. Mr. Chulasingh Vasantasingh | Independent Director/ Chairman of the Audit Committee |
| 3. Mr. Sihasak Phuangketkeow | Independent Director/ Member of Corporate Governance Committee |
| 4. Mrs. Benja Louichareon | Director/ Member of Remuneration Committee |
| 5. Mr. Watcharakiti Watcharothai | Independent Director/ Chairman of Nominating Committee/ Chairman of Corporate Governance Committee |
| 6. Gen. Warawat Indradat | Independent Director/ Member of Corporate Governance Committee |
| 7. Mr. Waroonthep Watcharaporn | Independent Director/ Member of Audit Committee |
| 8. Mr. Suthep Liumsirijarern | Director |
| 9. Mr. Krairit Nilkuha | Director/ Member of Remuneration Committee/ Member of Nominating Committee |
| 10. Mr. Arkhom Termpittayapaisith | Independent Director/ Chairman of Remuneration Committee |
| 11. Mr. Chitrapongse Kwangsukstith | Director |
| 12. Mr. Boonsom Lerdhirunwong | Independent Director/ Member of Audit Committee |
| 13. Mr. Insorn Buakeow | Independent Director |
| 14. Mr. Pailin Chuchottaworn | Director and Corporate Secretary/ Member of Nominating Committee/ CEO and President |

Executives

| | |
|------------------------------|--|
| 1. Mr. Surong Bulakul | CFO |
| 2. Mr. Wichai Pornkeratiwat | COO, Upstream Petroleum & Gas Business Group |
| 3. Mr. Nuttachat Charuchinda | COO, Downstream Petroleum Business Group |

Also in attendance were several senior executive vice presidents and executive vice presidents of business units to address queries.

External Auditors

| | |
|---------------------------|-------------------------------|
| 1. Ms. Mayuree Chanthamat | Office of the Auditor-General |
| 2. Ms. Methavee Suasom | Office of the Auditor-General |

Legal Advisors (to proctor balloting in case of disputes during the meeting)

| | |
|----------------------------------|--|
| 1. Ms. Phaengphanaw Boonklam | Weerawong, Shinawatra & Phaengphanaw Co., Ltd. |
| 2. Ms. Patcharaporn Phutranont | Weerawong, Shinawatra & Phaengphanaw Co., Ltd. |
| 3. Mr. Akraphol Phichetwanichoke | Allen & Overy (Thailand) Co., Ltd. |
| 4. Ms. Mananya Thitinanthawan | Allen & Overy (Thailand) Co., Ltd. |

Number of shareholders (at the meeting's conclusion at 14:18 hours)

A total of 9,586 shareholders registered, of whom 4,160 were shareholders and 5,426 were proxy holders, commanding a total of 2,428,743,597 shares and accounting for 85.03% of the total shares sold.

1.4 Practical Guidelines for Reporting Conflicts of Interest

As specified by the CG Handbook, all directors, management team members, and employees must prepare reports on conflicts of interest, consisting of annual reporting forms and a new annual format in case of changes during the year. At any given meeting, those with vested interests or conflicts of interest with PTT must inform the meeting to excuse themselves and abstain from voting on each connected matter.

At the shareholders' meetings, any director with vested interests or was involved in any agenda item, must inform the meeting to excuse themselves and abstain from voting on each connected agenda.

1.5 Disclosure of Shareholders' Meeting Outcomes

For the 2013 AGM, PTT duly submitted the summary of resolutions of the AGM made to SET and the SET Board within the afternoon of the date of the meeting (April 11, 2013). It also duly submitted the report of the shareholders' meeting with minutes (each agenda clearly separated), number of directors in attendance/absence, question raised by shareholders and answers from the directors and voting tallies of each agenda to SET and the SET Board within 14 days after the meeting. Meeting information, videotapes, and audiotapes are accessible through PTT's website.

2. Equitable Treatment of Shareholders

PTT treats all shareholders fairly despite different shareholding proportions and voting power due to their shares. The fundamental rights of the shareholders are conserved regardless of their gender, age, origin, nationality, religious, belief, social status, physical impairment, or political inclinations. At the AGM, seats at the most convenient spots were reserved for the elderly, disabled, and pregnant women with officers to attend to their needs. All shareholders have equal rights to take part in PTT's activities.

Directors with vested interests in any agenda must excuse themselves from the meeting on that agenda.

Information on the shareholders meeting was announced ahead of the meeting, both in Thai and English.

2.1 Proposing Additional Meeting Agenda Items and Nominating Directors

To enable minor shareholders to earnestly take part in business operations and auditing, PTT has defined the criteria and consideration process for entitling them to propose meeting agenda items and/or nominate directors in advance to deliberate agenda items that could be useful to PTT, including the selection of qualified directors to perform their duties efficiently in the best interests of PTT and all shareholders and stakeholders alike. In practice, shareholders with a combined holding of at least 100,000 shares could propose agenda items or nominate qualified directors before the AGM during the last quarter of the previous year.

For the 2013 AGM, PTT posted such criteria on its website and posted an announcement on the website of SET from October 1, 2012, to December 31, 2012, so that the shareholders could propose meeting agenda items and/or nominate directors in advance. However, it attracted no recommendation of such agenda items and no nomination of directors, and the Corporate Secretary had duly informed the Board meeting on the matter.

2.2 Facilitating Shareholders at the Meeting

As in previous AGM meetings, for the 2013 version, PTT facilitated all shareholders by manning officers to welcome and take care of them, and provided adequate convenience. The meeting venue was well chosen to accommodate all shareholders as well as able to facilitate the elderly and those on wheelchairs. Back-up meeting rooms were in place, as was a signal relay system between meeting rooms. Security precautions and emergency contingency plans were in hand. Examination of registration credentials one day ahead of the meeting was possible. Officers provided photocopying services and verified documents. On the meeting day, registration opened two hours ahead of the meeting and extended until the period before the last meeting agenda. A barcode system was used to quicken registration and voting. Finally, the shareholders had access to a reception.

Since most shareholders attending the AGM were Thais, it was conducted in Thai. However, for the benefit of foreign shareholders, PTT commissioned the translation of shareholders' meetings, supplementary documents, and other relevant documents in English. Its website is also bilingual. It also provided officers skilled in English on hand at meetings to facilitate foreign shareholders. If shareholders cannot communicate in Thai but require to pose queries or discuss in the meetings, PTT arranges for suitable communication and provide translation into Thai for both the queries and the answers for other shareholders to preserve their interests and ease communication needs for foreign shareholders.

2.3 Appointing Proxies

To maintain the rights of shareholders who cannot attend the 2013 AGM in person, they can appoint proxies or delegate their votes to any PTT's independent director in attendance. To this end, PTT has specified these independent directors' names in proxy forms defined by the Ministry of Commerce for voting on behalf of shareholders without conditions. PTT treats proxies as if they were shareholders.

Thirty days ahead of each meeting, PTT discloses the proxy form, which is attached along with details and procedures on its website. Shareholders may make further inquiries about this by phone or other channels such as PTT's website and e-mail.

3. Roles toward Stakeholders

As the national energy company, PTT accounts for all stakeholders' rights and interests by establishing guidelines for addressing the needs of each group in and outside PTT, as well as its own responsibility to society and the environment. The following spells out PTT Group's missions for each of the six following groups:

To the country Ensuring long-term energy security by providing adequate high-quality energy supply at fair prices to support economic growth.

To community and society

Maintaining a good standing corporate status in society by exercising environment stewardship of internationally accepted standards and helping to improve the quality of life for the community and society.

To shareholders

Operating profitable businesses that lead to sustainable growth while generating optimum returns.

To customers

Ensuring customers' satisfaction and loyalty by delivering world-class quality products and services at fair prices.

To business partners

Conduct fair practice with all partners while promoting trust, relationship, and cooperation to extend business capability and increase efficiency in long-term business partnerships.

To employees

Promoting capability building professionally and ensuring that employees' well-being is on a par with other leading companies in order to strengthen organization/employee engagement.

3.1 Treatment of Six Main Stakeholder Groups

3.1.1 Thailand

As a state enterprise serving as the national energy company, PTT secures natural resources to address the needs of the country while accommodating public policy on research, development, production, and distribution of alternative energy and clean energy to lower import dependence. Also, PTT generates income for the public sector (its major shareholder) for national development and is the leader in alternative energy.

PTT's businesses consist of procurement and supply, transport, distribution, gas processing, and investment in NGV stations, in addition to businesses that exploit and add value to natural gas through PTT Group companies. To achieve this, it secures gas supply from indigenous sources, imports from neighboring countries, and imports LNG to satisfy the increasing

demand posed by the power, industrial, and transport sectors. The efficiency of gas separation plants (GSPs) has been improved to raise the total capacity for gas processing into assorted products for value addition and for downstream applications.

PTT distributes its petroleum products (fuels, LPG, lubricating oil, and other products) through three main channels. First, retail marketing, conducted through PTT service stations, now developed into sophisticated and integrated stations. Second, commercial marketing, conducted through government agencies, state enterprises, industries, airliners, cargo ships, fishing boats, LPG bottling plants, LPG outlets, and exports. And third, distribution of products through fuel traders under the Fuel Trade Act. PTT also constantly promotes biofuels—namely gasohol to replace gasoline, and biodiesel to replace diesel.

In addition, PTT invests in the exploration and production business, the oil refinery business, and the petrochemical business through its affiliates to enhance energy security and to maximize the benefit of natural resources, a vital element of national economic development. Details appear under “Nature of Business and Business Performance”.

3.1.2 Community and Society

PTT is committed to the development of the society, communities, and environment of the areas where it operates. In another effort to create a sustainable society, PTT applied the Creating Shared Value (CSV) approach to its knowledge management, technological development, energy innovation creation, and social and community development for the well-being of people through CSR activities in various forms that are beneficial to society, communities, and the country as a whole. In 2013, PTT launched various pilot projects to integrate CSV in all its processes.

Throughout the years that PTT has been working for the Thai people, it has gained the trust and confidence of communities, and earned the company a number of awards of both national and international levels. This year, PTT was listed on the Dow Jones Sustainability Indices (DJSI) for the second consecutive year, a result of its work for sustainable development under three strategies: educational development, social

and community development, and natural resource and environmental conservation. PTT remains committed to continually proceeding with the development for a true CSV.

Details in the subject are described in “Growing Together for the Energy of Thailand”.

3.1.3 Shareholders

The Sustainable Growth Strategy finds application in PTT management to achieve a high-performance organization (HPO) that is based on CG in tandem with CSR (corporate social responsibility) to ensure investors that PTT provides sound investment returns and is sustainable, apart from being a part of Thai society in years to come.

Investors' Activities

Since 2006, PTT has continually arranged trips for minor investors to visit our operation, update information, and meet the management as well as participating in PTT's CSR activities in Rayong.

This year the trip was planned for January 14 - 16, 2013, for a visit to Rayong GSP in Map Ta Phut Industrial Estate (a tour around the compound by bus with officers from the Rayong GSP providing information and answering questions from the visitors) and a CSR study trip to the HRH Princess Maha Chakri Sirindhorn Herb Garden in Rayong for 480 shareholders in three groups. PTT mailed invitations and reply letters to the shareholders whose names appeared on the roster at the registration book closing for the interim dividend of 2013 on September 23, 2013. With an overwhelming response from more than 2,000 investors, lots were drawn on October 17, 2013, with PTT management and the Corporate Governance Committee as witnesses, to decide the actual visitors' names and the results announced on its website. In addition, PTT officers phoned the winners to confirm their interest. However, due to political demonstration at the time, which might affect the visit and the safety of the shareholders, it was then postponed and rescheduled to late May 2014.

Those interested in visiting PTT's sites can follow project updates and details on PTT's website. PTT reserves the rights to invite only those that have never taken part in this activity.

Activities for Debenture Holders

After the overwhelming response and success of our “Variety Concert” relationship activities with debenture holders from 2010 - 2012, PTT held the fourth concert, called “The Eternity Concert”, in 2013 for about 27,000 debenture holders and their companions. The concert presented famous singers of all times, as well as many other special guests, as well as other activities and fun booths held at the concert. Other activities held to keep good contact and faith with debenture holders who invested in PTT debentures included activities on health and family relations. In addition, PTT had arranged tours, both local and international, for our debenture holders to enhance good relations among the investors.

Activities for Institutional Investors

In 2013, besides investors’ meetings to inform institutional investors and securities analysts on its quarterly performance, PTT organized regular company visits and meetings with its executives in January and organized a visit to Rayong GSP Unit 6. PTT Group Homeshow was also launched to welcome overseas investors of PTT financial executives and introduce the business and potential of PTT Group. The investors also visited the GSP, PTTGC’s refinery and olefins plants under a friendly atmosphere. There such visitors and analysts learned about PTT’s business directions and opportunities to be involved in PTT Group’s businesses from executives first-hand.

3.1.4 Customers

PTT takes customers’ satisfaction seriously. It offers fair prices, quality, and accountability to customers and consumers, and is committed to consistently developing its products and provides safe, integrated, prompt, and quality services in response to their needs.

PTT has implemented quality, security, safety, occupational health, and environmental management systems (QSHE) in its operations to focus on quality



management through efficient work processes to deliver products and services that satisfy customers. At the heart of its operations is the continual implementation of assorted systems, including ISO 9001, TIS 18001, and ISO 14001.

PTT manages customers and marketing in compliance with its vision and mission to cater to consumers' diverse needs and expectations. It thus divides its market into two, domestic and overseas markets, with two major groups of customers: Business to Business (B2B) and Business to Customer (B2C), who consume its gas, oil, and petrochemical products. Customer lifecycles of each group are also divided into 1) current customers who consume or decrease the consumption of PTT's products, and 2) potential customers, which include new customers, those of PTT's rivals, and ex-customers.

PTT employs different processes in taking in views, comments, and complaints from its different groups of customers, markets, and lifecycles to learn about their needs, expectations, and necessity levels. For the B2B group, PTT emphasis is on site visits to gather information on products, services, and customer support. The information will help design customer relationship plans. Site visits are also used for the B2B group with decreasing consumption to find out the reasons of their product or service dissatisfaction, and come up with a plan to restore them. For potential customers, PTT holds meetings with its marketing partners and financial institutions that rank credit ratings, searches website and reports from various publications to select potential customers, and expands the business and supports future customers.

For the B2C group, social media (PTT owned/public owned) and points of purchase were the main sources of information. PTT's 1365 call center can be accessed 24 hours a day. Surveys on particular information were used to attract new customers and markets, including definition of qualifications for the development of new lubricating oil for eco-cars. The data are also used in the customer relationship management (CRM) plan for holding sales promotions with other products/services, developing area managers' programs

designed for them to provide business consultancy to sales agents. Under the business partner program, area sales managers upgrade and provide business promotions to business partners after meetings to exchange views and establish mutual business opportunities. Another example is the PTT Tune Up program, a complimentary engine check-up.

PTT applied the QSHE Management System to maintain its operation standards. Users' Guide and Operating Manual and service standards for every process are in place to ensure that all personnel and process throughout the chain could keep up with the same high standards in response to customers' needs.

PTT has instituted a complaint management process should the customers become dissatisfied with its products or services. It provides diverse channels of taking in views, comments, and complaints from customers and consumers, which differ among groups, markets, and lifecycles as mentioned above. All complaints are recorded in the CRC system and handled within the day. The customers will be informed once the matter is resolved, and satisfaction on the handling process and results surveyed to confirm their confidence and trust in PTT.

PTT has set up processes to assess customers' satisfaction, dissatisfaction, and loyalty. Data on customers' needs help improving products/services, work processes, strategic plans, marketing plans, and CRM plans, enabling PTT to respond to customers' needs beyond their expectation.

3.1.5 Business Partners

Since business partners are the key to business success through mutual support, PTT takes them seriously and treats them fairly on the basis of fair competition and mutual respect, and in good cooperation. PTT strictly complies with contracts and values procurement processes, as they are vital to the determination of expenses and the quality of PTT products and services. A clear procurement procedure has been formulated to ensure transparency, openness to scrutiny and maximum benefit.

PTT requires price bidders to strictly conform to the rules about work safety and handling of tools, as well as other regulations, particularly in the type of work affecting health, safety and the surroundings. PTT visits business partners' operation sites to assess their capabilities, particularly those on the QSHE side. In addition, business partners' employees must undergo the do's and don'ts in PTT's operating areas in addition to conforming to the requirements for entering sites to work, as described for each site.

PTT is committed to operating businesses that lead to sustainable growth and adheres to CG for social, community, and environmental development. To efficiently achieve its goals, PTT stresses the importance of supply chain management and development through monitoring our business partners. In 2012, "PTT Supplier Sustainable Code of Conduct" was defined with the contents and scope of the code in line with related rules, regulations, and laws. The Code consists of four major practices:

- Business Ethics
- Human Rights
- Occupational Health and Safety
- Environmental Management

The Code came into effect on April 1, 2012, and will be enforced on PTT's contracted suppliers with contract value over Baht 2 million and/or on work with operations with potential impacts on safety and the environment.

To ensure compliance of suppliers with its guidelines on sustainable operations, PTT published "PTT Supplier Sustainable Code of Conduct Guideline" in 2013, which contained:

- Definitions
- Examples on non-compliance practices
- Examples on management compliance practices.

PTT also implemented Total Cost of Ownership (TCO), a method to calculate the costs of delivering materials and communication convenience, as a criterion in selecting business partners, to enable those with production bases and offices in Thailand to compete

better. This represents our support of locally produced materials, resulting in a higher number of domestic business partners for certain materials where they have no procurement limitation.

Efficient and competent operation of suppliers is important to PTT, which targets sustainable growth for itself as well as its suppliers. Approaches for the management and development of suppliers were set up to:

In order to Exchange information and knowledge between PTT and suppliers and develop suppliers' potential to support PTT's performance and success in its operations, business continuity, and social responsibility, this year, PTT held five "Suppliers Relationship Management (SRM)" seminars.

The 1st Suppliers Relationship Management Seminar was held on May 31, 2013, to communicate with major suppliers of the PTT Head Office's Procurement Information Center Division. The suppliers learned the following from the seminar:

- PTT Supplier Sustainable Code of Conduct Guideline
- Anti-Corruption Act related to procurement





Besides, a workshop was held with joint activities and exchange of views between procurement staff and suppliers to create sustainable partnership.

The 2nd Suppliers Relationship Management Seminar was held on June 13, 2013, to communicate with major suppliers of Rayong GSP. The suppliers learned the following from the seminar:

- PTT Supplier Sustainable Code of Conduct Guideline
- Anti-Corruption Act related to procurement

Besides, a workshop was held with joint activities and exchange of views between procurement staff and suppliers to create sustainable partnership.

The 3rd Suppliers Relationship Management Seminar was held on October 18, 2013, to communicate with major suppliers for procurement of common goods for PTT and its group of companies. The suppliers learned the following:

- Operation directions which related to procurement of PTT and PTT group
- Guidelines on green procurement

Besides, a workshop was held with joint activities and exchange of views between procurement staff and suppliers to create sustainable partnership.

The 4th Suppliers Relationship Management Seminar was held on November 26, 2013, to communicate with major suppliers of the Materials Supplies & Inventories Division and the Eastern Petroleum Terminal Department. The suppliers learned the following:

- Anti-Corruption Act related to procurement
- PTT safety policy (Safety Talk)

Besides, a workshop was held with joint activities and exchange of views between procurement staff and suppliers to create sustainable partnership.

The 5th Suppliers Relationship Management Seminar was held on December 16, 2013, to communicate with major suppliers of service stations. The suppliers learned about PTT's current and future operating direction for service station business in the following fields:

- Design and engineering regulations
- Service station maintenance
- Approved Vendors List
- Ecological industrial development procurement

3.1.6 Employees

The information on employees is reported under the Management Structure Sector.

3.2 Respect for International Human Rights Principles

PTT requires that all its directors, the management, and employees observe laws, customs, and culture which differ in each country where PTT invests in and strictly respect international human rights principles under the Universal Declaration of Human Rights; the company does not condone its violation.

PTT encourages PTT Group of companies to apply human rights principles to their CSR framework. As a member of the United Nations Global Compact (UNGC) since March 1, 2012, PTT indicated its intention to observe principles on human rights, labor rights, environmental conservation, and anti-corruption as its guidelines for doing business, which will resolve fundamental problems faced by the business sector and communities, as a responsible corporate citizen should do. PTT Group, including PTT Global Chemical, PTT Exploration and Production, IRPC, Bangchak Petroleum, and Thai Oil, joined the UNGC. Relevant performance was detailed in the Sustainability Report 2013.

3.3 Significant Disputes with Stakeholders

PTT had no significant disputes with stakeholders.

4. Disclosure of Information and Transparency

Disclosure of information is a key index of transparency, an important factor to create confidence among investors and stakeholders. PTT values correct, accurate disclosure of information and creates numerous channels of disclosure of information so that all stakeholders can gain easy access to information. PTT promotes awareness among directors, the management, and employees of the importance of good corporate governance and transparency to their work, and creates appropriate mechanisms to receive complaints and fair treatment both for those who file complaints and those who have been complained against as follows:

4.1 Financial and Non-financial Reports

PTT prepared the Corporate Sustainability Report 2013 to communicate its policy, management approach, and outcomes of its economic, social, and environmental performance by relying on the Sustainability Reporting Guidelines and Oil and Gas Sector Supplement (OGSS), Version 3.1, of the Global Reporting Initiative (GRI) approach, to ensure that the information disclosure was suitable to and more specific for the business, with completeness assessed at the A+ level. PTT has commissioned an external party for the certification of the report's accuracy, transparency, and accountability

for the second consecutive years and years to come. This report together with the annual report was delivered to the shareholders and is accessible to those interested via www.pttplc.com.

4.2 Investor Relations

Ever since PTT's privatization and share trading on SET in October 2001, the Investor Relations Department has been established as a clearing house for disclosing essential information to investors and financial reporting, which includes performance reports, financial statements, and information reported to SET, together with quarterly management discussion and analysis (MD&A) reports with updated performance and corporate directions. These are disclosed to domestic and international shareholders fairly, regularly, and thoroughly. A quarterly investors' magazine under the "Happiness" title has been prepared to communicate business information and data, as well as PTT's performance, aimed at debenture holders and the quarterly newsletter "PTT Bizway" with the same purpose, aimed at common shareholders. The two publications are in Thai and English to communicate PTT's vision, mission, quarterly performance, CG, management toward sustainability, and other current major activities. Investors may contact the department directly or through the PTT website, which is regularly updated, for information in Thai and English, which includes:

- Annual report/Form 56-1
- Major investment project information
- Procurement and hiring
- Policy statements by the management
- Implementation of government policies
- Key plans
- Corporate governance policies and promotional activities
- Financial performance
- Non-financial performances
- Highlights of social responsibility activities

Through the years, PTT has valued the disclosure of information that is accurate, complete, transparent, and comprehensive, as well as direct and indirect presentation of performance and keeping investors, shareholders, and relevant parties informed of its information. A summary of our activities appears below:

- **Direct:** PTT regularly presents information to analysts, investors, and employees at analysts' meetings, roadshows, conference calls, and conferences organized by various entities. PTT also holds joint activities with SET to meet minor investors. Analysts, investors, and interested parties can also join company visits to meet our management and inquire about our updates.

In 2013, these key activities took place:

| Activities | 2012 (times) | 2013 (times) |
|--|---|--|
| International roadshows | 14 | 15 |
| Domestic roadshows | 6 | 7 |
| Analyst meetings | 4 | 4 |
| Credit rating reviews | 5 | 4 |
| Company visits/ conference calls | 163 | 177 |
| E-mail/ phone calls | 8 - 10 times daily | 8 - 10 times daily |
| Joint activities with SET and other agencies to meet investors | 3 | 3 |
| Trips for institutional investors to visit and meet management team members | 4 | 4 |
| Trips for minor (retail) investors to visit and meet management team members | One visit (three groups) in November 2012 | The visit (three groups) planned for January 2014 was postponed due to political situation |
| Relations activities with debenture holders | 18 | 20 |

- **Indirect:** Information about PTT, its performance, financial statements, and reports filed with SET are found at www.set.or.th, PTT's website, and the "Happiness" magazine for debenture holders as well as the quarterly newsletter "PTT Bizway" for common shareholders.

- Investors and interested parties can also mail inquiries to Investor Relations at Tel. 0-2537-3518-9, through e-mail at ir@pttplc.com, or through PTT website at www.pttplc.com.

- In addition, PTT has constantly publicized news, business activities, operation and project updates, apart from addressing questions and facilitating contacts for the media and the public. The activities this year appear below:

| Activities | 2012 (times) | 2013 (times) |
|--|------------------------------|-------------------------------|
| E-mails | 350 | 206 |
| News/ photo releases | 350 | 206 |
| Press conferences | 65 | 48 |
| Media visits to operations (domestic and international) | 15 | 8 |
| Welcoming and information provision to visiting agencies for assorted purposes | 78 groups (3,932 persons) | 34 groups* (1,465 persons) |
| | | (* Political Turmoil) |

4.3 Complaint-Filing and Access to Information

All stakeholders have equal access to PTT's public information, including reporting of news and leads, whether inside the Company through the intranet webboard or outside the Company through its website, by phone, letter, or e-mail. Please contact Investor Relations, Office of the President and Corporate Secretary, Corporate Communications, or the Ordering & Customer Relations Center through these channels:

- Telephone: PTT Call Center 1365, 0-2537-2000
- Website: www.pttplc.com
- E-mail:
 - Ordering & Customer Relations Center: 1365@pttplc.com
 - Corporate Communication Department: corporate@pttplc.com
 - Office of the President and Corporate Secretary: corporatesecretary@pttplc.com
 - Investor Relations: ir@pttplc.com

The queries, comments and recommendations will be forwarded to relevant units to address these through the complaint management system. Follow-up on the action is done through e-mail every three days. If the action is not completed, a notification will be sent to higher level of supervisors for action. When completed, responsible units will notify the contact person(s), with another follow-up to find out about their satisfaction with the services of the contact center officers, which will help improve information system management. The management tracks all information every month to detect trends and apply them as an approach for refinement of processes, products, and services to respond to all stakeholders. This year, the queries, comments, and recommendations received totaled 131,496, mostly on PTT Blue Card, energy credit cards, product orders, and other PTT's projects.

PTT offers opportunities for the public to file complaints on improper behavior of directors, the management, and staff or their violation of PTT's business ethics. They are to be directed to the Office of Corporate Audit, Office of the President and the Corporate Secretary, and Human Resources Department. PTT treats

all complaints on the basis of equality, transparency, and fairness to all concerned. An appropriate timeframe to consider the complaints is set. Moreover, the secrecy and the protection of those who file the complaints will be observed. No complaint on ethics was made in 2013.

Committees, Assessment of the Directors, Directors Development

1. Committees

The Board values CG by initially appointing the Audit Committee, the Nominating Committee, and the Remuneration Committee. For a period, the Audit Committee also looked after CG and risk management for the Board.

In 2004, the Board set up the Corporate Governance Committee, charged with promotion and screening of CG and promotion of excellence in such areas. This year the Board set up the Enterprise Risk Management Committee to ensure clearer implementation of PTT risk management in compliance with SET's corporate governance of listed companies CG and the State Enterprise Policy Office's (SEPO) guidelines on corporate governance of State-owned enterprises (2009). PTT today therefore has five committees investigating critical matters under the CG principles to create maximum benefit for shareholders, taking into account stakeholders' concerns and interests, business ethics, transparency, and accountability. Each of these committees consists of qualified, non-management directors as required by SET, with clearly written roles and responsibilities in a charter.

Since 2009, the duties of the Corporate Governance Committee have been expanded to cover additional policy, implementation, and monitoring of the operation on the responsibilities toward society, community, and the environment, so that the committee may be responsible for the stakeholders in a more comprehensive and efficient way. This year the duties of the committee also covered the definition of guidelines for CG monitoring in relation to PTT's counter-corruption implementation.

PTT has appointed five committees with the duties and responsibilities as follows:

1.1 The Audit Committee

Each quarter, together with Accounting and the Office of the Auditor-General, the Audit Committee reviews PTT's financial reports and presents its findings to the Board. The Board is accountable for PTT Group's consolidated financial statements, as well as other financial information ('Report on the Board's Responsibility for Financial Reports') presented in the annual report. The financial statements are prepared under generally accepted accounting principles and are audited and certified by the Office of the Auditor-General. Essential information, financial and otherwise, is completely and consistently disclosed.

The Board approved the appointment of the Audit Committee on October 1, 2001, which consisted of its directors with the qualifications specified by securities and exchange laws and SET. The committee must consist of at least three directors. As of February 1, 2013, it consisted of four independent directors as follows:

| Name | Position | Remarks |
|--------------------------------|----------|----------------------|
| 1. Mr. Boonsom Lerdhirunwong | Chairman | Independent director |
| 2. Mr. Waroonthep Watcharaporn | Member | Independent director |
| 3. Mr. Insorn Buakeow | Member | Independent director |
| 4. Mr. Montri Sotangkul | Member | Independent director |

Note: Mr. Boonsom Lerdhirunwong and Mr. Montri Sotangkul meet the qualifications required to review the accountability of the Company's financial statements. The Executive Vice President, Office of Corporate Audit, served as secretary.

Duties and Responsibilities

(revised in line with PTT's regulations on Audit Committee and Internal Audit 2014).

- Prepare charter on internal audit of the Audit Committee to correspond with PTT scope of works and responsibilities. The charter must be approved by the Board and revised at least once a year.
 - Review the efficiency and effectiveness of CG, risk management, and internal control processes.
 - Review PTT's financial reporting process to ensure accuracy and reliability.
 - Review compliance with laws, regulations, rules, stipulations, cabinet resolutions, SET regulations, securities and exchange laws, and laws relevant to PTT's business.
- Ensure the suitability and effectiveness of the internal control system and internal audit procedures and consider the adequacy of the budget and personnel, as well as the independence of the Office of Corporate Audit.
- Consider connected transactions or transactions of potential conflicts of interest or potential malfeasance affecting PTT's operations under the laws and SET's regulations.
- Provide recommendations to the Board on the appointment, transfer, promotion, and assessment of the head of internal audit unit.
 - Select, nominate, and recommend fees for the external auditor to the Board.
 - Coordinate with the external auditor audit findings and recommend reviews or verification on any items, if necessary.
- Report its internal audit performance to the Board at least quarterly, except for the fourth quarter, which will be prepared for the annual report. The reports must be submitted to the governing ministry and the Ministry of Finance for acknowledgment.

- Evaluate its own internal audit performance at least once a year and report the results to the Board.
- Disclose a report on its annual performance and the fees of the external auditor in the annual report.
- The chairman or members of the Audit Committee must attend the meetings of shareholders to answer on matters related to the Committee or appointment of external auditor.
- Ensure that the management have a mechanism to receive complaints and supervise the system of complaints.
- When it is necessary to provide its opinions on PTT's assorted operations, seek independent opinions from or hire advisers or specialists, at the expense of PTT.
- If internal reports show any sign of violation against laws, regulations, cabinet's resolutions, announcement, or orders relating to PTT's operations, the top management must be informed and responsible unit(s) ordered to take due actions.
- Hold the committee meeting at least every quarter, and a meeting with the external auditor in the absence of the management at least once a year.
- Hold a formal meeting with the management at least once a year.
- Perform other tasks as required by the law or as assigned by the Board within the committee's scope of duties and responsibilities.

This year the committee held 18 meetings (12 regular and 6 special meetings) and duly reported its findings to the Board. In addition, it participated in quarterly financial audits along with the external auditor and Accounting.

1.2 The Nominating Committee

The Board approved the appointment of the Nominating Committee on October 1, 2001, made up of three of its directors. As of February 1, 2014, it consisted of:

| Name | Position | Remarks |
|----------------------------------|----------|----------------------|
| 1. Mr. Athapol Yaisawang | Chairman | Independent director |
| 2. Mr. Watcharakiti Watcharothai | Member | Independent director |
| 3. Mr. Pailin Chuchottaworn | Member | Director & secretary |

Note: Mr. Athapol Yaisawang was appointed Chairman with effect from February 1, 2014.

Duties and Responsibilities

- Nominate qualified candidates for directors or the President.
- Define the recruitment procedures and criteria for directors or the President to ensure transparency.

The recruitment procedures for directors are as follows:

1. The committee defines the qualifications needed for the replacement to ensure that the new directors meet the criteria and qualifications as required by related laws and regulations, in line with PTT's business operation, and defines the procedures for nominating qualified candidates.
 2. The committee summarizes its recruitment results and presents to the Board a shortlist of qualified candidates along with supporting rationale.
 3. The Board appoints the qualified candidates from the list prepared by the committee and submits their names to the shareholders' meeting for approval.
- This year the committee held seven meetings.

1.3 The Remuneration Committee

The Board approved the appointment of the Remuneration Committee on October 1, 2001, by appointing three directors from the Board. As of February 1, 2014, it consisted of:

| Name | Position | Remarks |
|----------------------------------|----------|----------------------|
| 1. Mr. Arkhom Termpittayapaisith | Chairman | Independent director |
| 2. Mr. Somchai Sujjapongse | Member | Director |
| 3. Mr. Sihasak Phuangketkeow | Member | Independent director |

*Notes: 1. Mr. Sihasak Phuangketkeow was appointed on April 26, 2013, replacing Mr. Krairit Nilkuha, who completed the term on April 11, 2013.
2. Mr. Somchai Sujjapongse was appointed on November 25, 2013, replacing Mrs. Benja Louichareon, who resigned on June 26, 2013.*

Duties and Responsibilities

- Define compensation guidelines for directors and the President.
 - Define procedures and criteria for fair and sensible compensation paid to directors and the President for approval at the Board's or shareholders' meetings.
- This year the committee held one meeting.

1.4 The Corporate Governance Committee

The Board approved the appointment of the Corporate Governance Committee on June 24, 2004, consisting of three directors from the Board. As of February 1, 2014, it consisted of:

| Name | Position | Remarks |
|-------------------------------------|----------|----------------------|
| 1. Prof. Dr. Thosaporn Sirisumphand | Chairman | Independent director |
| 2. Mr. Sihasak Phuangketkeow | Member | Independent director |
| 3. Mr. Watcharakiti Watcharothai | Member | Independent director |

Note: Prof. Dr. Thosaporn Sirisumphand was appointed member of the Committee on April 26, 2013, replacing Gen. Warawat Indradat, who resigned on April 12, 2013. He became Chairman on November 25, 2013. The Vice President, Office of the President and Corporate Secretary, served as secretary.

Duties and responsibilities

- Propose CG guidelines to the Board.
 - Advise the Board on CG matters.
 - Ensure that the duties and responsibilities of directors and the management conform to CG principles.
 - Revise guidelines for PTT's CG against those of international organizations and present its recommendations to the Board.
 - Delegate corporate governance policies to the Corporate Governance Task Force.
 - Delegate policy and guidelines to implement Sustainability Management (SM) and Corporate Social Responsibility (CSR)
 - Monitor the implementation of SM and report its findings to the Board.
 - Define a CG outline relating to PTT's counter-corruption implementation.
- This year the committee held five meetings.

1.5 The Enterprise Risk Management Committee

The Board approved the appointment of the Enterprise Risk Management Committee on October 25, 2013, and November 22, 2013 by appointing at least three directors from the Board, one of which must be an independent director. As of February 1, 2014, it consisted of:

| Name | Position | Remarks |
|-------------------------------------|----------|----------------------|
| 1. Prof. Dr. Thosaporn Sirisumphand | Chairman | Independent director |
| 2. Mr. Prasert Bunsumpun | Member | Director |
| 3. Mr. Somchai Sujjapongse | Member | Director |
| 4. Mr. Athapol Yaisawang | Member | Independent director |

Note: Prof. Dr. Thosaporn Sirisumphand, Mr. Prasert Bunsumpun, and Mr. Somchai Sujjapongse were appointed on November 25, 2013. Mr. Athapol Yaisawang was appointed on February 1, 2014.

Duties and responsibilities

- Define and review the Company's risk management policy and framework
 - Regulate and support risk management process to be in line with strategy and business goals as well as prevailing circumstances
 - Provide recommendations, monitor and evaluate risk management for further implementation of the Risk Management and Internal Control Committee (RMCC) (executive level)
 - Review the Risk Management Report and provide recommendations on possible risks including specifications of control measures or mitigation plans, and the development of the risk management system to RMCC to ensure continual efficiency
 - Support Chief Risk Officer (CRO) to achieve the Company's risk management's goals
 - Report risk management results to the Board.
- In case where there are factors or events that might have significant on the Company, the Board must be notified immediately.
- The Enterprise Risk Management Committee should meet at least once a quarter
 - Perform other duties as assigned by the Board.

Note that the reviewing and updating of PTT's risk management is still the responsibility of the Audit Committee and the Office of Corporate Audit.

This year, no official meeting was held, since the Committee was established only in the fourth quarter.

2. Self-assessment of the Board

By the resolution of Board meeting No. 9/2013 of September 27, 2013, the Board approved the four self-assessment forms used last year for this year:

- Assessment of the Board
- Assessment of Individual Directors (Self-assessment)
- Assessment of Individual Directors (Cross-assessments), and
- Assessment of the Committees (the entire committees).

The Board also agreed to engage a third party in reviewing the forms and presenting its guidelines and recommendations for the assessment to the Board at least every three years. The assessment forms aligned with PTT's CG principles. It was to be a vital tool for improving Board performance, provide reference data for the corporate governance rating, cover the assessment of all committees, as well as serving as information for

the monitoring/assessment from external auditors. The four assessments forms stipulated the percentages corresponding to the levels of performance achieved in each of these are as detailed below.

| | | | |
|-------|-----|---|-------------------|
| Over | 85% | = | Excellent |
| Over | 75% | = | Very good |
| Over | 65% | = | Good |
| Over | 50% | = | Fair |
| Below | 50% | = | Need improvement. |

The findings from the self-assessments were as follows:

1. Assessment of the Board consisted of four categories: Board policy, composition, practices, and meetings.

The results indicated excellent/most suitable overall performance, with an average score of 93.59%.

2. Assessment of Individual Directors (Self-assessment) consisted of six categories: accountability for decisions and actions; responsibility for performing the job with full ability and efficiency; equitable treatment of all stakeholders; transparency in job performance and information disclosure; vision to create long-term value; and business ethics.

Overall results of the six categories indicated excellent conformance by most directors, with an average score at 96.76%.

3. Individual Assessment of Other Directors (Cross-assessments) consisted of six identical categories as listed above for direct comparison.

Cross-assessment results in these six categories indicated excellent conformance by most directors, with an average score of 97.52%.

4. Subject Assessment of the Committees (the entire committees) consisted of four identical categories as assessment of the Board for direct comparison.

The results in the four categories indicated excellent/most suitable overall performance for the committees as follows:

4.1 The Nominating Committee with an average score of 98.61%

4.2 The Remuneration Committee with an average score of 96.88%

4.3 The Corporate Governance Committee with an average score of 97.52%.

5. Assessment of the Audit Committee's Performance

Under PTT Plc's Audit Committee Charter 2012 on performance assessment, the Audit Committee Manual for State Enterprises under the Ministry of Finance, and SET's good governance handbook for internal auditors and the audit committee section 1.1: responsibility of the Audit Committee, the Audit Committee must assess its performance by undertaking self-assessment at least once a year. The individual self-assessment or the entire Committee's assessment is presented yearly to the Board, specifying problems leading to unfulfilled objectives. For the year 2012 - 2013, the Audit Committee's meeting No. 11/2012 of November 13, 2012, and No. 9/2013 of October 9, 2013, passed a resolution to use the same assessment forms as the previous two years, since they conformed to the good governance stipulated by the State Enterprise Policy Office (SEPO) and SET, with waived cross-assessments because there were only three Audit Committee members. The Audit Committee's meeting No. 14/2012 of December 6, 2012, and special meeting No. 6/2013 on October 22, 2013, approved the assessment of its performance for 2012-2013 with the following details:

- Self-assessment consisted of business knowledge/ specific expertise/ duties and authorities/ independence and fairness/ understanding of duties and responsibilities of the members/ commitment to work and meetings.

The assessment criteria were 4 = Excellent, 3 = Very good, 2 = Good, 1 = Need improvement.

The result of the Audit Committee's self-assessment indicated "very good to excellent" overall performance, with a score of 3.7 - 4.0 and 3.4 - 3.9.

- Assessment of the entire committee consisted of structure and composition/ roles and responsibilities/ relationship with the Office of Corporate Audit and the external auditor/ relationship with the management/ reporting/ quality consistency.

The assessment criteria were 4 = regularly implemented, 3 = mostly implemented, 2 = sometimes implemented, and 1 = never implemented.

The result of the assessment of the entire Audit Committee was at the "regularly implemented" level, with a score of 3.9 - 4.0 and 3.8 - 4.0.

3. Directors' Orientation

For new directors, PTT arranges an orientation program to inform them of its business policies, capital structure, shareholding structure, business performance, information systems, as well as related laws and regulations. Moreover, each director receives a Director's Handbook, which includes the following topics:

Director's Handbook

1. The Public Company Act
2. Securities and Exchange Act
3. Standard Qualifications of Directors and State Enterprise Officer Act
4. Company Registration Certificate
5. Company Certificate
6. Company Objectives
7. Company Regulations
8. Company Rules (14 Rules)
9. PTT Corporate Governance Handbook
10. Guidelines for Directors of Listed Companies.

Information kit for directors

1. Overview business presentation of PTT by the President & CEO
2. List of directors, committees, and management structure
3. Director Fiduciary Duty Check List
4. Good corporate governance principles for listed companies
5. Connected transactions of listed companies
6. Guidance on providing information for listed company management
7. PTT Plc. Company Profile
8. Annual Report
9. Financial Report
10. Sustainability Report
11. Governance book
12. PTT: The S-Curve Story
13. Debenture Magazine
14. PTT Spirit Magazine

In 2013, the President & CEO presents information about PTT, its policies, and relevant information to new directors for their overview of the business operation and performance. At the same time, the above-mentioned documents and handbook for new directors are handed over on seven occasions.

4. Directors' Development

The Board and the management participated in development training courses relevant to their performance, as seen in each of their profiles. Most directors have undergone training with IOD. PTT supports and encourages their training with IOD as well as other institutions in all relevant courses throughout the year. In addition, they took study trips to other agencies and organizations to seek helpful initiatives for application to PTT's business. This year, the following directors underwent training and seminars.

PTT's policy is to organize periodic site visits both domestic and overseas, for the directors to foster their understanding of the business, their expertise and experience related to energy concerning PTT and Thailand.

| Name | Course |
|--|--|
| 1. Mr. Vichet Kasemthongsri (resigned on June 26, 2013) | - Director Certification Program (DCP 170/2013) - Role of the Chairman Program (RCP 31/2013) - Seminar "Meeting the AEC Challenge: Role of the Chairman", organized by IOD |
| 2. Mr. Parnpree Bahiddha-Nukara | - Role of the Chairman Program (RCP 32/2013) |
| 3. Mr. Prasert Bunsumpun | - Seminar "The 2 nd National Director Conference 2013: Board Leadership Evolution", organized by IOD |
| 4. Mr. Insorn Buakeow | - Successful Formulation and Execution of Strategy (SFE 18/2013) - Role of the Nomination and Governance Committee (RNG 5/2013) - How to Measure the Success of Corporate Strategy (HMS 3/2013) - Seminar "The 2 nd National Director Conference 2013: Board Leadership Evolution", organized by IOD |
| 5. Mr. Waroonthep Watcharaporn | - Monitoring the Quality of Financial Reporting (MFR 17/2013) - Monitoring Fraud Risk Management (MFM 9/2013) - Seminar "The 2 nd National Director Conference 2013: Board Leadership Evolution", organized by IOD |
| 6. Mr. Boonsom Lerdhirunwong | - Successful Formulation and Execution of Strategy (SFE 18/2013) |
| 7. Mr. Suthep Liumsirijareen | - Successful Formulation and Execution of Strategy (SFE 18/2013) - Director Certification Program (DCP 180/2013) |

In 2013, PTT organized the following overseas trips:

1. Site visits on alternative energy/the coffee business in Germany and the Netherlands.

1.1 A site visit to Azul coffee business. The directors learned about the operation procedures, production processes, and packaging processes that maintains the quality of flavor and smell of the coffee.

1.2 A site visit to Adlershof Technology Park, a leading hi-tech industrial park with integrated management. It cooperates with leading universities in setting up campuses in the industrial estate to support research and technology development, produce graduates that meet the needs of the industry, promote energy saving by designing energy-saving buildings, as well as promoting the use of solar cells and electric cars.

1.3 A site visit to an alternative energy village. It is a good example of generating electricity from the wind, solar, and biomass gas produced from the local agricultural products. The excess electricity can be sold to add value to waste or garbage. Therefore, employment and income can be generated for the villagers and the cooperatives.

The site visits greatly benefited the directors in formulating strategies, especially the trends of alternative-energy businesses, the balanced management of industrial estate between the social, economic, and environmental aspects, the cooperation with universities in business development, sustainable communal development, and the expansion of the business chain of Café Amazon.

2. The directors welcomed HRH Princess Maha Chakri Sirindhorn on the occasion of her study visits to South Korean universities as follows:

- 2.1 Pohang Accelerator Laboratory (PAL) at Pohang University of Science and Technology (POSTECH)
- 2.2 POSCO Steelworks, Korea's first integrated steel factory with the highest competitiveness in the world for the fourth executive year (2010 - 2013) based on natural resource preservation and environmentally friendly principles.
- 2.3 Korea Advanced Institute of Science & Technology (KAIST), a public university, which has about 20 students from Mahidol Vittayanusorn School studying there. A study visit to Online Electric Vehicle (OLEV), one of the ten best emerging technologies. An electric vehicle can charge the battery while the vehicle is moving without having stop at a service station through the magnetic field with the length of about 200 meters buried under the surface of the road. KAIST uses OLEV as a daily shuttle vehicle for employees and students. Others include: visits to KAIST Institutes (KIs)/ Sungkyunkwan University (SKKU) campus Suwon/ Samsung Digital Library, Graphene Research and Department of Energy Science/ Samsung Human Resources Development Center.

3. Site visits of the operation of PTT Group companies in Rayong, led by the Chairman (Mr. Vichet Kasemthongsri), accompanied by directors and advisers to the directors on June 19, 2013, namely PTT Rayong GSP, PTT LNG Co., Ltd., and PTT Tank Terminal Co., Ltd., to follow up on the progress and communicate strategic guidelines on business operation to the management in each area. He also led the team of PTT Group executives in a special football match to forge relationship with government officials and businessmen in Rayong.

4. Study visits on energy in Norway.

- 4.1 A study visit to LMG MARIN AS NAVAL ARCHITECTS AND ENGINEERS (LMG) at Bergen, which designs commercial ships, battle ships, ferries, LNG built with durable materials with modern technology, for receiving/offloading gas. Such platforms can also generate electricity for its own consumption. The group also visited gas storage for bus refueling in Bergen, which is safe and pollution-free.
- 4.2 A study visit to the Innovation Center and Marine Research Center, the biggest in Norway, through the cooperation of three universities in Trondheim. The group visited stress testing of marine riser pipes to ward off the risk of broken pipes in deep seas, the design of ships according to their usage, and the design of marine-platform jackets.



5. Study visits of the business of PTT Group in the Rayong area, led by the Chairman and accompanied by PTT executives at PTT Rayong GSP, IRPC Plc., and PTT Global Chemical Plc. to acknowledge the overall directions of business operations. They also visited PTT Group companies in Map Ta Phut Industrial Estate, Rayong, considered PTT Group's second home.

With the policy to add up the Board's knowledge-base on various countries' energy usage and directions so that the Board could compare practices with Thailand's energy policy formulation. It enabled them to monitor data and progress in the energy business and to share views with experts from world-class energy companies. This broadens their views on PTT Group's overseas investment expansion, which is in line with future Group business directions. The data, knowledge, and first-hand experience derived will certainly contribute to knowledge and understanding of the global energy business and help in the deliberation of suitable businesses for PTT and Thailand.

Nomination and Appointment of Directors and President & Chief Executive Officer

1. Independent Directors

1.1 Qualifications of Independent Directors

At the meeting No. 1/2556 of January 17, 2013, the Board endorsed a proposal of the Corporate Governance Committee to redefine PTT independent directors in a way that is more stringent than the criteria of SEC and SET and to define their roles and responsibility in a manual, signed by the Chairman on January 21, 2013, as follows:

1. Hold not more than 0.5% of the of the voting shares of PTT, its subsidiaries, associates, or related companies (including the shares held by connected parties under Article 258 of Securities and Exchange laws)

2. Have not been involved in the management or employees, wage earners – including audit advisors, legal or other advisors – on the payroll of PTT, or have

control over PTT, its subsidiaries, associates or juristic persons that could pose conflicts of interest for the past two years

3. Have no relation as parents, spouses, siblings, or children to the persons due to be nominated as an executive or controller of PTT or its subsidiaries

4. Business relationship with PTT

a. Types of relationship

• Professional service includes:

• Auditor and other professional service provider, including legal adviser, financial adviser, property valuator

• Non-independent criteria

- Total prohibition for auditors

- Other professional services: when the total value exceeds Baht 2 million per year

• Commercial/business relationship (similar to SET's requirements for connected transactions)

• Types of relationship: Full coverage of business transactions, that is, normal transactions, real-estate leasing, asset/service transactions, and financial assistance transactions

• Non-independent criteria: Transaction value from Baht 20 million or 3% of PTT's NTA upward whichever is lower; the total value must include items occurring within six months before this transaction.

b. Should the relationship under (a) apply to a juristic person, the parties regarded as non-independent consist of the major shareholder, directors that are not independent ones or not a member of the Audit Committee, and executives (or partners) of that juristic person

c. The forbidden periods for (a) and (b): Two years before the appointment

d. Exceptions: If necessary and suitable (exceptional cases), independent directors/Audit Committee members may have more relationship than the non-independent

criteria while holding directorship, provided that a prior unanimous approval has been given by the Board. Besides, PTT must disclose such relationship in Form 56-1 and its annual report (Form 56-2). And PTT should decide to extend the term of that independent director, it must disclose details about such relationship in the meeting notice for the next shareholders' meeting (in the directors' election agenda).

5. Are not appointed to represent PTT's directors, its major shareholder, or shareholders that are related to PTT's major shareholder.

6. Have no qualifications that compromise the expression of free views.

7. Independent directors with qualifications 1-6 mentioned above may be assigned by the Board to decide on business matters of PTT, its subsidiaries, associated companies, sister companies, or juristic persons that could pose conflicts of interest; such decisions will be incidentally, if independent directors serve in this position in PTT, its subsidiaries, associated companies, or sister companies, PTT must also disclose information about such service and the total compensation of such directors in Form 56-1 and Form 56-2.

• Roles and Responsibilities of PTT's Independent Directors

1. Recommend essential and beneficial matters to PTT and all its shareholders to the Board or the President & CEO, or both.

2. Advocate roles and responsibilities of the Board and provide views commonly expected of independent directors for the benefit of PTT and all its shareholders.

3. Review matters to ensure PTT's compliance with the law dealing with independent directors, and revise the definition of independent directors for suitability and legal completeness.

4. Take other Board-assigned actions provided that these actions do not compromise their independence.

5. An independent director's term begins once he or she fulfills all the requirements under the definition

for PTT's corporate governance; it ends when he or she lacks qualifications or completes the PTT term.

6. The independent directors must hold their own meeting at least once a year.

1.2 Segregation of the Chairman and the President & CEO Positions

To segregate policy-making duties from those of day-to-day management and to enable directors to oversee, look after, and assess performance effectively, PTT has required that the Chairman and the President & CEO are always two different people. This is because the Chairman needs to oversee the management's performance, guide, and assist; however, the Chairman must not take part in or interfere with day-to-day management, which is the duty of the President & CEO under the authority delegated by the Board.

Currently, the Chairman is an independent director. He exercises leadership and ensures that directors do not fall under the influence of the management by chairing Board meetings and shareholders' meetings judiciously and efficiently, while encouraging participants to exercise their voting rights and strictly comply with good CG principles.

1.3 Independence of the Chairman

At its extraordinary meeting No. 2/2556 of July 5, 2013, the Board appointed Mr. Parnpree Bahiddha-Nukara as the Chairman, in compliance with the corporate governance principles for listed companies (2012 edition). It would allow the work of the Chairman to be independent and boost confidence in transparency of the operation and fair treatment of all stakeholders.

2. Nomination of Directors and President & CEO

2.1 Nomination of Directors

(The nominating process to appoint directors is reported under "2.1 The proposal of additional agenda item and the submission of the name of candidates for the position of directors" and "1.2 The Nominating Committee").

2.2 Nomination of President & CEO/ Succession Planning

Due to the fact that PTT is a state enterprise, the nomination and appointment of the President & CEO must follow the Standard Qualifications of Directors and State Enterprise Officer Act. The directors must have the qualifications as specified in Section 8 ter and the nominating procedures as specified in Section 8 quarter. The Board is to appoint a Nominating Committee with five members legitimately qualified to nominate persons with appropriate knowledge, capability, and experience to fill the positions of PTT management. They must be legitimately qualified and cannot be PTT directors, except for the management who are directors by title. They must not be older than 58 years old when submitting the application form. After the Nominating Committee selects appropriate candidates, the results must be submitted to the authority's consideration. The appointment must be completed within one year from the day the incumbent vacated the position. The hiring contract lasts up to four years for each term. If the Board wishes to hire the previous management team member after the completion of his term as specified in the hiring contract, it does not have to go through the nominating process, but it cannot hire that person for more than two consecutive terms.

The information on succession planning for the executives is reported under the management structure sector.

Supervision on the Operation of the Subsidiary Companies and the Associated Companies

Supervision Mechanisms

PTT has defined a corporate governance policy for PTT Group companies by preparing the "PTT Way" handbook and the "PTT Way of Conduct" guidelines, which are the compilation of work procedures in various dimensions of PTT Group companies so that their work procedures may be in conformity and unity. They will provide the PTT executives who take the positions of directors and presidents in PTT Group companies or relevant agencies with the guidelines that they can comply with and foster cooperation in business operation

among PTT Group companies toward the same direction, conforming with and complementing one another, in order to create competitiveness so as to meet the long-term goal and experience sustainable growth.

In addition, PTT has defined the roles and duties of those who take the positions of directors and executives as the guidelines for them to adhere to in the management of PTT Group companies for maximum benefit as set by the mission.

Roles of the Board are as follows:

- Define the Company's vision, directions, strategies, and policies
- Appoint the management to conduct business
- Monitor and ensure that the Company's operation provides maximum benefit to the shareholders and stakeholders
- Adhere to good governance

Roles of the Management are as follows:

- Provide linkage of strategies and policies between the Company and the PTT Group based on concrete implementation
- Manage the Company so that its performance may satisfy shareholders.

Roles of the Corporate Secretary are as follows:

- Support the Board and the Managing Director's operation
- Take responsibilities for corporate governance
- Provide the intend control system

Roles of the Stakeholders are as follows:

- Select and investigate the operation of the Board
- Participate in making the company's operational policies

The management is divided into two levels as follows:

• Corporate Level consists of:

- Corporate Center focuses on supervision and shared service by devising uniform policies for PTT Group
- COO/ BG with the role of devising strategies, goals, closely following up on the operation of each business group to achieve excellence, and building up synergy

- **Operating Level** in PTT Group, such as business units and companies under business units, focuses on the excellence of business operations, meets the achievements, integrates PTT Group's corporate governance policy with its own operation for maximum benefit.

The management at the Corporate Level and the Operating Level (BU/Flagship) will be linked through the following corporate governance mechanisms:

- The Company's regulations
- Implementation of policies under which PTT executives take the positions of directors or President & CEO, or both, in PTT Group companies, or PTT employees are seconded to PTT Group companies.
- Linking and driving of policies to achieve goals through the Committees
- The management of subsidiaries of each business unit will communicate, follow up, provide counsel, and assess the implementation of policies with PTT Group companies.

The regulations determining the roles, duties, and responsibilities of directors and President & CEO of PTT Group companies, including the regulations of the Securities and Exchange Commission, management principles of the PTT Group, and anti-corruption principles as monitored by the Private Sector Collective Action Coalition against Corruption

Policy on Serving as Directors of Other Companies

In 2013, PTT had 47 affiliated companies, five of which are SET-listed in which PTT has invested and held shares. About 70% of its current net income is derived from these companies. Thus, PTT has adopted the PTT Group management structure for synergy and alignment of policies. To achieve this, it appoints directors or management team members to serve as directors in these companies to supervise policies and business management which align with PTT's policies for the benefit and value addition for all stakeholders. The objectives for such appointments are as follows:

1. To ensure that the management of a given company aligns with the policy of PTT Group companies; to monitor its overall business performance to align with PTT's policy and institute comparable standards.

2. To establish synergy for the business of PTT Group companies and add value to all related parties, including Thailand as a whole.

3. To apply specific expertise in support of business, including financial know-how to improve accounting and financial processes to enable a given company to grow robustly. This includes assistance to companies outside PTT Group. The resulting application of the knowledge and expertise gained from serving in such leading companies will enhance the benefit to PTT and foster cordial relations and business alliances for PTT.

4. This is part and parcel of the responsibility of directors and the management of PTT.

PTT ensures its consideration of executives or outsiders from the Ministry of Finance's Director's Pool for appointment within PTT Group, which is regarded as state enterprises, based on an act on standard qualifications of directors and state enterprise officials. Chosen directors from the pool must make up no less than one-third of other directors of a given state enterprise. As of December 31, 2013, PTT had eight members who were on the list of the Director's Pool. It also ensures that PTT executives and such outsiders who serve as directors in PTT affiliates serve on no more than three PTT affiliates or other state enterprise affiliates. This is designed to lower risks of conflicts of interest and ensure conformance to applicable laws, as well as conformance to a Cabinet resolution of January 24, 2011, on fraud prevention measures at state enterprises, entitled "The appointment of senior government officials or persons as directors on multiple state enterprises", as proposed by the National Anti-Corruption Commission.

Supervision of the Use of Inside Information

1. Internal Control System

PTT consistently values internal controls, particularly a system that is comprehensive in scope of activities and dimensions, as well as adequate and suitable for its businesses. Adding efficiency and effectiveness to business, resource utilization, and stewardship of properties, this system consists of an accurate and reliable accounting system and financial

reporting. In addition, it calls for strict conformance to laws and regulations related to PTT's businesses.

The President & CEO has authorized the Risk Management and Internal Control Committee to define work procedures under PTT's internal control standards, together with assessing the outcomes and reporting the overview of PTT's internal control.

PTT has conducted an internal control assessment by the rule of the Office of the Auditor-General governing the formulation of internal control standards, B.E. 2544 (2011), Article 6, under which the head of a government agency or state enterprise must report to the Office of the Auditor-General, the monitoring agency, and the Audit Committee on internal controls at least once a year. The Board has assigned the Audit Committee to review the findings of such internal control assessment, annually conducted by the management and the Office of Corporate Audit, as highlighted below.

(1) Control Environment

PTT commands a sound overall control environment that is adequate for business efficiency and effectiveness. Its executives have promoted an organizational culture focusing on the code of conduct as a role model with the following implementations:

- PTT Group has defined policies and procedures in writing on integrity and code of conduct. The Corporate Governance Committee defines a CG policy in line with international standards. Disclosures are made about conflicts of interest to ward off activities of such conflicts, illegal and improper activities. The policy and the handbook are revised every year. Each director, management team member, and employee sign to acknowledge and conform to such policy and handbook as part of their work, illustrating the commitment to apply the good CG policy and code of conduct to bring practical results.

- PTT has instituted an organizational structure that decentralizes power for business flexibility and alignment with prevailing circumstances, as well as clear and suitable lines of command. Duties and responsibilities are defined in writing, with definitions of key performance indicators (KPIs) early in the year as guidelines for employee performance, and performance is regularly monitored against goals and measured at the year-end. Goals are revised each

year. All employees are aware of their roles, authority, duties, and responsibility.

- It has integrated CG in the organization's vision, missions, and core values by setting the goal for PTT as a company with sustainable growth strategy, a high-performance organization with CSR, and with proper benefits to the stakeholders on the basis of CG.

(2) Code of Conduct

PTT's written policy and a code of conduct are in place for integrity and ethics. In the handbook, the Corporate Governance Committee has defined the code based on international standards. Violators of the code are subject to disciplinary action.

The essential aspects of the code are included below:

1. Respect the law and the Universal Declaration of Human Rights principles
2. Stay politically neutral
3. Stay free of vested interests and conflicts of interest
4. Maintain confidentiality and refrain from using inside information for self-gains
5. Respond to customers' needs and show responsibility to consumers
6. Compete freely and fairly
7. Use a transparent procurement system and treat business partners fairly
8. Show responsibility to communities and society
9. Support employees' rights and establish employee engagement
10. Abide by the code of conduct on treatment of creditors
11. Have an efficient internal control system and an internal audit system
12. Have a guideline for accepting and giving gifts, assets, or other benefits
13. Maintain safety, promote health, and preserve the environment
14. Respect intellectual property and properly apply information technology.

(3) Conflicts of Interest

PTT requires information disclosure to prevent conflicts of interest and illegal, improper activities. Under

the Board's policy, business decisions made by the management and employees must be solely for PTT's best interests. All staff must not only avoid engaging in financial and other relationships with external parties that would lead to financial losses for PTT or a conflict in loyalty or interest, but also must not compromise the efficiency of business operation. Those staff with interests or related businesses which may require PTT's review and decisions must report their relationships and connection with a possible conflict of interest. PTT is to disallow such connected persons from exercising their authority for and involvement in such transactions.

(4) Reporting Connected Transactions with PTT

PTT has required the directors, management, and all employees to disclose potential conflicts of interest through a specific disclosure form. In addition, any approval of such items must not contain special conditions or specifications that are out of the ordinary, which forms a part of PTT's internal controls. PTT's Office of Corporate Audit and the Audit Committee have been entrusted with the monitoring and resolution of issues related to conflicts of interest. This year, however, no such cases of significance have arisen. The disclosure form confirms their acknowledgment that violation of ethics and the code of conduct in PTT's business operations is subject to disciplinary measures varying with the seriousness of the actions.

(5) Reporting Vested Interests of Directors, the Management, and Related Parties

In the first quarter of 2013, PTT requires reporting of the vested interests of directors, the management, and related parties as basic information to manage vested interests for directors and the senior management. The directors and the management are to report such matters every year and with every change. The Corporate Secretary is to compile and submit the copy to the Chairman of the Board and the Chairman of the Audit Committee to check and manage the conflicts of interest. This year no such cases have arisen.

(6) Reporting Changes in Share Ownerships (Portfolios)

As part of the oversight of inside-information measures, all PTT directors and management, including their spouses and children not yet of legal age, must report any changes in their PTT share ownership to the SEC under Article 59 of the Securities and Exchange Act B.E. 2535 (1992) within three days from the dates of sale, purchase, disposal, or receipt of such shares. PTT defines the policy of disclosing or reporting the sale, purchase, disposal, or receipt of such shares, changes of share ownerships of the directors and the management to the monthly Board meeting, contained in advance as a regular agenda item.

Moreover, one week before the closing of the quarterly and yearly financial statements, the Office of the President and Corporate Secretary issues a letter forbidding directors, the management, or internal units with inside information to disclose such information to external parties or unrelated parties, and to buy or sell PTT shares within 45 days of the last effective date of the financial statements to the notification date of the financial statements to SET, ahead of the public dissemination of the statements so as to prevent abuse of such inside information. This year, all directors and management have strictly observed this policy. The notifications of forbidding sale, purchase, disposal, or receipt of PTT's shares were sent to the directors and the management four times this year: (1) between January 1 - February 28 (2) between April 1 - May 15 (3) between July 1 - August 14 and (4) between October 1 - November 14.

(7) Reporting List of Assets and Debts to the Office of the National Anti-Corruption Commission (NACC)

Under Article 39 of the Anti-Corruption Act B.E. 2542, PTT's directors and senior management, including directors and senior management in the companies where PTT holds more than 50% of shares, are required to submit a list of their own assets and debts, including those of their spouses and children not yet of legal age, to the NACC Board every time they take up a position, every three years during their terms, and when they no longer hold their positions. To achieve this, PTT will issue a reminder to each of the directors and senior management as required.

Report on Directors' Securities Portfolios (as of year-end 2013)

| No. | Name | Shares | | Change during the year | Remark |
|-----|----------------------------------|---------------|---------------|------------------------|---|
| | | Dec. 31, 2012 | Dec. 31, 2013 | | |
| 1. | Mr. Pampree Bahiddha-Nukara | N/A | - | - | Appointed director on June 29, 2013 (No PTT Shares) |
| 2. | Mr. Boonsom Lerdhirunwong | - | - | - | (No PTT Shares) |
| 3. | Mr. Athapol Yaisawang | N/A | - | - | Appointed director on November 25, 2013 (No PTT Shares) |
| 4. | Mr. Arkhom Termittayapaisith | - | - | - | (No PTT Shares) |
| 5. | Prof. Dr. Thosaporn Sirisumphand | N/A | - | - | Appointed director on April 26, 2013 (No PTT Shares) |
| 6. | Mr. Waroonthep Watcharaporn | - | - | - | (No PTT Shares) |
| 7. | Mr. Insorn Buakeow | - | - | - | (No PTT Shares) |
| 8. | Mr. Montri Sotangkul | - | - | - | (No PTT Shares) |
| 9. | Mr. Watcharakiti Watcharothai | - | - | - | (No PTT Shares) |
| 10. | Mr. Sihasak Phuangketkeow | - | - | - | (No PTT Shares) |
| 11. | Mr. Somchai Sujjapongse | N/A | - | - | Appointed director on June 29, 2013 (No PTT Shares) |
| 12. | Mr. Prasert Bunsumpun | N/A | 210,800 | - | Appointed director on April 11, 2013 (No trading transaction of PTT Shares in 2013) |
| 13. | Mr. Chitrapongse Kwangsukstith | 258,690 | 258,690 | - | (No trading transaction of PTT Shares in 2013) |
| 14. | Mr. Suthep Liamsirijareen | N/A | - | - | Appointed director on February 23, 2013 (No PTT Shares) |
| 15. | Mr. Pailin Chuchottaworn | - | - | - | Shown in the Management's Ownership of Shares table. |

Securities Portfolio for Directors Who Completed Their Terms and Resigned during the year (as of year-end 2013)

| No. | Name | Shares | | Change during the year | Remark |
|-----|-----------------------------|---------------|---------------|------------------------|---|
| | | Dec. 31, 2012 | Dec. 31, 2013 | | |
| 1. | Mr. Norkun Sitthiphong | - | N/A | - | Resigned on February 1, 2013 (No PTT Shares) |
| 2. | Gen. Warawat Indradat | - | N/A | - | Resigned on April 12, 2013 (No PTT Shares) |
| 3. | Mr. Krairit Nilkuha | - | N/A | - | Resigned on April 11, 2013 (No PTT Shares) |
| 4. | Mrs. Benja Louichareon | - | N/A | - | Resigned on June 26, 2013 (No PTT Shares) |
| 5. | Mr. Vichet Kasemthongsri | - | N/A | - | Resigned on June 26, 2013 (No PTT Shares) |
| 6. | Mr. Chulasingh Vasantasingh | - | N/A | - | Resigned on November 15, 2013 (No PTT Shares) |

Management's Ownership of Shares (as of year-end 2013)

| No. | Name | Shares | | | Warrant # 1 | | Warrant # 2 | | Remark |
|-----|-----------------------------------|---------------|---------------|------------------------|-------------------|-----------|-------------------|-----------|---|
| | | Dec. 31, 2012 | Dec. 31, 2013 | Change during the year | Allocated in 2005 | Remaining | Allocated in 2006 | Remaining | |
| 1. | Mr. Pailin Chuchottaworn & spouse | 62,000 | 62,000 | - | 52,600 | - | 27,600 | - | No trading transaction of PTT Shares in 2013 |
| 2. | Mr. Surong Bulakul | 118,183 | 118,183 | - | 63,300 | - | 33,000 | - | No trading transaction of PTT Shares in 2013 |
| 3. | Mr. Nuttachat Charuchinda | 19,563 | 10,563 | (9,000) | 60,800 | - | 31,800 | - | Two transactions of PTT shares in 2013 - Buy in 6,000 shares - Sell out 15,000 shares |
| 4. | Mr. Sarun Rungkasiri & spouse | 43,579 | - | (43,579) | 56,900 | - | 30,000 | - | Transfer out 43,579 shares of PTT in 2013 |
| 5. | Mr. Supattanapong Punmeechaow | - | - | - | - | - | - | - | No PTT Shares |
| 6. | Mr. Pitipan Teparitarn | 8,334 | 8,334 | - | 38,500 | - | 20,400 | - | No trading transaction of PTT Shares in 2013 |
| 7. | Mr. Charrie Buranakanonda | 55,408 | 55,408 | - | N/A | - | N/A | - | No trading transaction of PTT Shares in 2013 |
| 8. | Mr. Chavalit Punthong | N/A | - | - | N/A | N/A | N/A | N/A | Appointed on October 1, 2013 |
| 9. | Mr. Atikom Terbsiri | - | - | - | - | - | - | - | Resumed work at PTT on October 1, 2013 |
| 10. | Mr. Sarakorn Kulatham & spouse | 56,900 | 59,900 | 3,000 | 54,200 | - | 28,300 | - | Purchased 3,000 Shares of PTT in 2013 |
| 11. | Mr. Tevin Vongvanich | 56,000 | 56,000 | - | 40,300 | - | 21,000 | - | No trading transaction of PTT Shares in 2013 |
| 12. | Mr. Veerasak Kositpaisal | 31,400 | 31,400 | - | - | - | 26,400 | - | No trading transaction of PTT Shares in 2013 |
| 13. | Mr. Bowon Vongsinudom | 12,100 | 12,100 | - | - | - | 12,100 | - | No trading transaction of PTT Shares in 2013 |
| 14. | Mr. Wirat Uanarumit | 25,500 | 25,500 | - | - | - | - | - | No trading transaction of PTT Shares in 2013 |
| 15. | Ms. Prisana Prahankhasuek | 47,363 | 47,363 | - | 35,100 | - | 18,400 | - | No trading transaction of PTT Shares in 2013 |

Securities Portfolios of Executives Transferred/ Resigned, and Retired (2013)

| No. | Name | Shares | | | Warrant # 1 | | Warrant # 2 | | Remark |
|-----|--------------------------------|---------------|---------------|------------------------|-------------------|-----------|-------------------|-----------|---|
| | | Dec. 31, 2012 | Dec. 31, 2013 | Change during the year | Allocated in 2005 | Remaining | Allocated in 2006 | Remaining | |
| 1. | Mr. Sukrit Surabotsopon | 2,000 | 2,000 | - | - | - | - | - | Seconded to IRPC Plc. on October 1, 2013 (No trading transaction of PTT Shares in 2013) |
| 2. | Mr. Pamin Phantawesak & spouse | N/A | 300 | - | N/A | N/A | N/A | N/A | Seconded to PTT Phenol Co., Ltd. on October 1, 2013 (No trading transaction of PTT Shares in 2013) |
| 3. | Mr. Anon Sirisaengtaksin | 141,700 | N/A | - | 79,800 | - | 41,900 | - | Retired on September 30, 2013 (No trading transaction of PTT Shares in 2013) |
| 4. | Mr. Wichai Pornkeratiwat | 55,559 | N/A | - | 46,900 | - | 25,200 | - | Retired on September 30, 2013 (No trading transaction of PTT Shares in 2013) |

(8) Declaring Vested Interests at Meetings

At every Board meeting, the Chairman reminds the directors to conform to the policy on conflicts of interest on all agenda items, which requires those with vested interests must declare such interests to the meeting to abstain from voting or giving any views. This year, a total of 18 notices were made to the Chairman out of 18 Board meetings.

(9) Review of Connected Transactions

The Audit Committee presents these transactions to the Board along with items of conflicts of interest, which have been examined for conformance to SET's criteria. Such transactions are strictly disclosed in the reports and disclosed in every quarter of the year.

(10) Corporate Governance Promotional Activities

The Corporate Governance Committee is assigned to promote and screen CG matters so that PTT may actively campaign for compliance with CG principles. A working group on CG, headed by an executive vice president, has implemented assorted matters under the policy and conducted campaigns to cultivate awareness in the directors, management, employees, and related parties in 2013 as described below:

- PTT constantly reviews and amends its values and corporate culture to suit and align with its vision and business context. Senior leaders show their commitment to the values and communicate with all staff across PTT through assorted channels. They also define promotional plans and activities for such values and culture, together with indicators for monitoring and assessment to lead effectiveness to internal communication, personnel skill sharing, and innovation in the workplace.

- PTT has defined its policy and management procedures for human resources in writing, including selection, training, promotion, and compensation procedures. A policy is in place to constantly develop competencies so that employees' capability matches business needs and accommodates work expansion in the future.

- PTT has set up a complaint management center, with Corporate Communications as the main responsible unit, charged with the management of external complaints and responses to queries, together with internal complaints. Suitable periods have been defined for these purposes. Issues are compiled, managed, and regularly submitted to the management for comprehensive improvement and development of PTT.

- This year, the Corporate Governance Committee held five meetings, with meeting frequency set for at least quarterly, to monitor corporate governance, follow up on the progress of the management of PTT's sustainability, and activities for society and PTT's communication.

- Since its meeting No. 2/2555, the Corporate Governance Committee has endorsed the approach to amend and revise the CG handbook and code of business conduct. Key topics included additional ethical standards in compliance of the Constitution of Thailand B.E. 2550 (2007); definition of the code of conduct on the treatment of creditors; an additional policy to educate and train employees on environmental matters; an additional policy on disclosure of securities trading, transfer, or portfolio changes for directors; stating directors' terms; amendment to disclosure forms for reporting conflicts of interest via a code of conduct; addition of sustainable guidelines for PTT's business partners; and addition of a charter to cover all sub-committees. PTT followed SET's CG principles for listed companies (2012 edition), which had been modified to align with the ASEAN CG Scorecard and conducted the organization assessment along with the guideline of "DJSI Sustainability Assessment" which had been modified for completeness according to the resolution of Board meeting No. 9/2556. The signing ceremony where the directors and the management received the handbooks and the dissemination of the handbooks to all the employees to sign have already taken place.

- An additional channel to directly communicate about CG with all stakeholders is a quarterly newsletter called "PTT Bizway" in Thai and English, mailed to

shareholders. It contains key information, including the vision, missions, message from the President & CEO, performance outcomes, CG, and management for PTT's sustainability. PTT enclosed an attitude survey form for shareholders and received cooperation from the readers. For the topic on satisfaction with PTT on CG, it received assessment at "very satisfied" to "most satisfied" of about 90%.

- In late 2013, the CG taskforce conducted a survey through internal communication channels to assess PTT employees' mastery of CG matters. Its conclusion was that nearly 90% of them commanded good understanding of CG and the code of business conduct. It also developed CG E-learning on the intranet as a learning media for CG and the code of business conduct for all employees, starting from June 2013. The plan is to assess employees' understanding to promote the cultivation of awareness and campaign for it in their performance under the code of business conduct.

- Campaigns on activities and additional corporate governance communications through the announcement in the meetings of the support functions and business units. The Office of the President and Company Secretary coordinates with the Office of the Senior Executive Vice President in communicating to the employees about CG practices. For new employees, the corporate governance principles are communicated through the orientation. This year there were five batches, each 60 - 80 persons. All new employees receive a CG handbook each. They had to study them and sign their names as acknowledgment before applying the CG principles and the code of business conduct as guidelines in their work.

- Besides promoting CG knowledge within the organization, PTT shared this knowledge with external parties by agreeing to requests for visits by assorted organizations/institutions. PTT's top management was also invited to give talks or join seminars on the subject.

- Periodic promotional campaigns were conducted through various media within PTT, including exhibitions, a CG website packed with information, and two-way communication channels through e-mail:

cghelpdesk@pttplc.com, internal broadcasts "PTT We Channel" under "CG Station", arrangement of "CG Camp" where employee representatives jointly study CG principles through various activities, video shows, and CG column in the "PTT Spirit" magazine are among the publicity and awareness tools, with positive responses from all. In addition, the Corporate Governance Committee distributed the Thai and English versions of the Good Corporate Governance Handbook (3rd Revision) to investors, international interested parties, and stakeholders for their reference. This will also be posted on PTT's website.

- In addition, PTT focused on CG among PTT Group to align with PTT's CG management standards. To this end, they agreed to jointly study and develop CG guidelines based on international best practices to establish a standard suitable for PTT Group as a step toward future ranking. Implementation plans and proactive promotional strategies for CG were also established as follows:

R-E-A-C-T

- R = Responsibility
- E = Equitable Treatment
- A = Accountability
- C = Creation of Long Term Value
- T = Transparency.

- Below is a description of activities promoting CG among PTT Group companies:

- Appointment of a PTT Group CG Steering Committee

- Staging of a PTT Group CG Day, a key annual activity designed to campaign, promote, and publicize CG practices among PTT Group companies, namely PTT, PTTEP, PTTGC, TOP, BCP, and IRPC. It promoted the awareness among executives and employees of CG application to their work. The all-day event consisted of exhibitions and recreational games that also educated visitors, in addition to a top-management seminar and an employee show among six PTT Group companies, featuring employees from all. Guest visitors also paid a visit, including

representatives of SET, Thai Listed Companies Association, and PTT Group executives. Knowledge and impression were evident in the spirit shown by senior executives and employees that participated in growing good awareness of the significance of CG to management and work. This year, IRPC was the host and had made all the arrangements. However, due to the continued political conflict during the period, the “PTT Group CG Day 2013” was adjourned.

(11) Anti-corruption

- In 2010, PTT enlisted itself in the 2010 declaration of the Private Sector Collective Action Coalition Against Corruption (CAC), a national agenda project supported by the government and the National Anti-Corruption Commission (NACC), as one of the first 27 companies to do so.

- PTT participated in a seminar on the procedures under the process to certify coalition membership, hosted by IOD, the secretariat to CAC, designed to elaborate the certification procedure and development of self-assessment for prospective companies. Currently, PTT, as a signatory of the above-mentioned declaration, is under the certification process for further certification by CAC. To this end, PTT appointed a monitoring committee and a working group to study and improve work procedures, divided into two levels:

1. A committee at the level of the Executive Vice President as a steering committee responsible for defining anti-corruption policies and guidelines, as well as promoting and driving the implementation of the guidelines.
2. A working group at the level of the Vice President responsible for studying the self-assessment form under the certification procedure and improve relevant work procedures to ensure complete management mechanism.

- The working group charted the draft of the anti-corruption policy of PTT and PTT Group and submitted to Board meeting No. 12/2556 on December 20, 2013, to seek the approval of the policy

and send the self-assessment form to CAC for consideration before going through the certification process. The Board meeting approved in principle the anti-corruption policy and entry into the certification process. The working group is in the process of reviewing definitions in the policy before announcing it to the directors, management, and employees of PTT and PTT Group for further application.

2. Risk Assessment

PTT recognizes the significance of risk management under changes that impact its businesses because of internal and external factors. Viewing risk management as a key component of every business process which must be linked with one another, PTT therefore defined a policy of corporate risk management that all must conform to and undertake at the operating level. As for corporate risks, this management is systematically undertaken by PTT’s management committees. Operation risks fall under the oversight of respective operations. A risk management and an internal control committee manages overall risks for maximum efficiency. It is the responsibility of all units to manage and control at manageable levels, as is clearly stated in the functional job descriptions of all units.

3. Control Activities

The Management Committee is authorized to review reports, financial and otherwise, of all business groups and corporate overviews, and regularly review all reports to ensure conformance to regulations and job manuals. PTT has defined policies and procedures in writing, including those for performance assessment of all employees, which relies on KPIs to enable control of management activities to be suitable, adequate, and accountable. Portions of businesses have been identified for key risks, and mechanisms defined to control and minimize errors. Regular performance reviews by the management are in place, including financial, procurement, and general administrative transactions. Systematic delegation of duties to personnel groups ensures checks and balances. Authority is duly and totally segregated for approval, information processing,

transaction recording, receipt and disbursement of cash, reviews and inspection, and stewardship of properties. In place is an internal control system for finance and accounting, dealing with cash collection, cash retention, receipt and disbursement, bank deposits, and cash advances. These follow the rules, with complete, accurate, and regular recording. Systematic storage of accounting documents, both documents and information, is in place to comply with the law.

In procurement and hiring, PTT follows rules and requirements on material and supply matters, which clearly define responsible parties, including the authority, approval limits, supply need assessment, inspection, control and storage of supplies, and property counting. As for human resource management, PTT has instituted a human resource management system, complete with adequate monitoring and assessment, covering recruitment, determination of compensation, duties, personnel development, performance, and communication so that employees may be competent and that PTT's human resource management may be both suitable and efficient.

If PTT enters into transactions with major shareholders, directors, the management, or related persons, PTT applies strict measures to ensure that each such transaction goes through the required approval procedures every time and for every item. The stakeholders will not take part in the approval of such an item. PTT also closely monitors any subsequent actions.

The Board looks after, monitors, and provides policies and recommendations on SSHE (Security, Safety, Health, and Environment) standards applied as part of the control activities through the Management Committee, headed by the President & CEO, together with the PTT Group QSHE (Quality, Security, Safety, Health, and Environment) Policy Committee and PTT's own QSHE Committee. The responsible corporate units are the SSHE and Corporate Quality Management departments.

SSHE is regarded as one of the key safeguarding mechanisms for PTT's business on its march toward an entity with sustainable growth and operational excellence in tandem with the strategy of TAGNOC (Technologically Advanced and Green National Oil Company).

PTT has defined a PTT Group SSHE Management Framework to bolster the strength of and define a clearer, integrated operation direction for PTT Group. Under this framework, PTT explicitly expresses its intention and commitment under the "PTT Group SSHE Management Standard (PTTG SSHE MS)", designed to serve as a tenet or basic requirement for SSHE risk management for all business units and companies to apply, given each business's nature and risks. In 2013, PTT improved significant processes, resulting in clearer SSHE management and in boosting confidence in the efficiency and effectiveness of the systematic management as follows:

- Clearer implementation of policy

PTT has reviewed and improved PTT Group SSHE target 2020 for clarity, communicated the goal to the employees in their line of work / PTT Group companies, and expanded the application of PTTG SSHE MS to ensure that PTT and PTT Group companies have systematic SSHE management under the same standards and directions.

- Improvement of the review process by PTT Group QSHE Policy Committee and PTT QSHE Committee, Audit/Assurance of correctness and reliability of performance data

There was improvement in the review process of the efficiency and effectiveness of SSHE management under the PTT Group SSHE Management Framework. It included screening of goals and strategic plans, development of protocol standards, procedures of the SSHE assessment, improvement of standards, process, and tools in filing and reporting key indicators of PTT Group's operation of SHE and greenhouse gases,

suitable to the nature and management process of PTT Group, as well as aligning with and adding correctness and accuracy to the information according to the latest international standards.

- **Supervision by focusing on networking and participation of PTT Group**

PTT has defined the SSHE policy of PTT Group companies according to the PTT Way of Conduct and the implementation of the policy. PTT has also defined the PTT Group SSHE Strategic Initiatives 2014 with the QSHE units of PTT and PTT Group companies. In addition, it has promoted the networking on the PTT Group SSHE to synergize knowledge and personnel of the PTT Group SSHE in a sustainable manner.

For details about SSHE performance, please refer to the Corporate Sustainability Report 2013.

4. Information & Communication

Thanks to the vision of the Board, PTT and group companies have jointly established PTT ICT Solutions Co., Ltd. (PTTICT), to centralize IT services for the group, a cost-saving idea that reduces infrastructural spending and IT redundancies for each company, while adding bargaining power for the group. To date, PTTICT has performed its role consistently well and has become PTT Group's flagship in IT operations.

Through the Audit Committee and the Risk Management and Internal Control Committee, the Board assigns priority to IT system security and the safety of electronic information storage. The management information systems and internal controls were constantly reviewed. This year, despite the ongoing political conflict where PTT's Head Office was surrounded by demonstrators, PTT adopted an alternative workplace and alternative ICT equipment and IT system so as not to interrupt its business. It managed to operate without interruption, reviewed critical computer systems, and sought scope expansion for ISO/IEC 27001

(Information Security Management System - ISMS) to cover all key systems. PTT was successfully and continuously certified. It also sought certification under TIS 22301-2553 in preparing for business continuity management (BCM).

In addition, the Board supported PTT's upgrading of its enterprise resource planning (ERP) to establish the competitiveness of its IT and communication with technologically advanced organizations. PTT expanded the application of the SAP ECC6.0 to its business jointly with PTT Group companies (under the SAP Roll Out Project) after registering success in its corporate application. The PTT Group companies have used SAP ECC6.0 to compile and process business data much like what PTT did, thus cutting data redundancy in legacy system application, which is abundant in PTT, and link data from PTT Group companies for quick summaries for the management. Besides, innovations have been devised in support of cash receipt and disbursement for greater efficiency by developing a payment gateway, leveraging the "Direct Approve" system in effectively shortening financial transaction time for PTT, customers, and banks. As for performance measurement and comparison of performance against goals, PTT has improved its information system to accommodate future policies and organization structures-including the COACH, Balanced Scorecard, and KPIs to promote progress toward becoming a leading business organization with the Thailand Quality Award (TQA) throughout. Incidentally, PTT's work on ICT has been named a winner at the ICT Excellence Award, hosted by the Thailand Management Association, ever since 2009.

5. Monitoring & Evaluation

• Internal Control System

The Office of Corporate Audit is an independent unit which directly reports to the Audit Committee. It fosters assurance and provides consultation to ensure that business processes are properly equipped with CG, risk management, and sound internal controls in support of PTT's objectives.

The Office audits annual operating plans and three-year advanced audit plans in line with business strategic directions and the so-called risk-based approach (key corporate risks), encompassing PTT Group's businesses, both domestic and international. It reports findings to the Audit Committee for consideration and reports to the Board for acknowledgment every quarter. Regular monitoring is undertaken for actions in response to the office's recommendations. In its work, the Office freely expresses its opinions. No conflicts have arisen between audited units and the Office that cannot be resolved.

• Control Self-Assessment (CSA)

In addition, PTT monitors internal controls and assesses them at least annually by defining this task as a part of the routine procedures of executives, supervisors, and relevant parties. It also instituted Control Self-Assessment (CSA) within PTT in a blended mode:

- Specific questionnaires on internal controls at corporate and departmental levels
- Facilitated Workshops to assess internal controls at the activity level, with a focus on process control, assessment outcomes, and plans to improve internal controls, which must have the buy-in of work process owners and monitoring by superiors.

The Risk Management Department compiles data and summarizes the analyses of those data in reports of self-assessment covering the entire PTT for the committee to screen, comment, and issues approaches for responsible units to proceed with corrective actions every year. In addition, the Office of Corporate Audit conducts reviews to ensure that the existing internal controls are adequate for handling risk management and are consistently conformed and observed. The Audit Committee reviews the findings of the internal audit annually. If any areas needing improvement are found, PTT has instituted procedures to ensure that such areas receive due attention and immediate corrective actions. As for the internal control assessment of accounting and finance, the audit and review is usually undertaken by the Office of the Auditor-General (the auditor), with the findings submitted to the Audit Committee for consideration quarterly and annually.

In monitoring and assessing internal controls, PTT conforms to the guidelines for report preparation issued by the Auditing Commission Regulation (Clause 6). It was concluded that the latest assessment was at a "good" level. All business groups also report their performance every month and have it regularly measured against KPIs.

The regular review of the assessment outcomes conducted by executives and the Office of Corporate Audit and the Audit Committee for this year indicated no significant problems or defects, a view shared by the external auditor. In summary, PTT's internal control system is adequate and effective from a business standpoint.

Auditor's Fee

(Information on the auditor's fees appears in the annual financial report 2013.)

Implementation of Corporate Governance in other areas

According to a survey on PTT's corporate governance conducted by the Thai Institute of Directors (IOD), the score given on the overall picture of PTT on the CG principles for listed companies in 2013 was "excellent", by which PTT earned an average score which topped that of 2012. Compared with peer companies dealing in natural resources, those in the SET 50 group, and those with market capitalization exceeding Baht 10,000 million, PTT's average score topped the three groups of companies. The survey result was based on the information that PTT disclosed to the public. This year, PTT has good practical guidelines apart from the survey criteria which can serve as good practices for other listed companies such as:

- The Board meeting passed the resolution to appoint Mr. Parnpree Bahiddha-Nukara, independent director, as the Chairman. Therefore, the assignment of policies and supervision of PTT's operations is independent. Another committee, the Enterprise Risk Management Committee, was also appointed, responsible for cautiously screening key tasks, focusing on maximum benefit for shareholders, while taking into account all stakeholders. At present, therefore, PTT has five committees:

1. The Audit Committee
2. The Nominating Committee
3. The Remuneration Committee
4. The Corporate Governance Committee
5. The Enterprise Risk Management Committee.

- PTT has defined guidelines to promote the systematic core values of SPIRIT by urging executives to behave as role models and coaches. It has prepared a SPIRIT Leader's Action Handbook and Poster to disseminate to all executives of PTT group at the manager level upward and campaign to communicate the core values to employees through meetings, including the communication of good corporate governance, which is also one of PTT's core values.

- The communication of the core values to PTT Group companies through the PTT Group policies and SPIRIT is defined as a PTT Way of Conduct.

- PTT ensures that the executives provide CG training at employees' orientation, and that the channels for the executives to communicate the CG policy to the employees are added, such as VDO to communicate through What's News, Intranet, internal PR, and television media.

- PTT initiates the transfer of knowledge on CG such as "CG Camp", "CG Station" internal broadcasts and encourages the employees to learn by themselves through "CG E-Learning" on the intranet.

- PTT prepares an agenda base for meeting agenda items among senior leaders and executives to increase performance review efficiency under the topics QSHE/SPIRIT/CSR/CG Talk as channels to communicate the CG principles, and encourages the campaign on the awareness of CG-based work.

The number of the sub-committees meetings is shown in the Management Structure chapter.

Internal Control and Risk Management

The Risk Management and Internal Control Committee has assigned the Risk Management Department to assess internal controls by preparing the individual internal control self-assessment form for executives at the manager level upward who work under PTT's organization structure and those who are seconded to PTT Group companies, covering the duties and responsibilities as referred in the internal control guidelines of The Committee of Sponsoring Organizations of the Treadway Commission (COSO), which devises five major compositions of internal control: (1) Control Environment (2) Risk Assessment (3) Control Activities (4) Information & Communication, and (5) Monitoring Activities.

The Office of Corporate Audit reviews the effectiveness of internal controls and reports the findings to the Audit Committee and the Board, which then assesses the system by asking questions of the management on the implementation of guidelines/recommendations to improve internal controls. In summary, in assessing PTT's internal control against the five compositions, namely Control Environment, Risk Assessment, Control activities, Information and Communication, and Monitoring Activities, the Board concluded that PTT's internal control system is adequate and suitable. PTT has provided enough employees to efficiently implement the system.



Head of the Office of Corporate Audit

At its meeting No. 21/2551 of September 22, 2008, the Management Committee appointed Ms. Nitaya Direksathaporn as Executive Vice President, Office of Corporate Audit, on October 1, 2008. She commanded in-depth knowledge and understanding of PTT's business. She was also experienced in PTT's accounting, financial matters, and financial risk management at the business and overall levels. Therefore, she was regarded as suitable for the position. The Audit Committee approved the appointment, transfer, performance assessment, and annual merit pay increase of this position.



Profile of the Head of the Office of Corporate Audit

Ms. Nitaya Direksathaporn

Age 56

Education

- Bachelor of Accounting (Second-Class Honors), Chulalongkorn University
- Master of Business Administration (Finance), National Institute Development Administration (NIDA)

Training

- Sasin Graduate Institute of Business Administration, Senior Executive Program
- Harvard Business School, Finance for Senior Executives
- NIDA-Wharton Executive Leadership Program
- IOD, Director Accreditation Program (DAP) 91/2011

Work experiences

| | |
|----------------|---|
| 2001 - 2006 | Vice President, Risk Management on Finance and Loan Policy, PTT |
| 2006 - 2008 | Executive Vice President, Corporate Accounting and Finance, IRPC Plc. |
| 2009 - Present | Executive Vice President, Office of Corporate Audit, PTT |

Relevant important position None

Relationship with the management None

Compliance Mechanism

PTT defines the responsibilities of the units to ensure the compliance of the Company's rules and regulations as follows:

- **Office of the President and Company Secretary** is responsible for ensuring that the PTT Group companies/ the Board/ the Management Committee/ executives/ units comply with the rules on state enterprises and listed companies, relevant rules and regulations. It also serves as a center to compile and follow up on the information on outside rules and regulations, provide knowledge and advice on external regulations on state enterprises and listed companies, by interpreting and summarizing them so that relevant persons/units may conform to.

- **Office of Corporate Legal** is responsible for supervising business laws, laws on listed companies, laws on environment/ safety in workplace, energy laws, Administrative Court cases, and international laws to ensure that PTT's business operations comply with the other laws and regulations of the state; provide counsel to other units/ PTT Group companies so that their operation may comply with the law, especially new business transactions, both domestic and overseas, to allow flexibility to business operations.

- **Office of Corporate Audit** is responsible for assessing the efficiency and adequacy of the internal control system and supervising the operation of PTT and its subsidiaries.

PTT Board of Directors

1
Mr. Parnpree Bahiddha-Nukara
Independent Director, Chairman



2
Mr. Boonsom Lerdhirunwong
Independent Director, Chairman
of the Audit Committee



3
Mr. Athapol Yaisawang
Independent Director, Chairman of
the Nominating Committee, Member of
the Enterprise Risk Management Committee



4
Mr. Arkhom Termpittayapaisith
Independent Director, Chairman
of the Remuneration Committee



5
Prof. Dr. Thosaporn Sirisumphand
Independent Director,
Chairman of the Corporate
Governance Committee,
Chairman of the Enterprise
Risk Management Committee



6
Mr. Waroonthep Watcharaporn
Independent Director,
Member of the Audit Committee



7
Mr. Insorn Buakeow
Independent Director,
Member of the
Audit Committee



8
Mr. Montri Sotangkul
Independent Director,
Member of the Audit Committee



9
Mr. Watcharakiti Watcharothai
Independent Director,
Member of the Nominating Committee,
Member of the Corporate Governance
Committee



10
Mr. Sihasak Phuangketkeow
Independent Director,
Member of the Remuneration
Committee, Member of
the Corporate Governance
Committee



11
Mr. Somchai Sujjapongse
Director, Member of the
Remuneration Committee,
Member of the Enterprise
Risk Management Committee



12
Mr. Prasert Bunsumpun
Director, Member of the Enterprise
Risk Management Committee



13
Mr. Suthep Liamsirijareon
Director



14
Mr. Chitrapongse Kwangsuksith
Director



15
Mr. Pailin Chuchottaworn
Director,
Secretary to the Board,
President &
Chief Executive Officer



Mr. Parnpree Bahiddha-Nukara
Independent Director, Chairman

Mr. Boonsom Lerdhirunwong
Independent Director, Chairman
of the Audit Committee

Mr. Athapol Yaisawang
Independent Director, Chairman of
the Nominating Committee, Member of
the Enterprise Risk Management

Mr. Arkhom Termittayapaisith
Independent Director, Chairman
of the Remuneration Committee

Prof. Dr. Thosaporn Sirisumphand
Independent Director, Chairman of
the Corporate Governance Committee,
Chairman of the Enterprise Risk
Management Committee

Mr. Waroonthep Watcharaporn
Independent Director,
Member of the Audit Committee

Mr. Insorn Buakeow
Independent Director,
Member of the Audit Committee

Mr. Montri Sotangkul
Independent Director,
Member of the Audit Committee

Mr. Watcharakiti Watcharothai
Independent Director, Member of
the Nominating Committee, Member of
the Corporate Governance Committee

Mr. Sihasak Phuangketkeow
Independent Director, Member of the
Remuneration Committee, Member of
the Corporate Governance Committee

Mr. Somchai Sujjapongse
Director, Member of the Remuneration
Committee, Member of the Enterprise
Risk Management Committee

Mr. Prasert Bunsumpun
Director, Member of the Enterprise Risk
Management Committee

Mr. Suthep Liumsirijarern
Director

Mr. Chitrapongse Kwangsukstith
Director

Mr. Pailin Chuchottaworn
Director, Secretary to the Board,
President & Chief Executive Officer

1. Mr. Parnpree Bahiddha-Nukara
Independent Director, Chairman

Age 56

(%) Share Possession

None

Educations

- Bachelor of Laws, Faculty of Law,
Chulalongkorn University, Thailand
- Master in Public Administration,
University of Southern California, U.S.A.
- Ph.D. Government, Public Administration,
Claremont Graduate University, U.S.A.

Certifications

- Thai Institute of Directors Association (IOD) RCP 32/2013
- Certificate in Top Executives in the Energy Education
Program, Thailand Energy Academy (Class of 3rd)
- Advanced Security Management Program
- Top Executives Program, Capital Market Academy
(Class of 6th), Thailand
- The Training Program for High Level Executives in
Criminal Justice at Judicial Training Institute
- Politics and Administration in Democracy for Executives
at King Prajadhipok's Institute

Work Experiences

- 2008 : Advisor to the Deputy Prime Minister
(Mr. Surapong Suebwonglee)
- 2010 - Present : Chairman of the advisory board,
Amata Foundation

Relevant Important Positions

- None

Relation among Family with other Directors and Executives

- None

2. Mr. Boonsom Lerdhirunwong
Independent Director,
Chairman of the Audit Committee

Age 60

(%) Share Possession

None

Educations

- B.Eng. (Civil Engineering), Chulalongkorn University,
Thailand
- M.Eng. (Civil Engineering), Chulalongkorn University,
Thailand
- Dr.Ing. (Civil Engineering), INSA, Toulouse, France

Certifications

- The National Defence Course, National Defence College
(Class of 49th), Thailand
- Certificate in Top Executives in the Energy Education
Program, Thailand Energy Academy (Class of 3rd)
- Thai Institute of Directors Association (IOD) DCP 162,
FSD 17, ACP 41, AACP 9 (MFM 8, MIA 13, MIR 13,
MFR 16), SFE 18

Work Experiences

| | |
|----------------|--|
| 2004 - 2008 | : Vice President for Property Management Affairs, Chulalongkorn University |
| 2007 - 2008 | : Member of Financial Policy Committee, Chulalongkorn University |
| 2008 - 2010 | : Member of Chulalongkorn University Council |
| 2008 - 2013 | : Dean, Faculty of Engineering, Chulalongkorn University, Thailand |
| 2010 - Present | : Member of Thai Red Cross Society Board |
| 2013 - Present | : Chairman, Board Commissioners, State Railway of Thailand |

Relevant Important Positions

- None

Relation among Family with other Directors and Executives

- None

3. Mr. Athapol Yaisawang

Age 63

Independent Director, Chairman of the Nominating Committee, Member of the Enterprise Risk Management Committee

(%) Share Possession

None

Educations

- LL.B. (Hons), Thammasat University, Thailand
- Barrister at Law, The Thai Bar Association, Thailand
- LL.M., Thammasat University, Thailand
- LL.D. (honoris causa), Ramkhamhaeng University, Thailand

Certifications

- The 24th Executive Director's Program, The 1st Curriculum, Office of the Civil Service Commission
- The 17th Public-Private National Defense Curriculum, National Defence College
- The 13th Advanced Certificate Course in Politics and Governance in Democratic System for Executives: Political and Governance College, King Prajadhipok's Institute, National Defence College
- Top Executives Program, Capital Market Academy (Class of 13th), Thailand
- The 1st Rule of Law for Democracy (RLD) Program, Constitutional College, Constitutional Education Institute, Office of the Constitutional Court

Work Experiences

| | |
|----------------|---|
| 2009 - 2013 | : Deputy Attorney General, The Office of the Attorney General |
| 2013 - Present | : Attorney General, The Office of the Attorney General |

Relevant Important Positions

- Independent Director, PTT Exploration and Production Public Company Limited

Relation among Family with other Directors and Executives

- None

4. Mr. Arkhom Termittayapaisith

Age 57

Independent Director, Chairman of the Remuneration Committee

(%) Share Possession

None

Educations

- B.A. Economics, Thammasat University, Thailand
- M.A. Development Economics, Williams College, U.S.A.
- Honorary Degree, Doctor of Liberal Arts, Sisaket Rajabhat University, Thailand

Certifications

- Senior Executive, Civil Servant Commission (Class of 35th), Thailand
- The National Defense Course, National Defence College (Class of 46th), Thailand
- Thai Institute of Directors Association (IOD) DAP 51/2006, DCP 92/2007, ACP 22/2008
- Top Executives Program, Capital Market Academy (Class of 1st), Thailand

Work Experiences

| | |
|----------------|---|
| 2000 - 2003 | : Assistant Secretary-General, Office of National Economic and Social Development Board (NESDB) |
| 2003 - 2004 | : Senior Advisor in Policy and Planning, NESDB |
| 2004 - 2010 | : Deputy Secretary-General, NESDB |
| 2010 - Present | : Secretary-General, NESDB |

Relevant Important Positions

- None

Relation among Family with other Directors and Executives

- None

5. Prof. Dr. Thosaporn Sirisumphand Age 53
Independent Director, Chairman of the Corporate Governance Committee, Chairman of the Enterprise Risk Management Committee

(%) Share Possession None

Educations

- Bachelor of Public Administration (Honors), Chulalongkorn University, Thailand
- Master of Public Administration, Pi Alpha Alpha (National Honor Society for Public Affairs and Administration), Northern Illinois University, U.S.A.
- Ph.D. in Policy Analysis, Public Administration and Comparative Politics, Northern Illinois University, U.S.A.

Certifications

- Thai Institute of Directors Association (IOD) DCP 80/2006, FND 30/2006
- "Local Authorities and the State", École Nationale d'Administration (ENA), France
- Top Executives Program, Capital Market Academy (Class of 10th), Thailand
- Senior Executives on Justice Administration Batch, National Justice Academy (Class of 15th), Thailand

Work Experiences

- 1996 - 2000 : Assistant to the President, Chulalongkorn University
- 2000 - 2003 : Deputy Secretary General, King Prajadhipok's Institute
- 2003 - 2006 : Board of Director, Thailand Post Company Limited
- 2004 - 2006 : Member of Royal Thai Police Personnel Committee
- 2006 - 2008 : Member of National Legislation Assembly
- 2009 - 2013 : Secretary General, Office of the Public Sector Development Commission
- 2013 - Present : Secretary General, Office of the Higher Education Commission

Relevant Important Positions

- Independent Directors, Chairman of Corporate Governance Committee, Thai Oil Public Company Limited

Relation among Family with other Directors and Executives

- None

6. Mr. Waroonthep Watcharaporn Age 45
Independent Director,
Member of the Audit Committee

(%) Share Possession None

Educations

- Bachelor Degree in Business Administration, Major in Marketing, The University Thai Chamber of Commerce, Thailand
- Master of Science in Information System (MIS), Engineering school, George Washington University, U.S.A.

Certifications

- TLCA Executive Development Program (EDP) (Class of 5th), Thai Listed Companies Association
- Game for Global Growth (Class of 2nd) (April 2010 - March 2011), Singtel
- Thai Institute of Directors Association (IOD) DCP 157/2012, FSD 17/2012, ACP 40/2012, AACP 2012, MIA 13/2012, MIR 13/2012, MFM 9/2013, MFR 17/2013

Work Experiences

- 2006 - 2007 : Assistant Vice President, Marketing One-2-Call, Advance Info Service Plc.
- 2007 - 2008 : Managing Director, Advance mPAY Company Limited
- 2008 - 2010 : Assistant Vice President, Corporate Business, Advance Info Service Plc.
- 2010 - 2011 : Vice President, Corporate Sales, Advance Info Service Plc.
- 2011 - Present : Vice President, Vice Chairman of the Board Executive Office, Advance Info Service Plc.

Relevant Important Positions

- None

Relation among Family with other Directors and Executives

- None

7. Mr. Insorn Buakeow Age 64
Independent Director,
Member of the Audit Committee

(%) Share Possession None

Educations

- Bachelor of Education, Burapha University (Bangsaen Educational College), Thailand
- Master of Public Administration, National Institute of Development Administration (NIDA), Thailand
- Doctorate of Public Administration, Century University, U.S.A.

Certifications

- Thai Institute of Directors Association (IOD) FSD 17/2012, DCP 162/2012, SFE 18/2013, RNG 5/2013, HMS 3/2013

Work Experiences

- 1976 - 1980 : Coordinator, the United Nations High Commissioner for Refugees (UNHCR)
- 1984 - 2009 : Executive of Surathip Co., Ltd. and Thai Beverage Public Co., Ltd.
- 1990 - 1995 : Advisor, Lao Shinawatra Telecom Co., Ltd
- 1992 - 2002 : Advisor, Sanpatong Agricultural Cooperative, Chiangmai
- 2010 - Present : Executive Advisor, Thai Beverage Public Co., Ltd. and T.C.C. Group

Relevant Important Positions

- None

Relation among Family with other Directors and Executives

- None

8. Mr. Montri Sotangkul Age 51
Independent Director,
Member of the Audit Committee

(%) Share Possession None

Educations

- B.A. (Faculty of Commerce and Accountancy), Chulalongkorn University, Thailand
- M.B.A., Northrop University, U.S.A.

Certifications

- Top Executives Program, Capital Market Academy (Class of 9th), Thailand

Work Experiences

- 2008 - 2009 : Executive Director, Geo - Informatics and Space Technology Development Agency, GISTDA (Public Organization)
- 2008 - 2010 : Director, National Innovation Agency
- 2008 - 2011 : Director, Provincial Waterworks Authority
- 2008 - 2011 : Executive Director, National Housing Authority, Ministry of Social Development and Human Security
- 1992 - Present : Managing Director, Prestige Direct Marketing Co., Ltd.

Relevant Important Positions

- None

Relation among Family with other Directors and Executives

- None

9. Mr. Watcharakiti Watcharothai Age 53
Independent Director,
Member of the Nominating Committee,
Member of the Corporate Governance Committee

(%) Share Possession None

Educations

- Bachelor of Arts (Political Science), Kasetsart University, Thailand
- M.P.A., Roosevelt University, U.S.A.
- Honorary Degree of Doctor of Philosophy, Department of Administration, Ramkhamhaeng University, Thailand

Certifications

- The State-Private & Political Sector Course, National Defence College, (Class of 4th), Thailand
- Top Executives Program, Capital Market Academy (Class of 9th), Thailand
- Public Director Certification Program, Public Director Institute (PDI), (Class of 5th), Thailand
- Senior Executives on Justice Administration Batch, National Justice Academy (Class of 15th), Thailand
- Thai Institute of Directors Association (IOD) DCP 121/2009, Moving Corporate Governance Forward: Challenge for Thai Director 2012

- Certificate in Top Executive Program in Commerce and Trade (TEPCoT), Commerce Academy (Class of 5th), Thailand
- Certificate in Top Executives in the Energy Education Program, Thailand Energy Academy (Class of 1st), Thailand
- Certificate in Top Executives in the PoomPalungPandin Program, Chulalongkorn University (Class of 1st), Thailand

Work Experiences

- 2001 - 2007 : Assistant Lord Chamberlain
- 2007 - Present : Grand Chamberlain

Relevant Important Positions

- Director, IRPC Public Company Limited (IRPC)

Relation among Family with other Directors and Executives

- None

10. Mr. Sihasak Phuangketkeow Age 56
Independent Director,
Member of the Remuneration Committee,
Member of the Corporate Governance Committee

(%) Share Possession None

Educations

- Bachelor of Arts (Political Science) - International Relations, Chulalongkorn University, Thailand
- Master of Arts (International Public Policy), Johns Hopkins University, U.S.A.

Certifications

- None

Work Experiences

- 2002 : Director General, Department of Information and Spokesman of the Ministry of Foreign Affairs
- 2006 : Deputy Permanent Secretary, Ministry of Foreign Affairs
- 2007 : Ambassador, Permanent Representative of Thailand to the United Nations Office and Other International Organizations in Geneva
- 2011 - Present : Permanent Secretary, Ministry of Foreign Affairs

Relevant Important Positions

- None

Relation among Family with other Directors and Executives

- None

11. Mr. Somchai Sujjapongse Age 52
Director, Member of the Remuneration Committee,
Member of the Enterprise Risk Management Committee

(%) Share Possession None

Educations

- B.A. (Economics) (Hons.) Chulalongkorn University, Bangkok
- M.A. (Economics) The Ohio State University, U.S.A.
- Ph.D. (Economics) The Ohio State University, U.S.A.

Certifications

- Thai Institute of Directors Association (IOD) DCP 75/2006
- Top Executives Program, Capital Market Academy (Class of 2nd), Thailand

Work Experiences

- 2009 - 2010 : Director-General,
Thai Customs Department
- 2010 - 2011 : Director, State Enterprise Policy
Office, Ministry of Finance
- 2011 - Present : Director, Fiscal Policy Office,
Ministry of Finance

Relevant Important Positions

- None

Relation among Family with other Directors and Executives

- None

12. Mr. Prasert Bunsumpun

Age 61

Director, Member of the Enterprise Risk
Management Committee

(%) Share Possession

0.007380

Educations

- Bachelor in Engineering (Civil Engineering), Chulalongkorn University
- MBA, Utah State University, U.S.A.
- Honorary Doctoral in Engineering, Chulalongkorn University
- Honorary Doctoral in Management, National Institute of Development Administration (NIDA)
- Honorary Doctoral in Management Science, Petchaburi Rajabhat University
- Honorary Doctoral in Management, Maharakarm University
- Honorary Doctoral in Social Innovation Management, Suan Sunandha Rajabhat University

Certifications

- Harvard Business School, Certificate in Advanced Management Program (AMP 155), U.S.A.
- National Defence College (Class No. 4010), Thailand
- King Prajadhipok's Institute, Politics and Government in Democracy for Executives (Class of 6th), Thailand
- Top Executives Program, Capital Market Academy (Class of 3rd), Thailand
- Thai Institute of Directors Association (IOD) DAP 26/2004, RCP28/2012

Work Experiences

- 2001 - 2003 : Senior Executive Vice President,
Gas Business Group,
PTT Public Company Limited

2003 - 2011

- : President and CEO,
PTT Public Company Limited
- Present : Chairman of Thailand Business
Council for Sustainable Development
(TBCSD)

Relevant Important Positions

- Chairman, PTT Global Chemical Public Company Limited
- Director, Krung Thai Bank Public Company Limited
- Director of Shin Corporation Public Company Limited
- Chairman/ Chairman of the Executive Board of Director, Thoresen Thai Agencies Public Company Limited
- Chairman/ Chairman of the Executive Board of Director, Mermaid Maritime Public Company Limited
- Director, Strategic Committee for Reconstruction and Future Development (SCRF)

Relation among Family with other Directors and Executives

- None

13. Mr. Suthep Liumsirijarern

Age 59

Director

(%) Share Possession

None

Educations

- B.Sc. in Civil Engineering, Chiang Mai University
- MSc in Hydraulic Engineering, Delft University of Technology, Netherlands

Certifications

- National Defence Studies Institute, Supreme Command Headquarters, Joint Staff Program (Class of 43rd)
- Energy Executive Program (Class of 1st), Ministry of Energy, Thailand
- Civil Service Training Institute (CSTI), Office of the Civil Service Commission (OCSC), Civil Service Executive Program 1 (Class of 44th), Thailand
- National Defence Studies Institute, National Defence College, The National Defence Course (Class of 51st), Thailand
- Thai Institute of Directors Association (IOD) DAP 96/2012, ACP 39/2012, MIR 12/2012
- Certificate in Top Executives in the Energy Education Program, Thailand Energy Academy (Class of 2nd), Thailand

Work Experiences

- 1998 : Director, Operation and Maintenance
Division 1, Bureau of Operation and
Maintenance, Department of Energy
Development and Promotion (DEDP),
Ministry of Science, Technology and
Energy
- 2003 : Director, Bureau of Technology
Transfer and Dissemination,
Department of Alternative Energy
Development and Efficiency (DEDE),
Ministry of Energy

| | |
|----------------|--|
| 2007 | : Director, Bureau of Alternative Energy Development, Alternative Energy Development and Efficiency (DEDE), Ministry of Energy |
| 2009 | : Deputy Director General, DEDE, Ministry of Energy |
| 2011 - 2013 | : Director General, Energy Policy and Planning Office (EPPO), Ministry of Energy |
| 2013 - Present | : Permanent Secretary, Ministry of Energy |

Relevant Important Positions

- Director, Chairman of the Risk Management Committee, PTT Global Chemical Public Company Limited

Relation among Family with other Directors and Executives

- None

14. Mr. Chitrapongse Kwangsukstith Age 64
Director

(%) Share Possession 0.009057

Educations

- B.Eng. (Mechanical Engineering), Chulalongkorn University, Thailand
- M.Eng. (Industrial Engineering), Lamar University, U.S.A.
- Doctor of Engineering Industrial, Lamar University, U.S.A.

Certifications

- Stanford Executive Program, Stanford University, U.S.A.
- The National Defence Course, National Defence College, (Class of 4212), Thailand
- Thai Institute of Directors Association (IOD) DCP 42/2004, FND 9/2004, RCC 10/2010, NCGC

Work Experiences

| | |
|-------------|---|
| 2000 - 2003 | : Senior Executive Vice President, PTT, Working as President, PTT Exploration & Production Public Company Limited |
| 2003 - 2007 | : Senior Executive Vice President, Gas Business Unit, PTT |
| 2008 - 2009 | : Chief Operating Officer, Upstream Petroleum and Gas Business Group, PTT |
| Present | : Chairman of the Board, PTT Energy Resources Company Limited |

Relevant Important Positions

- None

Relation among Family with other Directors and Executives

- None

15. Mr. Pailin Chuchottaworn Age 57
Director, Secretary to the Board, Nominating Committee, President & Chief Executive Officer

(%) Share Possession

0.002171

Educations

- B.Eng (Chemical Engineering) (Hons.), Chulalongkorn University, Thailand
- Master of Engineering in Chemical Engineering, Tokyo Institute of Technology, Japan
- Doctor of Engineering in Chemical Engineering, Tokyo Institute of Technology, Japan
- Honorary Doctorate Degree in Sustainable Energy and Environment Technology and Management, Rajamangala University of Technology Rattanakosin, Thailand

Certifications

- PTT Executive Leadership Program 2008, GE Crotonville, U.S.A.
- NIDA Executive Leadership Program 2007, The Wharton School of the University of Pennsylvania, U.S.A.
- Industrial Liaison Program (ILP) 2005, Massachusetts Institute of Technology, U.S.A.
- Diploma, The Joint State-Private Sector Course National Defence College (Class of 22nd), Thailand
- Thai Institute of Directors Association (IOD), DAP 24/2004, DCP 51/2004, FND 14/2004, ACEP 4/2012
- Certificate in Top Executives in the Energy Education Program, Thailand Energy Academy (Class of 1st)
- Corporate Governance Program for Directors and Executives of State Enterprises and Public Organizations (Class of 7th), King Prajadhipok's Institute
- Top Executives Program, Capital Market Academy (Class of 8th), Thailand
- Top Executive Program in Commerce and Trade (TEPCoT), (Class of 1st), University of the Thai Chamber of Commerce, Thailand

Work Experiences

| | |
|----------------------|--|
| 2006 - 2008 | : Executive Vice President, Petrochemicals & Refining Business Unit, PTT Plc., working as President of PTT Asahi Chemical Company Limited |
| 2008 - 2009 | : Senior Executive Vice President, Petrochemicals & Refining Business Unit, PTT Plc., working as President of PTT Polymer Marketing Company Limited and PTT Asahi Chemical Company Limited |
| 2009 - June 2011 | : Senior Executive Vice President, PTT Plc., working as President, IRPC Public Company Limited |
| June 2011 - Sep 2011 | : Chief Operating Officer, Upstream Petroleum and Gas Business Group, PTT Plc. |
| Sep 2011 - Present | : President & Chief Executive Officer, PTT Plc. |

Relevant Important Positions

- Director, PTT Exploration and Production Public Company Limited
- Director, PTT Global Chemical Public Company Limited

Relation among Family with other Directors and Executives

- None

PTT Executives

1
Mr. Pailin Chuchottaworn
President &
Chief Executive Officer



2
Mr. Surong Bulakul
Chief Financial Officer,
PTT Public Company Limited



3
Mr. Nuttachat
Charuchinda
Chief Operating Officer,
Upstream Petroleum
and Gas Business Group



4
Mr. Sarun Rungkasiri
Chief Operating Officer,
Downstream Petroleum
Business Group



5
Mr. Pitipan Tepartimargorn
Senior Executive Vice President,
Human Resources
& Organization Excellence



6
Mr. Supattanapong Punmeechaow
Senior Executive Vice President,
Corporate Strategy



7
Mr. Charcrie Buranakanonda
Senior Executive Vice President,
Gas Business Unit



8
Mr. Chavalit Punthong
Senior Executive Vice President,
Oil Business Unit



9
Mr. Atikom Terbsiri
Senior Executive Vice President,
Petrochemical
and Refining Business Unit



10
Mr. Sarakorn Kulatham
Senior Executive Vice President,
International Trading Business Unit



11
Mr. Tevin Vongvanich
President and Chief Executive Officer,
PTT Exploration and Production Public
Company Limited



12
Mr. Bowon Vongsinudom
President and Chief
Executive Officer,
PTT Global Chemical
Public Company Limited



13
Mr. Veerasak Kositpaisal
President and Chief Executive Officer,
Thai Oil Public Company Limited



14
Mr. Sukrit Surabotsopon
President, IRPC Public
Company Limited



15
Mr. Pamin Phantawesak
President, PTT Phenol Company Limited



Mr. Pailin Chuchottaworn
President & Chief Executive Officer

Mr. Surong Bulakul
Chief Financial Officer,
PTT Public Company Limited

Mr. Nuttachat Charuchinda
Chief Operating Officer,
Upstream Petroleum and Gas Business Group

Mr. Sarun Rungkasiri
Chief Operating Officer,
Downstream Petroleum Business Group

Mr. Pitipan Tepartimargorn
Senior Executive Vice President,
Human Resources & Organization Excellence

Mr. Supattanapong Punmeechaow
Senior Executive Vice President,
Corporate Strategy

Mr. Charcrie Buranakanonda
Senior Executive Vice President,
Gas Business Unit

Mr. Chavalit Punthong
Senior Executive Vice President,
Oil Business Unit

Mr. Atikom Terbsiri
Senior Executive Vice President,
Petrochemical and Refining Unit

Mr. Sarakorn Kulatham
Senior Executive Vice President,
International Trading Business Unit

Mr. Tevin Vongvanich
President and Chief Executive Officer,
PTT Exploration and Production Public
Company Limited

Mr. Bowon Vongsinudom
President and Chief Executive Officer,
PTT Global Chemical Public Company Limited

Mr. Veerasak Kositpaisal
President and Chief Executive Officer,
Thai Oil Public Company Limited

Mr. Sukrit Surabotsopon
President, IRPC Public Company Limited

Mr. Pramin Phantawesak
President, PTT Phenol Company Limited

1. Mr. Pailin Chuchottaworn
President & Chief Executive Officer

Age 57

(%) Share Possession

0.002171

Educations

- B.Eng (Chemical Engineering) (Hons.),
Chulalongkorn University, Thailand
- Master of Engineering in Chemical Engineering,
Tokyo Institute of Technology, Japan
- Doctor of Engineering in Chemical Engineering,
Tokyo Institute of Technology, Japan
- Honorary Doctorate Degree in Sustainable Energy and
Environment Technology and Management, Rajamangala
University of Technology Rattanakosin, Thailand

Certifications

- PTT Executive Leadership Program 2008, GE Crotonville,
U.S.A.
- NIDA-Wharton Executive Leadership Program 2007,
The Wharton School of the University of Pennsylvania, U.S.A.
- Industrial Liaison Program (ILP) 2005,
Massachusetts Institute of Technology, U.S.A.
- Diploma, The Joint State-Private Sector Course National
Defence College (Class of 22nd), Thailand
- Thai Institute of Directors Association (IOD), DAP 24/2004,
DCP 51/2004, FND 14/2004, ACEP 4/2012
- Certificate in Top Executives in the Energy Education
Program, Thailand Energy Academy (Class of 1st)
- Corporate Governance Program for Directors
and Executives of State Enterprises and Public
Organizations (Class of 7th), King Prajadhipok's Institute
- Top Executives Program, Capital Market Academy
(Class of 8th), Thailand
- Top Executive Program in Commerce and Trade (TEPCoT),
(Class of 1st), University of the Thai Chamber of Commerce,
Thailand

Work Experiences

- 2006 - 2008 : Executive Vice President,
Petrochemicals & Refining Business
Unit, PTT, working as President of
PTT Asahi Chemical Company Limited
- 2008 - Dec 2008 : Senior Executive Vice President,
Petrochemicals & Refining Business
Unit, PTT, working as President of
PTT Polymer Marketing Company
Limited and PTT Asahi Chemical
Company Limited

Jan 2009 - June 2011 : Senior Executive Vice President, PTT,
working as President,
IRPC Public Company Limited
June 2011 - Sep 2011 : Chief Operating Officer, Upstream
Petroleum and Gas Business Group, PTT
Sep 2011 - Present : President & Chief Executive Officer, PTT

Relevant Important Positions

- Director, PTT Exploration and Production Public Company Limited
- Director, PTT Global Chemical Company Limited

Relation among Family with other Directors and Executives

- None

2. Mr. Surong Bulakul Age 58
Chief Financial Officer, PTT Public Company Limited

(%) Share Possession 0.004138

Educations

- Bachelor of Science in Industrial Engineering and Operations Research, Syracuse University, New York, U.S.A.
- Master of Engineering in Operations Research, Cornell University, New York, U.S.A.
- Master of Business Administration, Cornell University, New York, U.S.A.

Certifications

- PMD, Harvard University, Boston, U.S.A.
- Democratic Politics and Governance for High-Level Administrators Program, King Prajadhipok's Institute, Thailand (Class of 8th)
- The Joint State-Private Sector Course, National Defense College (Class 4919), Thailand
- Top Executives Program, Capital Market Academy (Class of 10th), Thailand
- The Program for Senior Executives on Criminal Justice Administration, National Justice Academy (Class of 15th)
- Thai Institute of Directors Association (IOD), DCP 121/2009, R-SS 1/2011
- Thai Intelligent Investors Program, Thai Investors Academy (Class of 1st), Thailand
- Certificate in Top Executives in the Energy Education Program, Thailand Energy Academy (Class of 2nd), Thailand

Work Experiences

2005 - 2008 : Executive Vice President,
International Trading, PTT

2008 - 2009 : Senior Executive Vice President,
International Trading, PTT
2009 - 2012 : Senior Executive Vice President, PTT
working as Chief Executive Officer,
Thai Oil Public Company Limited
2012 - Present : Chief Financial Officer, PTT

Relevant Important Positions

- Director, Member of Nomination and Remuneration Committee, IRPC Public Company Limited
- Chairman, Global Power Synergy Company Limited
- Director, Sakari Resources Ltd.

Relation among Family with other Directors and Executives

- None

3. Mr. Nuttachat Charuchinda Age 58
Chief Operations Officer,
Upstream Petroleum and Gas Business Group

(%) Share Possession 0.000370

Educations

- B.Eng. (Civil Engineering), Chiang Mai University, Thailand
- M.B.A., Thammasat University, Thailand

Certifications

- 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, National Defence College (Class of 20th), Thailand
- Thai Institute of Directors Association (IOD), DCP 129/2010
- Top Executive Program, Capital Market Academy (Class of 15th), Thailand
- Certificate in Top Executives in the Energy Education Program, Thailand Energy Academy (Class of 3rd), Thailand

Work Experiences

2004 - 2005 : Executive Vice President Supply and Logistics, PTT
2005 - 2009 : Executive Vice President Natural Gas Vehicle, PTT
2009 - 2010 : Executive Vice President International Trading Business Unit, PTT
2010 - 2011 : Senior Executive Vice President, Corporate Strategy, PTT
2011 - 2013 : Chief Operating Officer, Downstream Petroleum Business Group, PTT
2013 - Present : Chief Operating Officer, Upstream Petroleum and Gas Business Group, PTT

Relevant Important Positions

- Director, Member of the Risk Management Committee, Thai Oil Public Company Limited
- Director, Member of the Remuneration Committee, PTT Exploration and Production Public Company Limited
- Director, PTT Energy Resources Company Limited

Relation among Family with other Directors and Executives

- None

4. Mr. Sarun Rungkasiri

Age 56

Chief Operating Officer,
Downstream Petroleum Business Group

(%) Share Possession

None

Educations

- B.Eng. (Industrial Engineering), Chulalongkorn University, Thailand
- M.S. Management, Polytechnic Institute of New York, U.S.A.

Certifications

- Thirty Fourth Oxford Energy Seminar, St.Catherine's College, Oxford University, UK
- NIDA-Wharton Executive Leadership Program 2009, The Wharton School of the University of Pennsylvania, U.S.A.
- The Joint State - Private Sector Course, National Defense College, (Class of 23rd), Thailand
- Thai Institute of Directors Association (IOD), CSP 8/2004, DCP 61/2005, FND 19/2005

Work Experiences

| | |
|----------------|---|
| 2003 - 2005 | : Vice President, Office of President |
| 2006 - 2007 | : Vice President, Corporate Public Relation |
| 2008 - 2009 | : Executive Vice President, Corporate Communication & Social Responsibility |
| 2009 - 2010 | : Executive Vice President, Commercial & International Marketing |
| 2010 - 2011 | : Executive Vice President, Retail Marketing |
| 2011 - 2013 | : Senior Executive Vice President, Oil Business Unit |
| 2013 - Present | : Chief Operating Officer, Downstream Petroleum Business Group |

Relevant Important Positions

- Director/ Member of the Risk Management Committee, PTT Global Chemical Company Limited
- Director/ Executive Director, IRPC Public Company Limited

Relation among Family with other Directors and Executives

- None

5. Mr. Pitipan Tepartimargorn

Age 57

Senior Executive Vice President,
Human Resources & Organization Excellence

(%) Share Possession

0.000292

Educations

- B.Eng., King Mongkut's Institute of Technology Ladkrabang, Thailand
- Master of Political Science (Public Administration), Thammasat University, Thailand

Certifications

- Strategic Human Resources Management Program, Harvard University, U.S.A.
- NIDA-Wharton Executive Leadership Program, The Wharton School of the University of Pennsylvania, U.S.A.
- Senior Executive Program (SEP), Sasin Graduate Institution of Business Administration of Chulalongkorn University, Thailand
- Thai Institute of Directors Association (IOD), DCP 138/2010, ACEP 4/2012

Work Experiences

| | |
|----------------|---|
| 2001 - 2003 | : Vice President, Corporate Development, PTT |
| 2003 - 2004 | : Vice President, Human Resources Policy, PTT |
| 2004 - 2010 | : Executive Vice President, Human Resources, PTT |
| 2010 - Present | : Senior Executive Vice President, Human Resources & Organization Excellence, PTT |

Relevant Important Positions

- Chairman, PTT Polymer Logistics Company Limited
- Chairman, PTT ICT Solutions Company Limited
- Chairman, PTT Polymer Marketing Company Limited

Relation among Family with other Directors and Executives

- None

6. Mr. Supattanapong Punmeechaow

Age 54

Senior Executive Vice President, Corporate Strategy

(%) Share Possession

None

Educations

- Bachelor Degree, Chemical Engineering, Chulalongkorn University, Thailand
- Master Degree, Business Administration, Chulalongkorn University, Thailand

Certifications

- Advanced Management Programme, INSEAD University, France
- The Joint State-Private Sector Course, National Defense College, (Class of 5020), Thailand
- Thai Institute of Directors Association (IOD), DCP 131/2010, RCP 30/2013
- Oxford Energy Seminar 2013, United Kingdom

Work Experiences

- 1998 - 2005 : Managing Director, SCB Securities Co., Ltd.
- 2006 - 2008 : Managing Director, SCB Securities Co., Ltd.
- 2009 - 2011 : Executive Vice President Business Development, PTT International Company Limited and Executive Vice President Corporate Strategy, PTT
- 2011 - Present : Senior Executive Vice President, Corporate Strategy, PTT

Relevant Important Positions

- Director, PTT Energy Resources Company Limited
- Director, Bangchak Petroleum Public Company Limited
- Director, Sakari Resources Limited

Relation among Family with other Directors and Executives

- None

7. Mr. Charcrie Buranakanonda

Age 58

Senior Executive Vice President, Gas Business Unit

(%) Share Possession

0.001940

Educations

- B. Eng. (Mechanical Engineering), Kasetsart University, Thailand

Certifications

- King Prajadhipok's Institute, Advanced Certificate Course in Public Administration and Law for Executives 2010
- Thai Institute of Directors (IOD), DCP 138/2010
- PTT-GE Executive Program, GE Crotonville, U.S.A. 2012

Work Experiences

- 2008 - 2009 : Vice President, Rayong Gas Plant, Gas Business Unit, PTT
- 2009 - 2011 : Executive Vice President, Natural Gas Transmission, Gas Business Unit, PTT
- 2011 - 2012 : Executive Vice President, Natural Gas Processing, Gas Business Unit, PTT
- 2012 - Present : Senior Executive Vice President, Gas Business Unit, PTT

Relevant Important Positions

- Director, PTT Energy Resources Company Limited
- Director, East Mediterranean Gas (S.A.E.), Arab Republic of Egypt
- Director, Ratchaburi Power Co., Ltd.

Relation among Family with other Directors and Executives

- None

8. Mr. Chavalit Punthong

Age 57

Senior Executive Vice President, Oil Business Unit

(%) Share Possession

None

Educations

- Bachelor of Engineering (Mechanical), Kasetsart University
- MBA, Central Missouri State University

Certifications

- Senior Executive Program (SEP), Sasin Graduate Institute of Business Administration of Chulalongkorn University, Thailand
- PTT-GE Executive Leadership Program, GE Crotonville, U.S.A.
- NIDA-Wharton Executive Leadership Program, The Wharton School of the University of Pennsylvania, U.S.A.
- Thai Institute of Director (IOD), DCP 177/2013

Work Experiences

- 2008 - 2009 : Executive Vice President, Petroleum Supply and Logistics
- 2009 - 2010 : Executive Vice President, Supply & Terminals Operation
- 2010 - 2011 : Executive Vice President, Commercial & International Marketing
- 2011 - 2013 : Executive Vice President, Retail Marketing
- 2013 - Present : Senior Executive Vice President, Oil Business Unit

Relevant Important Positions

- Chairman, Thai Petroleum Pipeline Company Limited
- Chairman, PTT Retail Management Company Limited
- Chairman, PTT Retail Business Company Limited

Relation among Family with other Directors and Executives

- None

9. Mr. Atikom Terbsiri

Age 51

Senior Executive Vice President, Petrochemical and Refining Unit

(%) Share Possession

None

Educations

- Bachelor of Business Administrationachelor Assumption University
- Master of Finance, International Business with High Distinction, Armstrong University, Berkeley, California, U.S.A.

Certifications

- Diploma, National Defence College, The State Private Sector and Political Sectors Course, (Class of 5th)
- Advanced Security Management Program (ASMP1), The National Defence Collage Association of Thailand
- Top Executives Program, Capital Market Academy (Class of 17th), Thailand
- Thai Institute of Directors Association (IOD), DCP 125/2009
- Executive Education Program, Harvard Business School, Harvard University, U.S.A.

Work Experiences

- 2002 - 2007 : Executive Vice President, Business & Finance, The Aromatics (Thailand) Public Company Limited
- 2007 - 2009 : Executive Vice President, Corporate Strategy & Commercial , PTT Aromatics and Refining Public Company Limited
- 2009 - 2011 : Senior Executive Vice President, Corporate Strategy & Planning, Acting Senior Executive Vice President, Port & Asset Management Business Unit, IRPC Public Company Limited
- 2011 - 2013 : Senior Executive Vice President, PTT, working as President, IRPC Public Company Limited
- 2013 - Present : Senior Executive Vice President, Petrochemicals & Refining Business Unit, PTT Public Company Limited

Relevant Important Positions

- Director, PTT Global Chemical Company Limited
- Director, Star Petroleum Refining Company Limited

Relation among Family with other Directors and Executives

- None

10. Mr. Sarakorn Kulatham

Age 59

Senior Executive Vice President,
International Trading Business Unit

(%) Share Possession

0.002097

Educations

- B.Eng., Chulalongkorn University, Thailand
- M.S. (Science) Civil Engineering, University of Missouri, U.S.A.

Certifications

- Leadership Program, IMD Institute
- NIDA-Wharton Executive Leadership Program, The Wharton School of the University of Pennsylvania, U.S.A.

Work Experiences

- 2005 - 2006 : Executive Vice President, PTT, Working as Supply and Planning Management, Alliance Refining Company Limited
- 2006 - 2007 : Executive Vice President, PTT, Working as Deputy CEO-Supply Planning, Star Petroleum Refining Company Limited
- 2007 - 2008 : Executive Vice President, International Trading Business Unit, PTT
- 2008 - Present : Senior Executive Vice President, International Trading Business Unit, PTT

Relevant Important Positions

- Director, Bangchak Petroleum Public Company Limited
- Chairman, PTT International Trading Pte. Ltd.

Relation among Family with other Directors and Executives

- None

11. Mr. Tevin Vongvanich

Age 55

President and Chief Executive Officer,
PTT Exploration and Production
Public Company Limited

(%) Share Possession

0.001961

Educations

- B.Eng. (Chemical Engineering) (Hons.), Chulalongkorn University, Thailand
- M.S. (Chemical Engineering), Rice University, U.S.A.
- M.S. (Petroleum Engineering), University of Houston, U.S.A.

Certifications

- Program for Global Leadership (PGL), Harvard Business School, U.S.A.
- Democratic Politics and Governance for High-Level Administrators Program, (Class of 10th), King Prajadhipok's Institute, Thailand
- Senior Executive Program (SEP), Sasin Graduate Institute of Business Administration, Chulalongkorn University, Thailand
- Top Executives Program, Capital Market Academy (Class of 6th), Thailand
- The Joint State Private Sector Course, National Defense College, (Class of 22nd), Thailand
- The Programme for Senior Executives on Justice Administration, (Class of 16th), Thailand
- Thai Institute of Directors Association (IOD), DCP 21/2002, FSD 6/2009, RCC 13/2011

Work Experiences

- 2008 - 2009 : Senior Executive Vice President,
Corporate Strategy & Development, PTT
- 2009 - 2010 : Chief Financial Officer and Senior
Executive Vice President,
Corporate Strategy, PTT
- 2010 - 2012 : Chief Financial Officer, PTT
- 2012 - Present : President and Chief Executive Officer,
PTT Exploration and Production
Public Company Limited

Relevant Important Positions

- Director, PTT Exploration and Production Public Company Limited of the Risk Management Committee

Relation among Family with other Directors and Executives

- None

12. Mr. Bowon Vongsinudom

Age 59

President and Chief Executive Officer,
PTT Global Chemical Public Company Limited

(%) Share Possession

0.000424

Educations

- B. Eng. (Chemical Engineering), Chulalongkorn University, Thailand
- Master of Engineering in Chemical Engineering, Chulalongkorn University, Thailand
- Master of Business Administration (Management), Sasin Graduate Institute of Business Administration, Thailand

Certifications

- The Joint State - Private Sector Course, National Defense College, (Class of 17th), Thailand
- Thai Institute of Directors Association (IOD), DAP 76/2008

Work Experience

- 2007 - 2009 : President, Alliance Refining Company Limited (ARC)
- 2009 - 2010 : Senior Executive Vice President, PTT Aromatics and Refining Public Company Limited (PTTAR)
- 2010 - 2011 : Senior Executive Vice President, PTT, working as President and Chief Executive Officer, Aromatics and Refining Public Company Limited
- 2011 - 2013 : Senior Executive Vice President, PTT, working as President, PTT Global Chemical Public Company Limited
- 2013 - Present : Senior Executive Vice President, PTT, working as President and Chief Executive Officer, PTT Global Chemical Public Company Limited

Relevant Important Positions

- Director, Secretary of Board, Directors Member of the Risk Management Committee, PTT Global Chemical Public Company Limited
- Director, PTT Global Chemical Public Company Limited
- Director, Thai Tank Terminal Company Limited
- Director, Global Power Synergy Company Limited
- Director, Vinythai Company Limited
- Chairman, PTT Maintenance and Engineering Company Limited
- Chairman, NPC Safety and Environmental Service Company Limited
- Chairman, PTT Phenol Company Limited

Relation among Family with other Directors and Executives

- None

13. Mr. Veerasak Kositpaisal

Age 59

President and Chief Executive Officer,
Thai Oil Public Company Limited

(%) Share Possession

0.001099

Educations

- B.Eng. (Mechanical), Chulalongkorn University, Thailand
- M.S. (Mechanical Engineering), Texas A&I University, U.S.A.

Certifications

- Top Executive Program in Commerce and Trade (TEPCOT) 2/2009, Thailand
- Top Executives Program, Capital Market Academy (Class of 11th), Thailand
- Thai Institutes of Directors Association (IOD), DCP 82/2006, FND 30/2006
- Certificate in Leadership Development Program "Enhancing Competitiveness" by International Institute for Management Development (IMD) 11/2012

Work Experience

- 2006 - 2008 : Executive Vice President, PTT, working as Senior Executive Vice President, Trading Business, PTT Chemical Public Company Limited and Managing Director, Bangkok Polyethylene Public Company Limited
- 2008 - 2008 : Executive Vice President, PTT, working as Senior Executive Vice President, Polymer Product Business Unit, PTT Chemical Public Company Limited
- 2008 - 2009 : Executive Vice President, PTT, working as President, PTT Chemical Public Company Limited
- 2009 - 2011 : Senior Executive Vice President, PTT, working as President, PTT chemical Public Company Limited
- 2011 - 2012 : Senior Executive Vice President, PTT, working as Chief Executive Officer, PTT Global Chemical Public Company Limited

2012 - Present : Senior Executive Vice President, PTT,
working as President and Chief
Executive Officer,
Thai Oil Public Company Limited

Relevant Important Positions

- Director/ Secretary of Board Directors/ Member of the Risk Management Committee, Thai Oil Public Company Limited
- Chairman, Thai Lube Base Public Company Limited
- Chairman, Thailoil Power Company Limited
- Director, Global Power Synergy Company Limited

Relation among Family with other Directors and Executives

- None

14. Mr. Sukrit Surabotsopon Age 55
President, IRPC Public Company Limited

(%) Share Possession 0.000070

Educations

- B.Eng. (Chemical Engineering), Chulalongkorn University, Thailand

Certifications

- Executive Development Program (EDP 3) 2009, Thai Listed Companies Association (TLCA)
- Thai Institute of Directors Association (IOD), DCP 132/2010, ACP 38/2012, MIR 12/2012
- Democratic Politics and Governance for High-Level Administrators (15/2012), King Prajadhipok's Institute
- Top Executives Program, Capital Market Academy (Class of 16th), Thailand

Work Experiences

2007 - 2008 : Assistant Managing Director - Business,
Thai Oil Public Company Limited

2008 - 2009 : Assistant Managing Director - Strategic
Planning & Business Development,
Thai Oil Public Company Limited

2009 - 2010 : Executive Vice President, Subsidiary
Planning & Management
Petrochemicals & Refining Business
Unit, PTT

2010 - 2013 : Senior Executive Vice President,
Petrochemicals & Refining
Business Unit, PTT

2013 - Present : President, IRPC Public
Company Limited

Relevant Important Positions

- Director/ Executive Director/ Secretary of Board Directors/ Secretary of the Executive Committee, IRPC Public Company Limited

Relation among Family with other Directors and Executives

- None

15. Mr. Pramin Phantawesak Age 59
President, PTT Phenol Company Limited

(%) Share Possession 0.000011

Educations

- Bachelor of Engineering in Industrial Engineering, Chulalongkorn University
- Master of Engineering in Industrial Engineering, Lamar University, U.S.A.

Certifications

- Thai Institute of Directors Association (IOD), DCP 63/2005, RCC 12/2011
- The Joint State-Private Sector Course, National Defence College (Class of 19th)
- Advanced Management Programme (AMP), INSEAD Business School, France, 2008
- PTT Group EVP Leadership Development, 2009, PTT Public Company Limited, Thailand
- Certificate in Company Management Course, 2011, PTT Public Company Limited, Thailand
- Certificate in Executive Development Program (EDP), Fiscal Policy Research Institute Foundation, 2011
- TLCA Executive Development Program (Class of 9th), Thai Listed Companies Association, 2012

Work Experiences

2005 - Oct 2013 : Executive Vice President -
Petrochemicals & Refining Business
Unit, PTT, working as
secondment as follows;

- 2005 - 2006 : Managing Director, Independent Power
(Thailand) Company Limited
- 2006 - 2009 : Managing Director, Thai Paraxylene
Company Limited
- 2009 - Feb 2012 : President, PTT Polymer Marketing
Company Limited
- Mar - Sep 2012 : President, PTT Polymer Logistics
Company Limited
- Oct 2012 - Present : President, PTT Phenol Company Limited

Nov 2013 - Present : Senior Executive Vice President, PTT,
working as a secondment at PTT Global
Chemical Public Company Limited
working as the President,
PTT Phenol Company Limited

Relevant Important Positions

- Director, PTT Phenol Company Limited
- Director, PTT Polymer Marketing Company Limited
- Director, Polymer Marketing DMCC

Relation among Family with other Directors and Executives

- None

Positions held by the Management and Authorized Controllers of PTT Plc., Subsidiaries, Associates, and Related Companies

As of February 2014

| Company | | | PTT Executive | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|--------------------------|----|---|---------------------------|-----------------------|--------------------------|---------------------------------|----------------------------|--------------------|--------------------|----------------------------|-----------------------|-------------------------|-----------------------|------------------------|-------------------------------|-------------------------|--------------------|--------------------------|---------------------|---------------------------|-------------------------------|---------------------------|---------------------|---------------------|----------------------|----------------------|-----------------------|-------------------------|-------------------------|-----------------------|--------------------|---------------------------|
| | | | Mr. Pampree Bahiddha-Nukara | Mr. Boonsom Lerchirunwong | Mr. Athapol Yaisawang | Mr. Akhom Tempitayapaith | Prof. Dr. Thosaporn Srisumphand | Mr. Waroonthep Wacharaporn | Mr. Insorn Buakeow | Mr. Month Solankul | Mr. Wacharakit Wacharothai | Mr. Shasak Phuangkeaw | Mr. Somchai Sujjapongse | Mr. Prasert Bunsurpun | Mr. Suhep Lumsirjatern | Mr. Chitrapongse Kwangsuklith | Mr. Palin Chuchottaworn | Mr. Surong Bulakul | Mr. Nuttachai Chauchinda | Mr. Saun Rungkasiri | Mr. Phipan Teparitmarnorn | Mr. Supattanapong Punneechaow | Mr. Charlie Buranakanonda | Mr. Chavali Puthong | Mr. Alikorn Tebsiri | Mr. Sarakorn Kuatham | Mr. Tevin Vongvanich | Mr. Bowon Vongsinudom | Mr. Veerasak Kosipaisal | Mr. Sukrit Surabotsopon | Mr. Pramit Phanawesak | Mr. Wirat Unanumit | Mrs. Pirisna Pratanhaksuk |
| PTT Plc. | | | PTT | x | / | / | / | / | / | / | / | / | / | / | / | */ | // | // | // | // | // | // | // | // | // | // | // | // | // | // | // | // | |
| Subsidiaries | E&P | 1 | PTT Exploration and Production Plc. | PTTEP | | | / | | | | | | | | | / | / | | | | | | | | | | | | | | | | |
| | | 2 | PTT Natural Gas Distribution Co., Ltd. | PTTNGD | | | | | | | | | | | | | | | | | | | | | | */ | | | | | | | |
| | GAS | 3 | PTT LNG Co., Ltd. | PTTLNG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | PTT Green Energy Pte. Ltd. | PTTGE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 5 | PTT Energy Resources Co., Ltd. | PTTER | | | | | | | | | | | | | | | | | | | | | | | | | | | | x | |
| | OIL | 6 | PTT (Cambodia) Co., Ltd. | PTTCL | | | | | | | | | | | | x | | / | | / | / | | | | | | | | | | | | |
| | | 7 | PTT Retail Business Co., Ltd. | PTTRB | | | | | | | | | | | | | | | | | | | | x | | | | | | | | | |
| | | 8 | Subic Bay Energy Co., Ltd. | SBECL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 9 | Business Services Alliance Co., Ltd. | BSA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 10 | Thai Lube Blending Co., Ltd. | TLBC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 11 | PTT Tank Terminal Co., Ltd. | PTT TANK | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Petrochemical & Refining | 12 | PTT Oil Myanmar Co., Ltd. | PTTOM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 13 | PTT Polymer Marketing Co., Ltd. | PTTPM | | | | | | | | | | | | | | | | | | x | | | | | | | | / | / | | |
| | | 14 | PTT Polymer Logistics Co., Ltd. | PTTPL | | | | | | | | | | | | | | | | | | x | | | | | | | | | | | |
| | Trading | 15 | PTT PMMA Co. Ltd. | PTTPMMA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 16 | PTT International Trading Pte. Ltd. | PTTT | | | | | | | | | | | | | | | | | | | | | x | | | | | | | / | |
| | Others | 17 | Energy Complex Co., Ltd. | EnCo | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 18 | PTT Regional Treasury Center | PTTRTC | | | | | | | | | | | | | | | | | | | | | | | | | | | | x | |
| Associated and Related Companies | GAS | 19 | Global Power Synergy Co., Ltd. | GPSC | | | | | | | | | | | | | x | | | | | | | | | | / | / | | | | | |
| | | 20 | Thai Oil Power Co., Ltd. | TP | | | | | | | | | | | | | | | | | | | | | | | | | x | | | | |
| | | 21 | Trans Thai-Malaysia (Thailand) Co., Ltd. | TTM-T | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 22 | Trans Thai-Malaysia (Malaysia) Co., Ltd. | TTM-M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 23 | District Cooling System and Power Plant Co., Ltd. | DCAP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 24 | Ratchaburi Power Co., Ltd. | RPCL | | | | | | | | | | | | | | | | | | | / | | | | | | | | | | |
| | | 25 | Nava Nakorn Electricity Generating Co., Ltd. | NNEG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | OIL | 26 | Thai Petroleum Pipeline Co., Ltd. | THAPLINE | | | | | | | | | | | | | | | | | | | x | | | | | | | | | | |
| | | 27 | PetroAsia (Thailand) Co., Ltd. | PA-Thai | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 28 | Bangkok Aviation Fuel Service Plc. | BAFS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 29 | Intoplane Services Co., Ltd. | IPS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 30 | Fuel Pipeline Transportation Co., Ltd. | FPT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 31 | Vietnam LPG Co., Ltd. | VLPG | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 32 | Keloli-PTT LPG Sdn. Bhd. | KPL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 33 | Petro Asia (Huizhou) Co., Ltd. | PA-Huizhou | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 34 | Petro Asia (Maoming) Co., Ltd. | PA-Maoming | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 35 | Petro Asia (Sanshui) Co., Ltd. | PA-Sanshui | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Petrochemical & Refining | 36 | PTT Global Chemical Plc. | PTTGC | | | | | | | | | x | / | / | / | / | / | / | / | / | / | / | / | / | / | */ | | | | | | |
| | | 37 | Star Petroleum Refining Plc. | SPRC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 38 | Thai Oil Plc. | TOP | | | / | | | | | | | | | | | | / | | | | | | | | | */ | | | / | | |
| | | 39 | Bangchak Petroleum Plc. | BCP | | | | | | | | | | | | | | | | | | / | | / | | | | | | | | | |
| | | 40 | IRPC Plc. | IRPC | | | | | | / | | | | | | | | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | |
| | | 41 | HMC Polymers Co., Ltd. | HMC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 42 | PTT Asahi Chemical Co., Ltd. | PTTAC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 43 | PTT Maintenance and Engineering Co., Ltd. | PTTIME | | | | | | | | | | | | | | | | | | | | | | | | x | | | | | |
| | | 44 | PTT MCC Biochem Co., Ltd. | PTTMCC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 45 | PTT Energy Solutions Co., Ltd. | PTTES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Others | 46 | Dhipaya Insurance Plc. | TIP | | | | | | | | | | | | | | | | | | | | | | | | | | | | / | |
| | | 47 | PTT ICT Solutions Co., Ltd. | PTTICT | | | | | | | | | | | | | | | | | | x | | | | | | | | | | | |

Notes: Symbol x = Chairman * = CEO O = President / = Director // = Executive

Awards of Success

Recognition for PTT in 2013

In 2013, PTT won 52 awards and prestigious rankings from 29 entities:

- National level: A total of 25 awards from 16 entities
- International level: A total of 27 awards from 13 entities

National

16 entities
25 awards

01

Thailand Quality Class: TQC 2012

awarded to three business units:

- Gas
- Oil
- International Trading

Date: February 5, 2013

Presented by



Office of Thailand Quality Award

Notes (Reference/ Criteria)

- In recognition of outstanding organizational management of international standard



02

Excellence Awards (Innovation category) from Thailand ICT Excellence Awards 2012

Date: May 28, 2013

Presented by



Thailand Management Association
(TMA)

Notes (Reference/ Criteria)

- In recognition of the 'Financial Supply Chain Management: Direct Approve' - a new form of cash payment jointly developed with Oil Business for ERP improvement



03

Trusted Brand Awards 2013

- Platinum award for service stations

Date: June 26, 2013

Presented by



Reader's Digest

Notes (Reference/ Criteria)

- PTT stations won the awards for consecutive years, with Gold awards from 2001 to 2008 (eight years) and Platinum awards from 2009 to present (five years as the sole recipient)
- The awards confirmed PTT station's standard and product innovation recognized by consumers



04

Quality and Safe Service Stations Project

Date: August 26, 2013

Presented by



Department of Energy Business,
Ministry of Energy

Notes (Reference/ Criteria)

- Out of 1,021 awarded stations, 603 stations carrying PTT brand won the highest number of awards for four consecutive years
- As many as 59 PTT stations won special awards after having won gold medals for at least three consecutive years



05

Most Popular Stock Award 2012 (Resource Group)

Date: August 26, 2013

Presented by



Burapathat (1999) Co., Ltd., on behalf
of Kaohoon newspaper and SET

Notes (Reference/ Criteria)

- The award encouraged the management and major shareholders of public companies to always pay attention to investors' preferences



06

The plaque of honor, Outstanding Company Award (Environment Conservation)

Date: September 3, 2013

Presented by



Provincial Press Association of
Thailand

Notes (Reference/ Criteria)

- In recognition of PTT, as a national energy company, for its continuous environmental promotion and conservation



07

Thailand Energy Award 2013 (Energy Conservation and Alternative Energy Promotion)

Date: September 19, 2013

Presented by



Ministry of Energy

Notes (Reference/ Criteria)

- In recognition of PTT's management and staff for their strong will to promote energy conservation and alternative energy



08

Thailand's Top Corporate Brand Values 2013 (Industrial Resources)

Date: September 20, 2013

Presented by



Faculty of Commerce and Accountancy,
Chulalongkorn University

Notes (Reference/ Criteria)

- Based on a survey by Marketing Department, Faculty of Commerce and Accountancy, Chulalongkorn University, based on 'CBS Valuation Tool', developed as the first tool in Thailand for assessing brand value. PTT brand commanded the highest value of Baht 851,807,767,171.



09

Best TV Commercial for Consumer: OCBP Ad Award (Product), 2013

Date: September 27, 2013

Presented by



Office of the Consumer Protection
Board (OCPB) and Advertising
Association of Thailand

Notes (Reference/ Criteria)

- Only 13 out of 4,659 TV commercials in 2012 passed three vetting rounds for the award
- An honorable award intended for owners and producers of TV commercials that are creative, responsible for society, and fair for consumers

10 Best State Enterprise Awards 2013

- Best Innovation Award (four consecutive years), this year for PTT's 'Novel Co-processing Technology for Bio-hydrogenated Diesel

Date: October 17, 2013

Presented by



Ministry of Finance

Notes (Reference/ Criteria)

- In recognition of PTT's promotion of technology and innovation to strengthen the organization and the national economy
- This technology was a global innovation to convert vegetable oil's molecules into high-quality bio-hydrogenated diesel-a brainchild of PTT's research team



11 Café Amazon's Drive Awake Application

- Gold Award for Mobile Application & Mobile Games
- Silver Award for
 - Best Corporate/CSR, PR
 - Best Use of Digital Media
 - Best Use of Technology
- Bronze Award for Best Marketing PR presented at the Adman Awards & Symposium 2013

Date: October 16, 2013

Presented by



Advertising Association of Thailand

Notes (Reference/ Criteria)

- Café Amazon joined Proximity Thailand under BBDO Bangkok in developing the 'Drive Awake' application



12 CSRI Recognition 2013

Date: November 12, 2013

Presented by



Corporate Social Responsibility Institute (CSRI), under the governance of SET

Notes (Reference/ Criteria)

- The award encouraged listed companies to develop a sustainability report that discloses information about the environment, society, and corporate governance for the benefit of investors



13 Sustainability Report Award 2013

Date: November 12, 2013

Presented by



Listed Companies Association, SEC, and
ThaiPAT Institute

Notes (Reference/ Criteria)

- The award encouraged listed companies to develop a sustainability report that disclosed information about the environment, society, and corporate governance for the benefit of investors

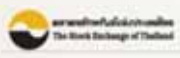


14 SET Awards 2013

- Best Corporate Governance Report Awards
- Best Corporate Social Responsibility Awards (three consecutive years, 2011 - 2013)

Date: November 20, 2013

Presented by



การเงินธนาคาร

SET and Money & Banking Magazine

Notes (Reference/ Criteria)

- Based on performance which benefits all stakeholders: employees, consumers, shareholders, society, communities, and the environment
- The awards illustrated PTT's earnest, consistent commitment to CSR operations



15 Board of the Year Awards 2013 (Board of the Year for Distinctive Practices)

Date: November 27, 2013

Presented by



Thai Institute of Directors (IOD),
SET, Thai Chamber of Commerce,
Federation of Thai Industries,
Thai Bankers' Association,
Thai Listed Companies Association,
and Federation of Thai Capital Market

Notes (Reference/ Criteria)

- In honor of boards of directors who effectively performed in motivating and driving corporate governance



16

Thailand Automotive Quality Award – TAQA Award 2013

- Best popular fuel products
- Best popular service stations
- Best popular lubricant products

Presented by



Inter-Media Consultant Co., Ltd.,
Custom Asia Co., Ltd., and Manager
Newspaper

Notes (Reference/ Criteria)

- In recognition of the business operator who won popularity, based on a satisfaction survey among 6,700 motorists voting for service quality, vehicle performance, after-sale service, and related products
- PTT has won the award for four consecutive years



International

13 entities
27 awards

01

The Asset's Platinum Award for All-Round Excellence 2012

(fourth consecutive year for Platinum Award)

Date: March 2013

The Asset's Platinum Award for All-Round Excellence 2013

(fifth consecutive year for Platinum Award)

Date: December 10, 2013

Presented by



The Asset Magazine

Notes (Reference/ Criteria)

- Based on an opinion survey of leading institutional investors, analysts, and experts worldwide who invested in Asian stock markets in six areas which are: financial performance, corporate governance, management, social responsibility, environmental responsibility, investor relations.
- PTT is the sole Thai entity to win the Platinum Award for five consecutive years.



02

Asian Excellence Recognition Awards 2013

presented at the 3rd Asian Excellence Recognition Awards 2013

- Three Individual awards:**
 - Asia's Best CEO (Investor Relations): (three consecutive years)
Mr. Pailin Chuchottaworn
 - Asia's Best CFO:
Mr. Surong Bulakul
 - Best Investor Relations professional: Thailand:
Mrs. Nidcha Jirametthanakij
- Four Corporate awards:**
 - Best Investor Relations Website / Promotion (three consecutive years)
 - Best Investor Relations Companies: Thailand (three consecutive years)
 - Best Environment Responsibility (three consecutive years)
 - Best CSR

Date: March 27, 2013

Presented by



Corporate Governance Asia Magazine

Notes (Reference/ Criteria)

- Based on scores and investor interviews
- In recognition of listed companies in each country with outstanding investor relations practices in all aspects and without ranking them. The awards reflected PTT's caliber of organizational management and investors' confidence



9th Corporate Governance Asia Recognition Awards 2013

- Asian Corporate Director Recognition Awards 2013 (four consecutive years)
- Corporate Governance Asia Recognition Awards 2013: Asia's Icon in Corporate Governance (eight consecutive years)

Date: June 25, 2013

Presented by



Corporate Governance Asia Magazine Notes (Reference/ Criteria)

- Asian Corporate Director Recognition Awards 2013 in recognition of Thai listed companies' directors with outstanding management performance and advocacy of good corporate governance
- In recognition of companies in each Asian country with outstanding CG management in all aspects. PTT has won the award for eight consecutive years. Newly dubbed 'Asia's Icon in Corporate Governance', the award was intended for companies that aligned their CG performance with changing economic situations



1st Asian Company Secretary of the Year Recognition Awards 2013

Mrs. Sumon Rungkasiri,
Corporate Secretary, PTT Plc.

Date: November 18, 2013

Presented by



Corporate Governance Asia Magazine Notes (Reference/ Criteria)

- In recognition of company secretaries who showed support for the company's sustainable growth, encouraged directors to comply with laws, regulations, and CG principles, protected investors' interests, and represented the company in dealing with regulators



03

Ranked 144th in Forbes Global 2000 Ranking 2013

Date: April 2013

Presented by



Forbes Magazine

Notes (Reference/ Criteria)

- Among 2,000 out of 3,300 major public companies, based on sales revenue, profit, asset value, and market value in 2011
- PTT ranked 144th (the best ranking among Thai companies). In 2013, 16 Thai companies were ranked, with PTT Group companies such as PTTGC (ranked 607th) and TOP (1,368th)
- Past rankings:
2012: 167th
2011: 171st
2010: 196th
2009: 244th
2008: 205th
2007: 354th
2006: 372nd
2005: 425th
2004: 461st

| Company | | | | | | |
|---------|---------|---------|----------|-----------|-----------|--------------|
| 144 | ptt | PTT PCL | | | | |
| Rank | Company | Country | Sector | Profile | Market | Market Value |
| 144 | ptt | PTT PCL | Thailand | Oil & Gas | Oil & Gas | 4,118 |

04

41st International Exhibition of Inventions of Geneva (Electromagnetic Induction)

- **Gold Medal** in Mechanics - Engines - Machinery - Tools - Industrial process - Metallurgy
- **Special Award** from Chinese Taipei by the Taiwan Invention Association

Date: April 10 - 14, 2013

Presented by



The Swiss Federal Government, of the State, the City of Geneva and of the World Intellectual Property Organization-WIPO

Notes (Reference/ Criteria)

- PTT won two awards (out of over 1,000 entries from 98 organizations in 41 countries) at the longest-running innovation contest. The Electromagnetic Induction was the work of the Geo-science and petroleum engineering research department.



05

Best Regional Jet Fuel Marketers 2013 (Asia Pacific)

Date: June 25, 2013

Presented by



Armbrust Aviation Group (AAG)

Notes (Reference/ Criteria)

- AAG is a well-known news agency and market analyst in the aviation industry for over 75 years
- The award, won for the third time after 2003 and 2006, boosted confidence in both products and services among PTT's aviation customers. PTT has the largest share of domestic aviation fuel market for 18 consecutive years.



06

7th Annual Best Financial Institution Awards 2013 & 3rd Annual Corporate Awards 2013 (Thailand)

- **Best CFO in Thailand:** Mr. Surong Bulakul
- **Best Senior Management IR Support**
- **Most Consistent Dividend Policy**
- **Best Strategic CSR**

Date: June 28, 2013

Presented by



Alpha Southeast Asia Magazine

Notes (Reference/ Criteria)

- Based on the 3rd annual survey among investors in pension funds and hedge funds to select Southeast Asia's top companies
- A total of 473 brokers and analysts in SE Asia were ranked based on their performance on financial management, CG, CSR, investor relations strategy, transparency, and disclosure of information.



07

The World's 81st largest company
in Fortune Global 500

Date: July 2013

Presented by



Fortune Global 500 Magazine

Notes (Reference/ Criteria)

- Based on revenue and profit of 2012
- PTT still remained the sole Thai company in Fortune global 500
- Past rankings:
 - 2012: 95th
 - 2011: 128th
 - 2010: 155th
 - 2009: 118th
 - 2008: 135th
 - 2007: 207th
 - 2006: 265th
 - 2005: 373rd
 - 2004: 456th



08

Dow Jones Sustainability Indices
(DJSI) 2013
(Oil and Gas Industry: OIX)

Date: September 23, 2013

Presented by



Dow Jones Sustainability Indices (DJSI)

Notes (Reference/ Criteria)

- In recognition of PTT's leading position in management for sustainability
- For the OIX industry in DJSI World Group, 123 companies had been invited for assessment in economic, social, and environmental management. PTT was one out of the five companies which had been chosen by the Robeco SAM's Corporate Sustainability Assessment.



09

Silver Lions Award for Café
Amazon's 'Drive Awake'
application (Mobile category)

Date: October 16, 2013

Presented by



Cannes Lions Festival of Creativity,
Cannes, France

Notes (Reference/ Criteria)

- Café Amazon joined Proximity Thailand under BBDO Bangkok in developing the 'Drive Awake' application. PTT was the first company in Thailand who received such award.



10

Platts Top 250 Global Energy Company (2013)
(ranked 18th for overall global performance)

Date: October 29, 2013

Presented by



Platts

Notes (Reference/ Criteria)

- Based on asset value, sales revenue, profit, and ROI of energy companies worldwide with over US\$ 4 billion in assets



11

Thailand Best Borrower Award

Date: October 30 - 31, 2013

Presented by



FinanceAsia Magazine

Notes (Reference/ Criteria)

- Based on votes from over 300 bond investors across the region



12

Outstanding APEA 2013 Awards

(Asia Pacific Entrepreneurship Oil & Gas, Mining and Energy Sector)

Mr. Pailin Chuchottaworn,
President & CEO, PTT Plc.

Date: October 31, 2013

Presented by



Enterprise Asia

Notes (Reference/ Criteria)

- In honor of executives with a strong will in business management along with responsibility for society, communities, and the environment
- Enterprise Asia is an independent agency promoting business development by creating opportunities and forums for free competition at the regional level



13

Thailand Business Leader of
the Year Award (12th Asia
Business Leaders Awards:
ABLA)

Mr. Pailin Chuchottaworn,
President & CEO, PTT Plc.

Date: November 14, 2013

Presented by



Notes (Reference/ Criteria)

- Based on interviews and analyses of large leading Asian corporations to assess business leaders by independent committees from around the world, analysts, and CNBC executives -- 62 leaders were nominated, five of whom were Thais
- This reflected PTT executives' outstanding leadership in creating national economic stability using technology as the springboard for sustainable growth.







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รักษ์สิ่งแวดล้อม โดยใช้กระดาษไอลีเดีย กรีน ออฟเซ็ท



ลดการใช้ต้นไม้
433 ต้น

ลดก๊าซ CO₂
35.01 ตัน

ลดพลังงานทั้งหมด
428 ยูนิท

ลดพลังงานน้ำ
361,433 ลิตร

ลดพลังงานเอนา
1,500 ตัน

