TOGETHER
WE CAN GROW
STRONGER

ptt GLOBAL CHEMICAL

ANNUAL REPORT 2013

PTT Global Chemical Public Company Limited

LEARNING FROM THE CHALLENGES

Between you and your destination often lie unseen obstacles and hindrances.

Never let them discourage you from thrusting ahead or making progress. Instead, treat them as challenges that drive you forward, giving you reason to be truly proud of yourself when you have finally overcome them.

At PTTGC, we too have learned from our challenges. We have learned that while we continue to develop our production capacity and energy efficiency, it is equally important to show our voluntary spirit and be socially responsible, as well as, environmentally-friendly at all times. In time of great challenges, we have learned to give our all to help each other and society at large. We have demonstrated our willingness and determination to do what we can to help restore the environment and natural resources.

TOGETHER

WE CAN MAKE IT

One important factor that helps us emerge stronger after every challenge is the spirit of teamwork, cooperation and support from each and every one from both public and private sector who has walked with us through good times and bad.

“Together, we truly can”

Grow Together

- The strategic alliance between companies within the PTT Group has given each one of them the unparalleled competitive edge of a range of diversified and comprehensive petrochemical products and services that complement and support each other.
- This has resulted in an effective supply chain managed with long standing experience and proven expertise.
- With such a strong and supportive foundation, PTTGC is ready to become a world leading provider of high-quality chemical products now and into the future.

GROW TOGETHER GROW STRONGER

Grow Stronger

- By focusing on strengthening PTTGC's existing businesses through efficiency and adherence to international standards.
- By consistently expanding PTTGC's business base to reach new regions and markets through introduction of new products. This will also contribute to increasing competitiveness and business value of PTTGC in the long term.
- By placing emphasis on environmental friendliness in all PTTGC operations by implementing the creation of green innovations that are safe to humans and kind to the environment.
- By making constructive efforts to conserve energy and improve energy efficiency in order to achieve world-class environmental sustainability.

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"Investors may search for more details of Company information in Form 56-1 available at www.sec.or.th or Company website www.pttgcgroup.com "

" TO BE A LEADING
CHEMICAL COMPANY
FOR BETTER LIVING "

VISION

MISSION

- We deliver the best business performance through trustworthiness to create fair and sustainable value for shareholders.
- We engage and integrate social and environment to our business with responsibility and care for sustainable development.
- We provide superior solutions from innovative products and services to be the best choice for business partners.
- We create a learning organization and a happy workplace to cultivate proficient workforces with profound engagement and commitment to professional excellence.

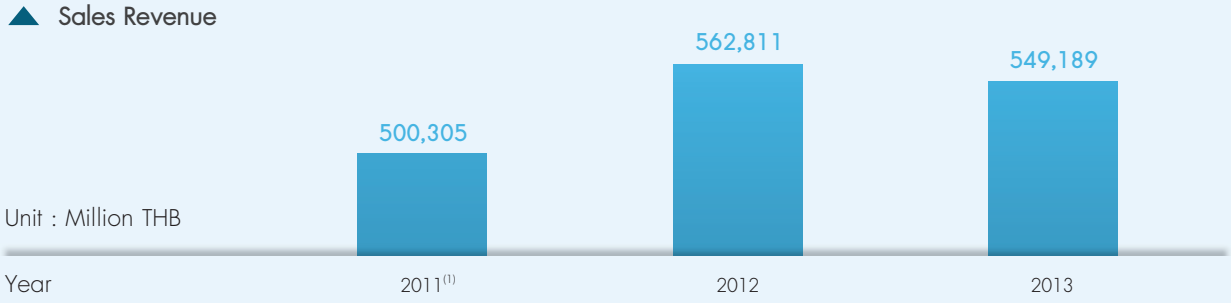
CORPORATE STRATEGY

PTT Global Chemical Public Company Limited has laid out Corporate strategies and the business direction toward maintaining its leadership in the chemical industry. This has been conducted by increasing the competitive advantages of existing businesses (Core uplift initiatives) in support of competition in the longer term, and also exploring business opportunities (Growth initiatives) simultaneously. PTTGC has expanded its business to cover the business of High-Volume Specialties and Green Chemicals. A focus has been placed on the End use Market with high growth potential in response to the demand and the better quality-of-life of consumers. Furthermore, importance has been stressed on technology and innovation investment and management, which both play a pivotal role in product development as well as adding value and expanding businesses in the future.

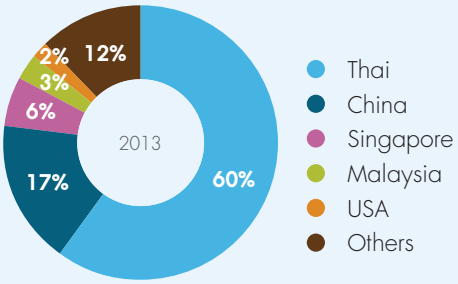
PTTGC has endeavored to drive and realize Corporate strategies. Significantly, all related tasks have been carried out to help create a balance between business, society and the environment to ensure business sustainability now and into the future.

FINANCIAL HIGHLIGHTS

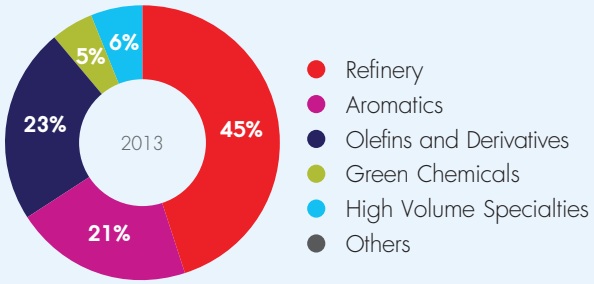
Sales Revenue



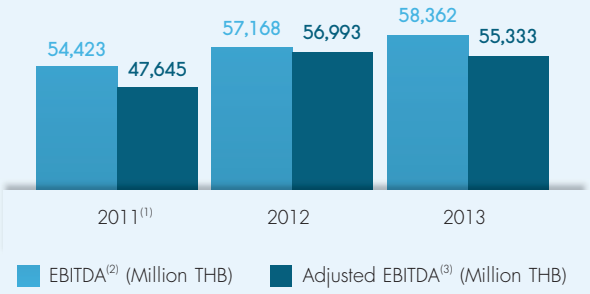
Sales Revenue Breakdown by Geography



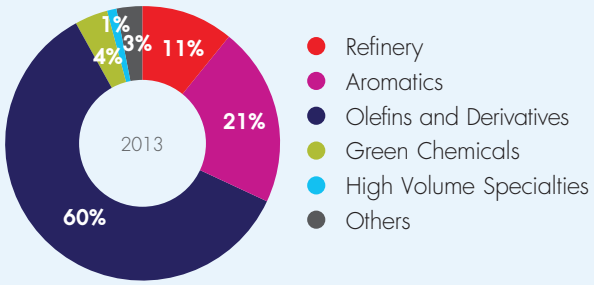
Sales Revenue Breakdown by Business



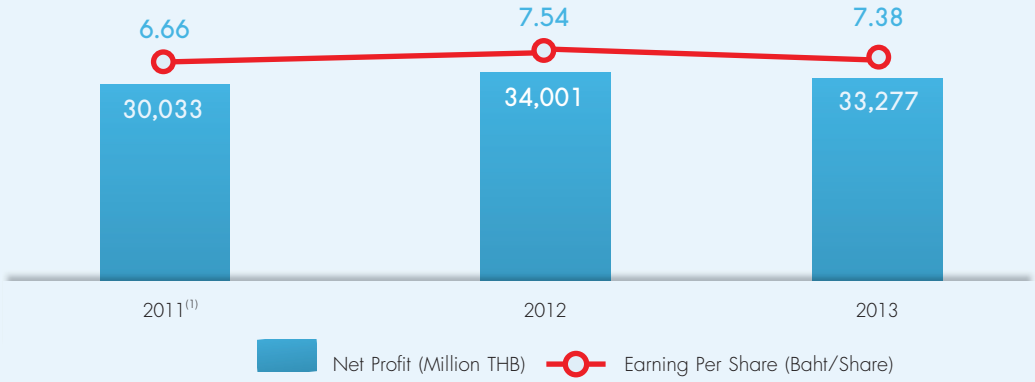
EBITDA



Adjusted EBITDA(3) Breakdown by Business



Net Profit



STATEMENT OF FINANCIAL POSITION (Million THB)	2011[1]	2012	2013
TOTAL ASSETS	**372,967**	**436,062**	**432,362**
Cash and Cash Equivalents + Short-term Investment	22,606	60,062	44,384
Current Assets	82,631	100,830	116,130
Property, Plant and Equipment	235,343	240,497	231,249
Non-current Assets	32,387	34,673	40,599
TOTAL LIABILITIES	**164,513**	**198,017**	**187,129**
Loan	120,165	136,856	120,250
Other Liabilities	44,348	61,161	66,879
TOTAL EQUITY	**208,454**	**238,045**	**245,233**

FINANCIAL RATIO	2011[1]	2012	2013
Current Ratio (times)	1.75	2.31	1.93
EBITDA to Tatal Revenues (%)	10.88	10.16	10.63
Net Profit on Total Revenues (%)	6.00	6.04	6.06
Return on Total Assets (%)	10.79	10.43	9.42
Return on Equity (%)	15.13	16.16	14.44
Interest Bearing Debt to Equity (times)	0.58	0.57	0.49
Net Interest Bearing Debt to Equity (times)	0.47	0.32	0.31
Net Interest Bearing Debt to EBITDA (times)	1.79	1.34	1.30

	Dividend Paid (Baht/Share)			Earning per Share (Baht/Share)	Dividend Payout Ratio (%)
	1st Half	2nd Half	Full year		
2013[4]	1.62	1.78	**3.40**	7.38	46%
2012	0.95	2.45	**3.40**	7.54	45%
2011[1]	1.68	1.30	**2.98**	6.66	45%

Note :

(1) From Pro-forma consolidated financial statements

(2) EBITDA is Earnings Before Interest, Taxes, Depreciation and Amortization.

(3) Adjusted EBITDA refers to EBITDA excluding impact of inventory value (excludes Inventory and NRV)

(4) The Board of Directors at its meeting No.2/2014 held on February 18th, 2014 has approved the proposal to propose at the 2014 Annual General Meeting of Shareholders to consider and approve on the dividend payment for the year 2013 operating performance of Baht 3.40 per share or 46% of the net profit, of which Baht 1.62 per share was paid as an interim dividend on September 12th, 2013. The final dividend payment will be Baht 1.78 per share, but the right to receive dividend is subject to the approval of Shareholders at the 2014 Annual General Meeting.

EVENTS AND ACTIVITIES IN 2013

January 10th, 2013

Amalgamation between PTT Utility Company Limited and Independent Power (Thailand) Company Limited

The completion of amalgamation between PTT Utility Company Limited (PTTUT) and Independent Power (Thailand) Company Limited (IPT) was announced. The new company name is Global Power Synergy Company Limited (GPSC) with initial registered capital of 8.63 billion THB. PTTGC holds 30.31% of shares.

April 1st, 2013

Head of Agreement (HoA) signing of a Petrochemical Complex

The signing ceremony of a Head of Agreement (HoA) between PTTGC and Pertamina (Persero) took place at 6th Floor, Energy Complex. This was to pursuing the final investment decision of the world-scale Petrochemical Complex.

April 26th, 2013

Acquistion of 40% Shareholding in PTT Phenol Company Limited

The Board of Directors of PTTGC at the Meeting No. 4/2013 passed the resolutions to approve the connected transaction regarding the 40% shareholding in PTT Phenol Company Limited (PPCL). This is according to the restructuring policy of PTT groups to make PTTGC as the Petrochemical flagship and take an opportunity to get into high volume specialty business.

May 10th, 2013

Joint Venture Investment in Auria BioChemical Co.,Ltd.

PTTGC together with Myriant Corporation co-established Auria BioChemicals Company Limited. PTTGC holds 54% of the shares while Myriant holds 46%. The purpose of this joint venture is to conduct research and development of bio-based chemicals to enhance the Myriant's technology and pave the way towards an investment in a commercial scale production plan in Southeast Asia.

June 21th, 2013

Registered Capital Increase of PTT Phenol Company Limited and Signing of construction contract of Phenol 2 Project

The Board of Directors of PTTGC at the Meeting No. 6/2013 approved an increase in the registered capital of PTT Phenol Company Limited (PPCL) to be used for investment in the Phenol 2 Project with a budget of 3,500 million THB. The Project is expected to start in the third quarter of 2015.

July 1st, 2013

The acquisition of the entire business of Bangkok Polyethylene Public Company Limited and PTT Polyethylene Company Limited to PTTGC

At the 2013 PTTGC Annual General Meeting, shareholders approved the entire business transfer of Bangkok Polyethylene Public Company Limited (BPE) and PTT Polyethylene Company Limited (PTTPE) as well as activities in relation to the matter to PTTGC. This is in order to enhance the effectiveness of the management and administration of company within the group.

July 9th, 2013

The ceremony of foundation stone laying of the Life Science Research & Technology Center

Ceremony of The foundation stone laying of the Life Science Research & Technology Center took place at the construction site of the Rayong Office. The center will support research and development in Oleochemical derivatives, Bio-based products, Health and Nutrition and development in Biotechnology.

July 10th, 2013

The opening ceremony of "Enclosed Ground Flare" and "Vapor Recovery Unit"

The opening ceremony of the Enclosed Ground Flare (EGF), located on Olefin Plant 3 (Ethane Cracker Plant) in Padaeng Industrial Estate and Vapor Recovery Unit (VRU), located on Aromatics 1 Plant in Map Ta Phut Industrial Estate and Aromatics 2 Plant in RIL Industrial Estate. The unit is to promote clean technology for better environment of Rayong.

July 10th, 2013
Shutdown of LDPE Plant

PTTGC shutdown the LDPE Plant to repair cylinders in the Booster / Primary Compressor.

July 27th, 2013
Oil Spill from Flexible Hose Leakage

A leakage in the flexible hose was found while discharging crude oil from a vessel to the Refinery. The oil spill was promptly disbursed by PTTGC, while its operation can be operating as usual. In this regard, PTTGC has insurance coverage under Property Damage and Business Interruption, Marine Cargo and Third Party Liability.

July 29th, 2013
MOU Signing for Strategic Alliance

A Memorandum of Understanding (MOU) for a Strategic Alliance was signed between PTTGC and Sinochem Group to establish cooperation in the form of a Strategic Alliance partner to strengthen their businesses and increase the investment potential in the specialty chemicals business.

August 14th, 2013
Shutdown of PTT Gas Separation Plant Unit 5

An accident incurring from the thunder storm and lightning strike on Waster Heat Recovery Unit of PTT Gas Separation Plan Unit 5, which is the gas supplier of PTTGC's I4/2 plant.

September 20th, 2013
Appointment of the new Chief Executive Officer

The Board of Directors of PTTGC at the Meeting No. 9/2013 recommended by the Nomination Remuneration Committee to appoint Mr. Bowon Vongsinudom, to be President and Chief Executive Officer and Secretary to the Board of Director, effective from October 1st, 2013 onwards.

September 30th, 2013
The Passing on Ceremony

Mr. Anon Sirisaengtaksin, the outgoing Chief Executive Officer of PTTGC, passed on duties and responsibilities to Mr. Bowon Vongsinudom who has been appointed as Chief Executive Officer and President, effective from October 1st, 2013 onwards.

October 18th, 2013
Shares Purchasing in Global Power Synergy Company Limited

The Board of Directors of PTTGC at the Meeting No. 10/2013 approved on the shares purchase for the newly issued shares to the existing shareholders in proportion of their shareholding of Global Power Synergy Company Limited, amounting to approximately 1,818 million THB. PTTGC maintains the shareholding at around 30.31% in GPSC.

November 26th, 2013
Aromatics 2 Debottlenecking Project EPC Contract Signing

PTTGC signed the engineering, procurement, and construction (EPC contract) for the Aromatics 2 Debottlenecking Project with SK Engineering and Construction Company Limited (SKEC) and PTT Maintenance and Engineering Company Limited (PTTME). This project will increase the nameplate capacity of Aromatics to 1,240,000 tons per year.

December 10th, 2013
Signing of the Manufacturing Joint Venture- Heads of Agreement

PTTGC signed a Manufacturing Joint Venture- Heads of Agreement (MJV-HOA) with PT Pertamina (Persero) to set a joint investment of a world scale petrochemical complex in Indonesia.

December 20th, 2013
Signing of the Inter-Company Borrowing & Lending Agreement

PTTGC signed an Inter-Company Borrowing & Lending (ICBL) Agreement with PTT to proceed the short-term liquidity management between two companies by preparing the loan agreement and/or any other related contracts.

December 24th, 2013
Shares Purchasing in Myriant from Existing Shareholders

PTT Chemical International Private Limited (CH Inter), which is a 100% owned by PTTGC, has increased shares in Myriant Corporation. Consequently, PTTGC holds 72.62% in Myriant. Allowing PTTGC to become the biotechnology research and development center as well as strengthening its fundamentals for commercial production in the future.

AWARDS AND RECOGNITIONS

The commitments to operate our business with sustainability can be demonstrated through the awards and success we received both nationally and internationally. Our pride from the awards and recognitions has been motivating us in striving for better things to improve.

ECONOMY

TOP

Business Performance

PTTGC is the only one Asian Company among 9 top companies that was ranked in the Down Jones Sustainability Indices (DJSI) World Member, the Chemicals Sector.

EXCELLENCE

ICIS TOP 100

With an outstanding operational excellence and acceptance from businesses and stakeholders globally, the Company was ranked at 18th from 100 world leading petrochemical companies in ICIS Top 100 Chemical Companies in 2013.

SOCIAL

TRUST

UN Global Compact

PTTGC is the first and only one company in Thailand who has committed to aligning their operations and strategies with ten universally accepted principles of UNGC Advanced Level.

CREDITABILITY

Global Reporting Initiative

PTTGC Sustainability Report 2013 was prepared according to the GRI G4 Guidelines at in accordance core level and verified by LRQA.

ENVIRONMENT

EXCELLENCE

Environment

PTTGC is one of 7 companies that received Best New Responding Company 2013 Award given by the Carbon Disclosure Project (CDP).

RESPONSIBILITY

Energy Conservation

PTTGC received ASEAN Energy Awards. This award is to recognize business operators that have shown outstanding performance in Energy Management and Conservation, and Alternative Energy

GLOBAL

LOCAL

EXCELLENCE

FORBES 2013 GLOBAL 2000

PTTGC was ranked at 607th in Forbes 2012 Global 2000 (Worlds Biggest Companies). Four aspects have been taken into consideration for the evaluation : Sales, Profits, Assets and Market Value.

EXCELLENCE

Thailand Top Corporate Brand Values 2013

PTTGC received Thailand Top Corporate Brand Values 2013 with brand value at 194,645 MB. The brand values were assessed by Corporate Brand Success Valuation (CBS Valuation).

EXCELLENCE

Board of the Year Awards 2012/2013

PTTGC's Board received the recognition for 2013 / 2012 Board of the Year Awards.

EXCELLENCE

Partnership Initiative

The company received the CSR Excellence Recognition 2013 in Silver status from AMCHAM for outstanding achievements in sustainable community development for 4 consecutive years.

EXCELLENCE

Industry Award

PTTGC received the Prime Minister's Industry Award 2013

RESPONSIBILITY

CSR-DIW

PTTGC awarded of the CSR-DIW for another 4 plants in 2013 that results to 7 plants have awarded from totally 13 plants. This proves that the PTTGC's operation aligning with sustainable development.

RESPONSIBILITY

Carbon Footprint

PTTGC is the first polyethylene producer in Thailand that all grades of Polymers and Ethylene Oxide Based product grades are certified and received the Carbon Footprint labels from Thailand Greenhouse Gas Management Organization.

RESPONSIBILITY

Energy Conservation

PTTGC received Thailand Energy Awards. This award is to recognize business operators that have shown outstanding performance in Energy Management and Conservation and Alternative Energy.

MESSAGE FROM THE CHAIRMAN

Dear Shareholders,

The year 2013 marked another year of challenges, including several global economic crises. Fragile economy of the United States during its recovery stages, and the ongoing economic downturn of the European Union had significant impact on the global level. In addition, the Chinese economy did not grow at the pace that had been predicted. Other factors that affected the overall market situations and product prices throughout the year were the fluctuation in Thai currency, variations in crude oil prices, and the political uncertainties from the lengthy protests in Bangkok which began in the last quarter of the year.

Last year, PTT Global Chemical Public Company Limited entered its second year of its amalgamation, which foundation had been laid for Fully Integrated Petrochemical and Refinery Operations, the diverse product portfolio, as well as the effective supply chain have been instigated. Competitive advantages have been created and bolstered up continuously through our production efficiency enhancement scheme. However, in the latter half of 2013, PTTGC experienced series of critical incidents, particularly the oil spill from its offshore platform in Rayong Province, which were regarded as great challenges to our overall performances. Rapid remedy and adjustment were therefore taking in serious actions, both in operational strategies and management, in order to overcome the challenges of these magnitudes.

In regard to the oil spill restoration plan of Ao Phrao of Ko Samet, PTTGC immediately commissioned five working teams to efficiently deal with the situation namely; A cleanup team - to rescue and resolve the situation, A restoration team, A communication team, A legal team - to handle any relevant legal and financial matters as well as insurance, and A remedy team - to provide aid and corrective measures to help people in the affected areas. In addition, PTTGC also coordinated with government agencies and education institutes led by personnel who are well recognized expertise in relevant issues, to make both the short-term and long-term restoration plans, which are currently in the process of monitoring long-term impact. According to the analytical and monitoring results revealed by the Ministry of Natural Resources and Environment, the fertility of the natural ecosystem in the affected areas has returned to its normalcy. The seawater quality has now reached the expected standards while marine life has been restored. On November 1st, 2013, Ao Phrao was officially re-opened by the Ministry of Natural Resources and Environment.

On behalf of PTTGC, the Board of Directors, Executives and all Staff Members have taken full responsibilities in solving the problems to the best of our abilities and resources to restore the environment of Ao Phrao. At the same time, the preventive plans have been reviewed and implemented to avoid any recurrence of such an incident. Despite the full recovery of Ao Phrao, assistance and remedial offers have also been given to those affected by the oil spill through the coordination center, which are the collaborative efforts formed by PTTGC, public and private sectors, and all agencies involved. This has been conducted simultaneously with the ongoing restoration of the Ko Samet tourism image.

As for our internal operations, PTTGC has consistently focused on strengthening its competitive advantages continuously, aligned with PTTGC's strategic goal, efforts have been made to enhance the operational excellence toward the First Quartile Performance to ensure that all PTTGC's plants will operate smoothly and efficiently with the highest standards of safety. We are also focusing on project management to ensure synergy project realization and other investment projects, along with enhancing the sales and marketing capabilities and research and development activities to fulfill customer's needs.

Furthermore, significant emphasis has been placed on **strategic expansion and investment.** Aiming to become a regional leader, PTTGC has continued to develop the global business partnerships, which are a pivotal step in its growth plan. A joint venture agreement was signed with Pertamina of Indonesia on both the marketing and trading of petrochemical products and conducting a feasibility study on the petrochemical complex investment, which is a world-class mega project in Indonesia. In addition, a Memorandum of Understanding was signed between PTTGC and Sinochem International for the import and distribution of Thermoplastics into China.

In the area of social, environmental and stakeholder responsibility, PTTGC has long been committed to establish sustainable principles. For the 2013 assessment, PTTGC was ranked one of the nine leading sustainably - driven companies in the chemicals sector on the Dow Jones Sustainability Indices (DJSI) which is a benchmark for companies that perform in a sustainable best practice. PTTGC is the first and the only company in Asia in this sector which has earned recognition as a leader in sustainable development on the world stage. Other prestigious recognitions presented by world-renowned institutes that PTTGC has recieved, GRI G4 Guidelines at Core level, or the highest level, by both the Global Reporting Initiatives and the United Nations Global Compact Advanced Level.

Regarding corporate governance, PTTGC has earned long-standing trust among stakeholders as a result of its transparent business management based on full compliance with corporate governance. This is clearly evident in our achievements of the "Excellence" level from the Corporate Governance Report of Thai Listed Companies (CGR), and the "Board of the Year - Excellence" rating awarded by the Board of the Year for Distinctive Practices, which was jointly organized by the Thai Institute of Directors, the Stock Exchange of Thailand, the Board of Trade of Thailand, the Federation of Thai Industries, the Thai Bankers' Association, the Thai Listed Companies Association, and the Federation of Thai Capital Market Organizations.

Anti-corruption is another issue of paramount importance. As a result, the Anti-Corruption and Anti-Bribery Policy were formulated and incorporated in the Corporate Compliance Policy. Knowledge in relation to such topics has been disseminated to employees among the PTTGC Group on a regular basis. PTTGC has joined the Private Sector Collective Action Coalition Against Corruption Council (CAC), and currently is in the process of acquiring certification from the CAC committee.

As a result of organizational management with a focus on increasing our competitive advantages and ensuring the implementation of emergency response plans in tackling problems caused by external factors and the Ao Phrao oil spill incident, our 2013 performance targets were all achieved, **at the sales revenue of 549,189 million THB. Company profits were 33,277 million THB, with an Earnings per Share of 7.38 THB.**

Realized that our success are from the contribution of all stakeholders. On behalf of the Board of Directors, Executives and all Staff Members, I would like to express my deepest gratitude for such continuous and valuable support, which make us overcome obstacles and achieved a number of awards and honors from organizations in Thailand and abroad. We pledge to operate in a socially responsible manner with adherence to all principles of corporate governance and ensure the strong and sustainable growth of PTTGC, leading it to become a leader in an international level in the future.

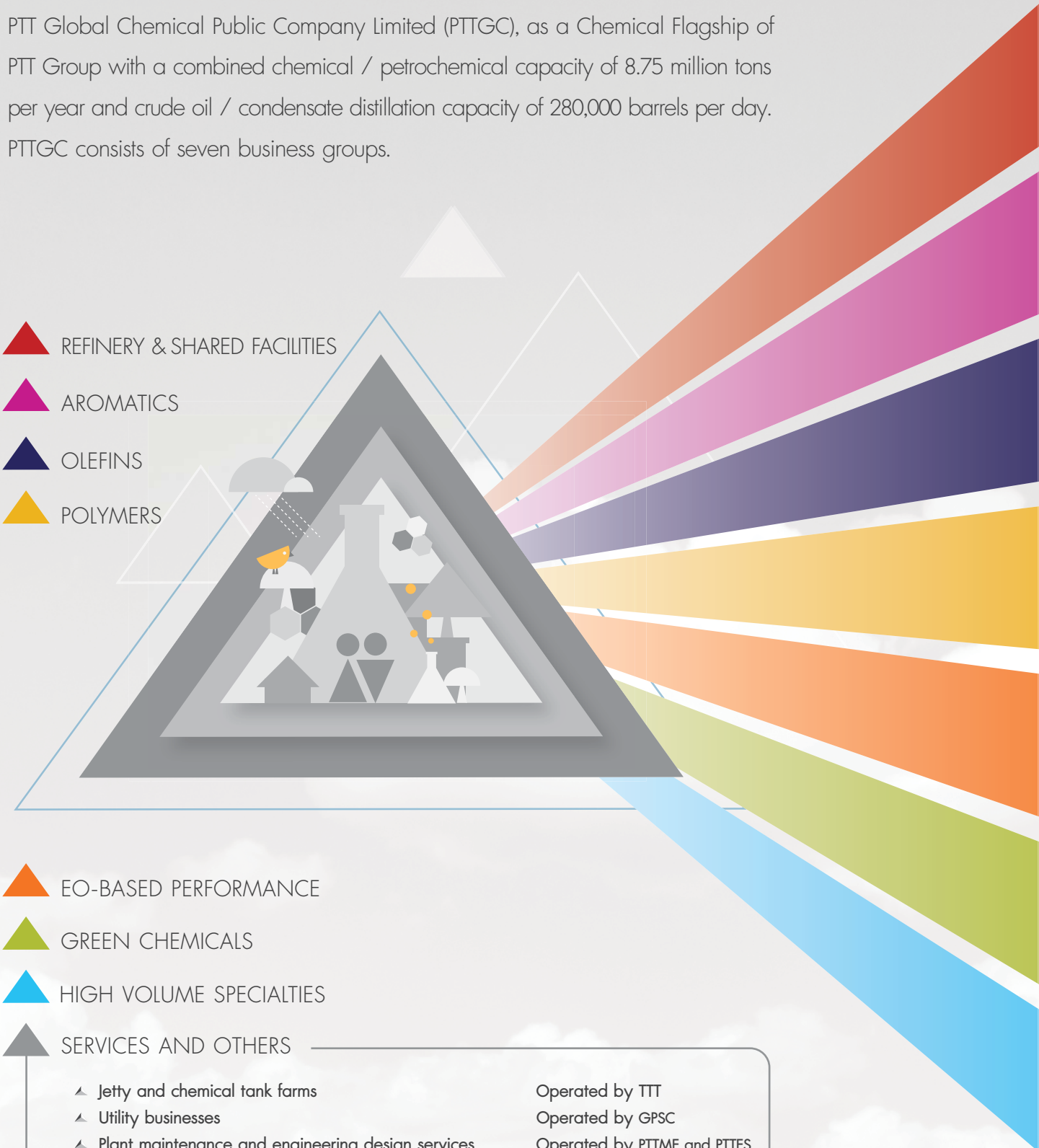
(Mr. Prasert Bunsumpun)
Chairman

WE CAN MAKE IT

BUSINESS
EXCELLENCE

BUSINESS STRUCTURE

PTT Global Chemical Public Company Limited (PTTGC), as a Chemical Flagship of PTT Group with a combined chemical / petrochemical capacity of 8.75 million tons per year and crude oil / condensate distillation capacity of 280,000 barrels per day. PTTGC consists of seven business groups.



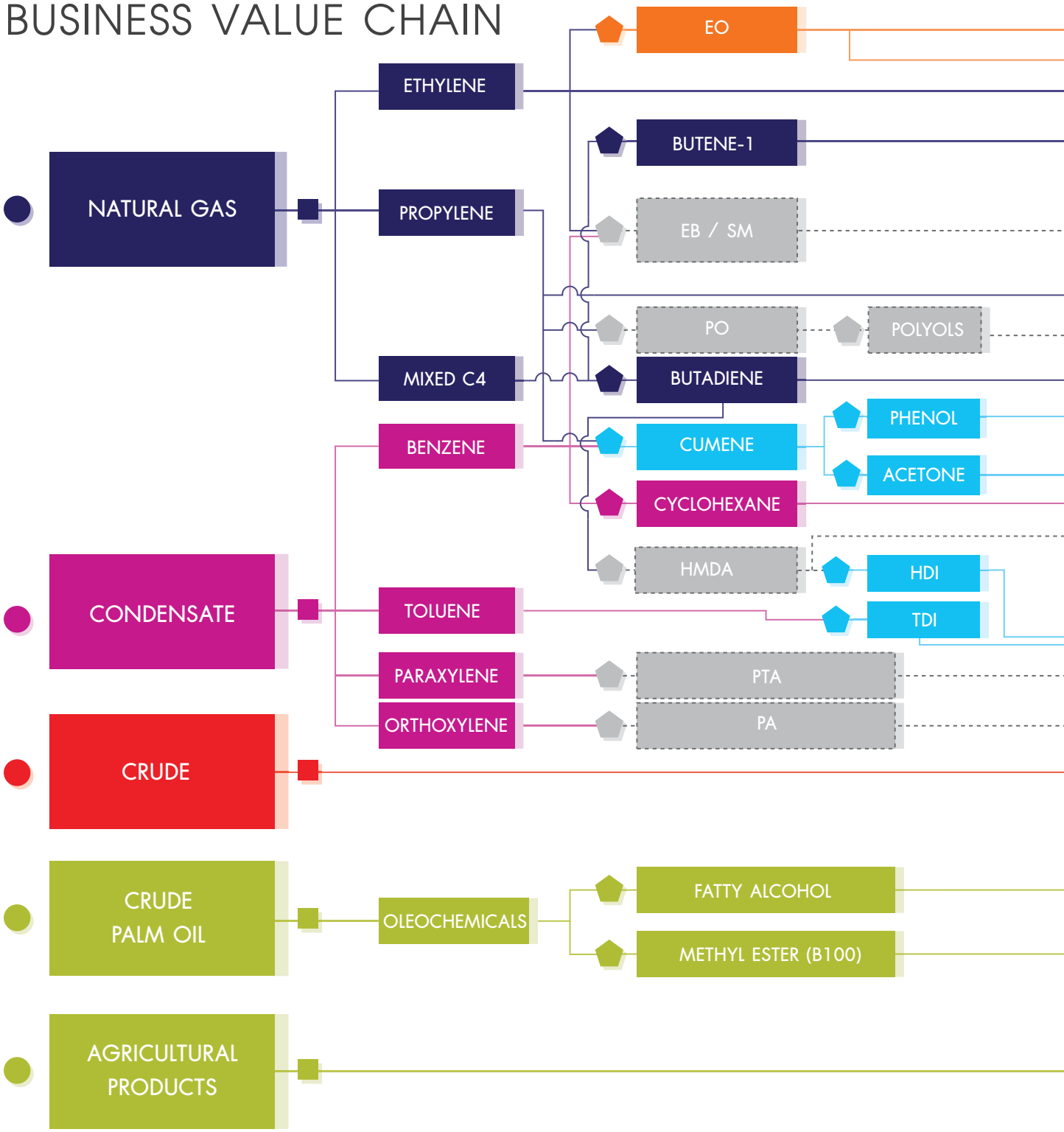
- REFINERY & SHARED FACILITIES
- AROMATICS
- OLEFINS
- POLYMERS
- EO-BASED PERFORMANCE
- GREEN CHEMICALS
- HIGH VOLUME SPECIALTIES
- SERVICES AND OTHERS

Jetty and chemical tank farms	Operated by TTT
Utility businesses	Operated by GPSC
Plant maintenance and engineering design services	Operated by PTTME and PTTES
Safety, occupational health, and environmental services	Operated by NPC S&E
Pipeline infrastructural services	Operated by EFT
Information technology services	Operated by PTT ICT
Labor outsourcing services	Operated by BSA
Marketing and sales for health and nutrition products	Operated by Bio Creation
Polymer sales and marketing services	Operated by PTTPM

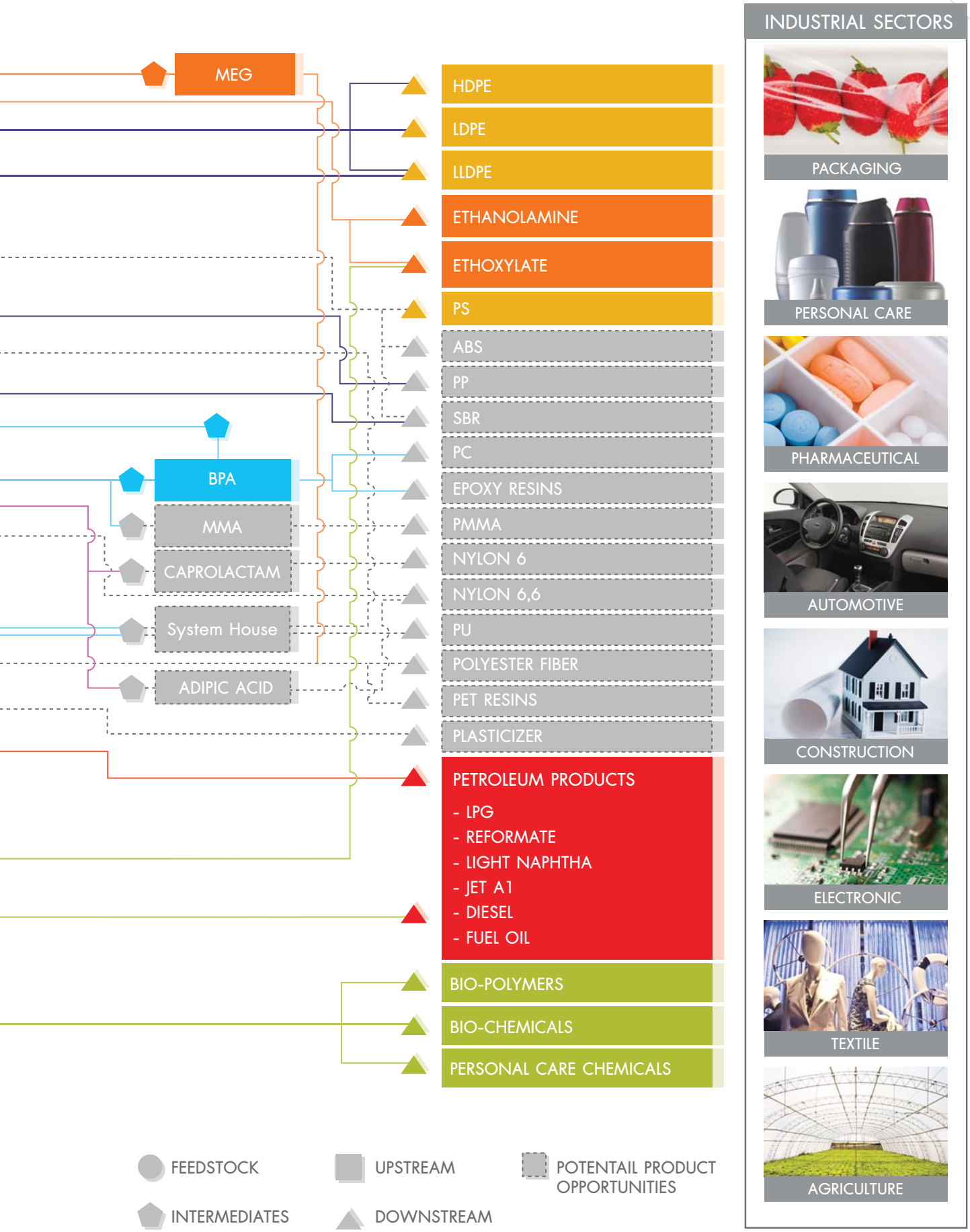
MAIN PRODUCTS	CAPACITY *	OPERATED BY	
REFINERY & SHARED FACILITIES ▲ LPG ▲ LIGHT NAPHTHA ▲ REFORMATE ▲ JET A1 ▲ DIESEL ▲ FUEL OIL	▲ CRUDE OIL DISTILLATION 145,000 BARRELS/DAY	▲ PTTGC	
AROMATICS ▲ BENZENE ▲ TOLUENE ▲ PARAXYLENE ▲ ORTHOXYLENE ▲ MIXED XYLENES ▲ CYCLOHEXANE	▲ CONDENSATE DISTILLATION 135,000 BARRELS/DAY ▲ AROMATICS 2,259 KTA **	▲ PTTGC	
OLEFINS ▲ ETHYLENE ▲ PROPYLENE ▲ PYROLYSIS GASOLINE ▲ MIXED C4 ▲ BUTADIENE ▲ BUTENE-1	▲ ETHYLENE/ PROPYLENE 2,888 KTA ** ▲ BUTADIENE/ BUTENE-1 100 KTA **	▲ PTTGC	
POLYMERS ▲ HDPE ▲ LDPE ▲ LLDPE ▲ PS	▲ POLYETHYLENE 1,500 KTA ** ▲ POLYSTYLENE 90 KTA **	▲ PTTGC ▲ TSCL ▲ VNT	
EO-BASED PERFORMANCE ▲ ETHYLENE OXIDE/ETHYLENE GLYCOL ▲ ETHANOLAMINE ▲ ETHOXYLATE	▲ 495 KTA **	▲ TOCGC ▲ TEX	
GREEN CHEMICALS ▲ METHYL ESTER ▲ FATTY ACID ▲ FATTY ALCOHOL ▲ GLYCERIN ▲ SPECIALTY OLEOCHEMICALS ▲ BIOPLASTICS	▲ 863 KTA **	▲ TOL ▲ TFA ▲ BIO SPECTRUM ▲ EMERY ▲ NATUREWORKS ▲ MYRIANT ▲ AURIA BIOCHEMICAL	
HIGH VOLUME SPECIALTIES ▲ PHENOL ▲ BISPHENOL A ▲ ACETONE ▲ TOLUENE DIISOCYANATE ▲ HEXAMETHYLENE DIISOCYANATE AND DERIVATIVES	▲ 555.6 KTA **	▲ PPCL ▲ VENCOREX	

Remarks : * Only capacity that PTTGC hold equal to or more than 50% share and calculate proportionate by percent share
** KTA is THOUSAND TONS PER YEAR

BUSINESS VALUE CHAIN



REFINERY & SHARED FACILITIES
AROMATICS
OLEFINS
POLYMERS
EO-BASED PERFORMANCE
GREEN CHEMICALS
HIGH VOLUME SPECIALTIES


MEG
BPA
MMA
CAPROLACTAM
System House
ADIPIC ACID
HDPE
LDPE
LLDPE
ETHANOLAMINE
ETHOXYLATE
PS
ABS
PP
SBR
PC
EPOXY RESINS
PMMA
NYLON 6
NYLON 6,6
PU
POLYESTER FIBER
PET RESINS
PLASTICIZER
PETROLEUM PRODUCTS
- LPG
- REFORMATE
- LIGHT NAPHTHA
- JET A1
- DIESEL
- FUEL OIL
BIO-POLYMERS
BIO-CHEMICALS
PERSONAL CARE CHEMICALS
INDUSTRIAL SECTORS
PACKAGING
PERSONAL CARE
PHARMACEUTICAL
AUTOMOTIVE
CONSTRUCTION
ELECTRONIC
TEXTILE
AGRICULTURE
FEEDSTOCK
INTERMEDIATES
UPSTREAM
DOWNSTREAM
POTENTAIL PRODUCT OPPORTUNITIES

COMPANY INFORMATION

Name PTT Global Chemical Public Company Limited

Initial PTTGC

Website www.pttgcgroup.com

Registered Number 0107554000267

Number and Value of Issued Shares

As at 31 December 2013, the registered share capital was Baht 45,088,491,170 made up of 4,508,849,117 common shares at a par value of Baht 10 per share. The registered share capital is made up of Paid-up capital of Baht 45,088,491,170

Establishment 19 October 2011

First Day Trade on the SET 21 October 2011

Business Structure and Value Chain

- Group Performance Center - Refinery & Shared Facilities
- Group Performance Center - Aromatics
- Group Performance Center - Olefins
- Polymers Business Unit
- EO - Based Performance Business Unit
- Green Chemicals Business Unit
- High-Volume Specialties (HVS) Business Unit
- Services & Others

Number of Employees 3,652

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59 Rachniyom Road, Tambon Noen-Phra,
Amphoe Mueang Rayong, Rayong 21150
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14, I-1 Road, Tambon Map Ta Phut,
Amphoe Mueang Rayong, Rayong 21150
Tel. 66 (0) 3899-4000 Fax: 66 (0) 3899-4111

Branch 3 : Olefins 2 Plant
9, I-4 Road, Tambon Map Ta Phut,
Amphoe Mueang Rayong, Rayong 21150
Tel. 66 (0) 3899-4000 Fax: 66 (0) 3899-4111

Branch 4 : Aromatics I Plant
4, I-2 Road, Map Ta Phut Industrial Estate,
Map Ta Phut, Muang District, Rayong 21150
Tel: 66 (0) 3897-1000 Fax: 66 (0) 3899-4111

Branch 5 : Aromatics 2 Plant
98/9 Rayong Highway Road 3191,
RIL Industrial Estate, Map Ta Phut,
Muang District, Rayong 21150
Tel: 66 (0) 3897-1000 Fax: 66 (0) 3899-4111

Branch 6 : Refinery
8, I-8 Road, Map Ta Phut Industrial Estate,
Map Ta Phut, Muang District, Rayong 21150
Tel: 66 (0) 3897-1000 Fax: 66 (0) 3899-4111

Branch 7 : Jetty and Buffer Tank Farm
19 Rong-Pui Road, Tambon Map Ta Phut,
Amphoe Mueang Rayong, Rayong 21150
Tel. 66 (0) 3899-4000 Fax: 66 (0) 3899-4111

Branch 8 : Aromatics Tank Farm
11, I-4 Road, Map Ta Phut Industrial Estate,
Map Ta Phut, Muang District, Rayong 21150
Tel: 66 (0) 3897-1000 Fax: 66 (0) 3899-4111

Branch 9 : Laboratory Service Center
24/9 Pakorn Songkro-Radh, Tambon Map Ta Phut,
Amphoe Mueang Rayong, Rayong 21150
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Branch 10 : Applications & Quality Assurance Center (AQA)
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Branch 11 : Olefins 3 Plant
8, Padaeng Road, Map Ta Phut,
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Tel: 66 (0) 3899-4000 Fax: 66 (0) 3897-6205

Branch 12 : Polyethylene Plant
8, I-10 Road, Map Ta Phut Industrial Estate,
Map Ta Phut, Amphoe Mueang Rayong, Rayong 21150
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References:

Securities Registrar
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Rachadapisek Road, Klongtoey, Bangkok 10110
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Fax: 66 (0) 2654-5427 Website http://www.tsd.co.th

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3000 Phaholyothin RD., Chompon, Chatuchak,
Bangkok 10900 Tel. 66 (0) 2299-1536,1321
Fax: 66 (0) 2242-3270 Website http://www.tmbbank.com

Registrar Services
Siam Commercial Bank Public Company Limited
Registrar Markets Operations Division
1060 Phetburi Road, Makasan, Ratchatawee,
Bangkok 10400
Tel. 66 (0) 2256-2323-8 Fax: 66 (0) 2256-2406

Corporate Trust
7th Fl. Zone A, 9 Rutchadapisek Road,
Chatuchak, Bangkok 10900
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Website http://www.scb.co.th

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REFINERY AND SHARED FACILITIES

Overview

PTTGC is one of the leading refineries and producer of petroleum in Thailand, owning and operating modern complex refineries with Hydrocraker and Visbreaker units. So, we are able to convert fuel oil to more valuable middle distillate products. Refining capabilities stand strong at 145,000 barrels per day. Additionally, company refineries are flexible and are able to adjust according to customer needs as well as any volatility in the markets. A summary of our petroleum production capabilities and their uses is listed as follows:

Petroleum Products		Product Uses
Light Distillates	Liquefied Petroleum Gas (LPG)	- Fuel - Petrochemical feedstock (Olefins Plants)
	Light Naphtha	- Gasoline blending component - Petrochemical feedstock (Olefins Plants)
	Reformate	- Gasoline blending component - Petrochemical feedstock (Aromatics Plants)
Middle Distillates	Jet Fuel	- Aviation fuel
	Diesel	- Automotive fuel - Industry fuel
Heavy Distillates	Fuel Oil	- Bunker fuel - Industry Fuel

Environmental Friendly Operations

PTTGC refinery adhere to compliance requirements and strict environmental laws. Operations are conducted according to ISO 14001 Environmental Standards, and priority has been given to limiting adverse effects on the environment. Furthermore, Environmental Impact Assessments or EIA are performed to protect against and reduce any effect on the environment. Additional efforts are made to increase the environmental friendliness and efficiency of PTTGC resources, including constant monitoring, application of quality control, and also the retrofitting of equipment. A summary of major operations to reduce the effects on the environment have been listed below:

- Energy efficiency was increased through the retrofitting and regular cleaning of equipment such as the heat exchangers, and cogeneration processes were used in electricity production to reduce greenhouse gas emissions.

- Low NO_x Emissions systems have been used continuously in our gas turbine generators to reduce nitrogen oxide emissions.

- Zero emission of Volatile Organic Compounds (VOCs) was achieved with the installation of Vapor Recovery Units (VRUs) on storage tanks as well as on product dispensers which are attached to transport trucks.

- PTTGC made efforts to decrease the levels of pollution through planting of trees which leads to the increase of green space, especially along the fences adjacent to neighboring communities.

- The production of low-sulfur diesel fuel that meets Euro IV standards helps reduce the emissions of sulfur dioxide from the production processes of our facilities located in the Map Ta Phut Industrial Estate, as well as from the combustion of diesel vehicles.

- The 3Rs principle (Reduce, Reuse and Recycle) has been implemented to minimize waste, and it has earned PTTGC a “3Rs Award” from the Department of Industrial Works.

- The Community Relations Department has joined with the Quality, Safety, Occupational Health and Environment Department to conduct regular visits to surrounding communities and listen to opinions on any environmental impact on the local communities. Furthermore, whenever turnaround works are due to be undertaken, PTTGC always informs local communities well in advance of work commencement.

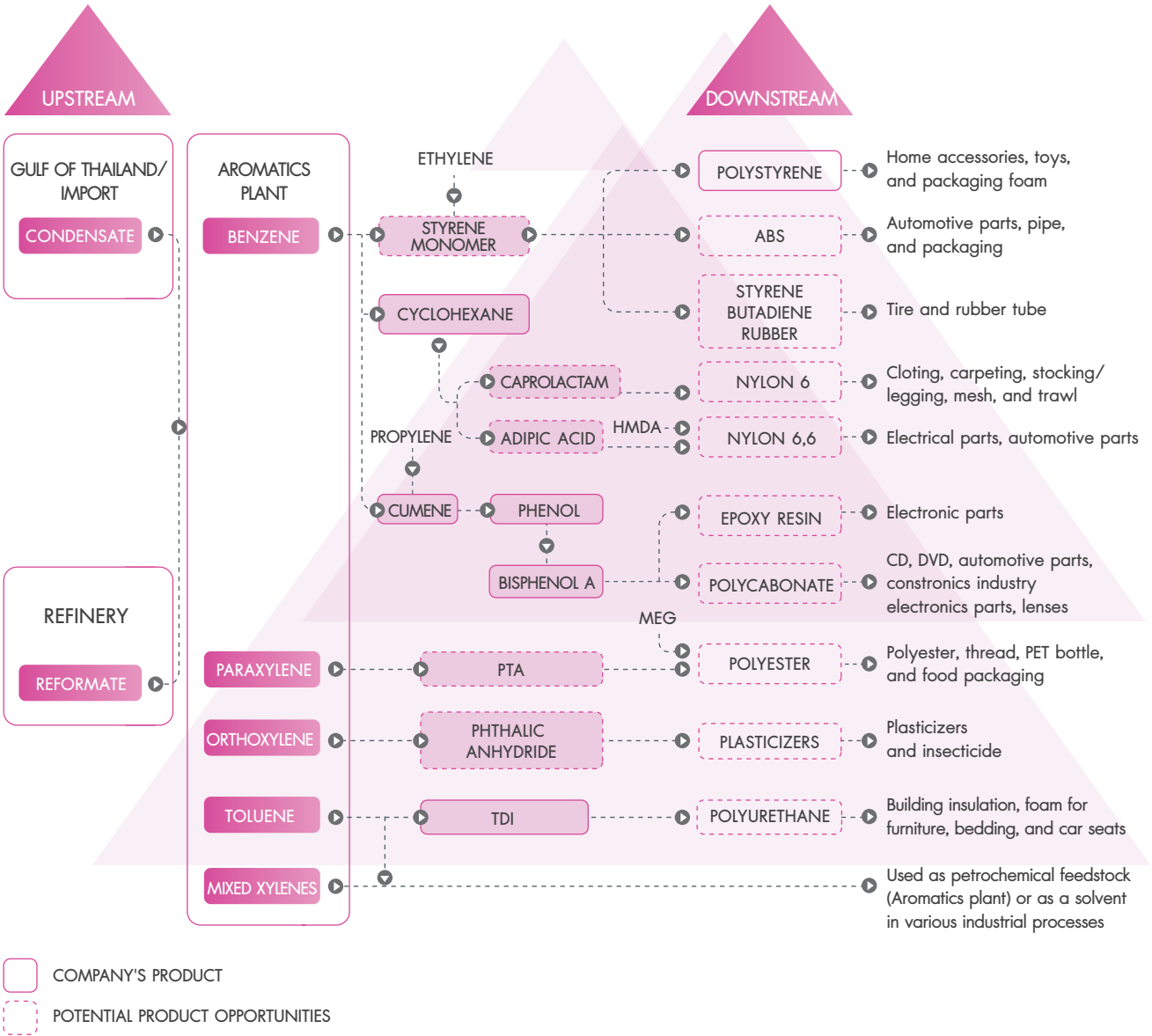
- The Office of the Map Ta Phut Industrial Estate, together with, representatives of communities located near the Map Ta Phut Industrial Estate, joined in a site visit to the company facilities located in this industrial estate to increase their confidence in PTTGC operations.

- Each of PTTGC's petroleum products has had its Carbon Footprint of Products certified by the Thailand Greenhouse Gas Management Organization (Public Organization). This is in recognition of operational standards that not only meet, but exceed the quality generally practiced or mandated by law. This certification reflects the company's genuine commitment and responsibility to society and the environment.

AROMATICS

Overview

PTTGC is a manufacturer and seller of Aromatics products such as Paraxylene, Benzene, Orthoxylene, Mixed Xylenes, Toluene and Cyclohexane. These products are used as feedstock in various industrial processes, and are detailed in the chart below:



Aside from the products listed above, our Aromatics Plants also manufacture a number of by-products. These include LPG and Light Naphtha, which is used as feedstock in Olefins Plants, as well as, Condensate Residue, which is used as feedstock in refinery operations to create Jet Fuel, Diesel Fuel and Fuel Oil. PTTGC currently operates a total of two commercial Aromatics plants. Their overall capacity has been summarized below.

Company	Product	Capacity (Thousand ton/year)
PTTGC	Benzene	662
	Toluene	60
	Paraxylene	1,195
	Orthoxylene	66
	Mixed Xylenes	76
	Cyclohexane	200

Environmentally Friendly Operations

PTTGC's Aromatics plants adhere to compliance requirements and strict environmental laws. All operations are conducted according to ISO 14001 Environmental Standards. Priority has been given to limiting any adverse effects on the environment. The company performs, Environmental Impact Assessments or EIA to protect against and reduce effects on the environment. In addition to this efforts are made to increase environmental friendliness and the efficiency resources of PTTGC's, including the constant monitoring, quality control, and the retrofitting of equipment. A summary of major operations in 2013 to reduce the effects on the environment have been listed below:

- Energy efficiency was increased through the retrofitting and regular cleaning of equipment such as heat exchangers. This contributed to reducing the amount of greenhouse gas emissions, helping to combat global warming.

- Zero emission of Volatile Organic Compounds (VOCs) was achieved with the installation of Vapor Recovery Units (VRUs) at all storage tanks.

- PTTGC made efforts to decrease levels of pollution through the planting of trees to increase the amount of green space, especially along fences adjacent to neighboring communities.

- The 3Rs principle (Reduce, Reuse and Recycle) has been implemented to minimize waste and it has earned PTTGC the prestigious "Zero Waste to Landfill Achievement Award", as well as, the "3Rs Award" from the Department of Industrial Works.

- The Community Relations Department of PTTGC together with environmental agencies make regular visits to surrounding communities to listen to their opinions on any environmental effect on the communities. Moreover, when turnaround works are due to be undertaken, PTTGC always informs local communities well in advance.

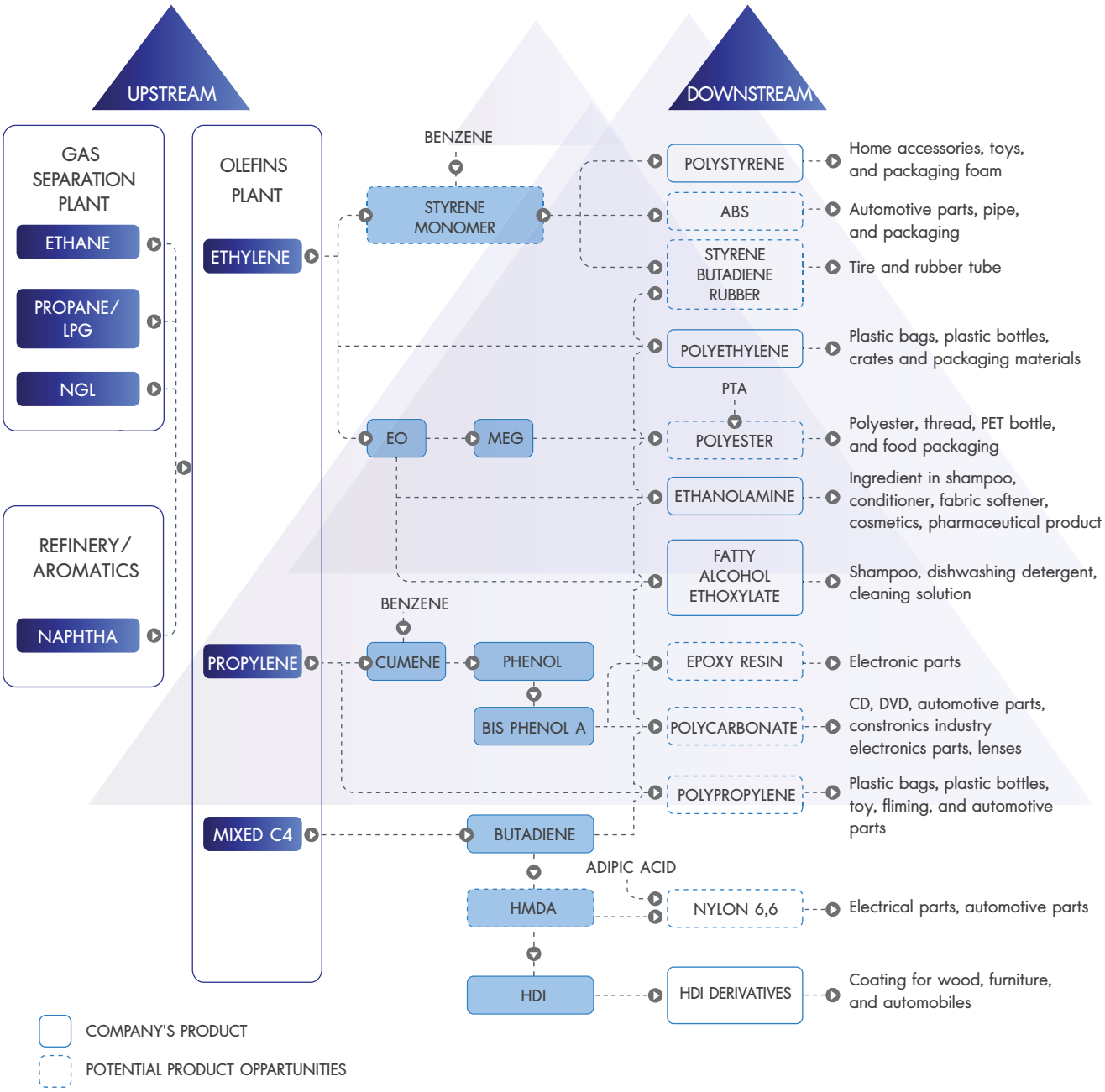
- The Office of the Map Ta Phut Industrial Estate, together with, representatives of communities located near to the Map Ta Phut Industrial Estate, joined a site visit to the company facilities located in this industrial estate to increase their confidence in PTTGC operations. The company also recognized for its excellent score for Corporate Government in regards to the environment (White Flag - Green Star Award).

- Each of PTTGC's Aromatics products has had its Carbon Footprint of Products certified by the Thailand Greenhouse Gas Management Organization (Public Organization). This is in recognition of operational standards that not only meet, but exceed the quality generally practiced or mandated by law. This certification reflects the company's commitment and responsibility to society and the environment.

OLEFINS

Overview

PTTGC Olefins plants are capable of manufacturing Ethylene and Propylene. The chart below shows the flow of feedstock used in upstream processes to the end products produced downstream, as well as, their associated uses:



PTTGC Olefins plants also manufacture various by-products such as Pyrolysis Gasoline, Mixed C4, Tail Gas, Cracker Bottom, and Hydrogen. These by-products are used as feedstock in our Refinery and Aromatics plants to increase value. For example, Pyrolysis Gasoline is turned into Aromatics products. Cracker Bottom will be distillated to petroleum products and Hydrogen by-product is used in our Refinery as a substitute for Hydrogen produced by Hydrogen Manufacturing Units (HMUs) which have higher production costs.

Additionally, the PTTGC Olefins plants also manage the production and distribution of various utilities which include Treated Water, Potable Water and Demineralized Water for use in its own Olefins plants and other downstream plants under its supervision, as well as, for other companies located in the Map Ta Phut Industrial Estate to use.

PTTGC operates a total of 4 different Olefins plants. And a summary for capacity can be found in the chart below:

Company	Product	Capacity (Thousand ton/year)
PTTGC	Ethylene	2,376
	Propylene	512

Main feedstock used in Olefins production include Ethane, Propane, LPG and NGL-all of which are products manufactured from natural gas. In 2013, PTTGC was able to secure procurement of 97.6% of its required feedstock needs through PTT. Although PTTGC feedstock supply is highly dependent on PTT, yet PTT has exhibited a high level of competency in the securing of feedstock for procurement. Also PTT operates 6 different natural gas separation plants and the potential for all 6 of them to falter at the same time is minute. Furthermore, PTT maintains stockpiles of different feedstocks so that it is able to consistently meet all long and short-term procurement obligations. PTTGC and PTT collaborate closely to ensure that feedstock logistics is performed according to plan, encountering as few obstacles as possible.

In addition to feedstocks listed above, PTTGC is able to use Light Naphtha, a by-product from the PTTGC Refinery and Aromatics plant operations, as a feedstock supplement. The economic viability of this is dependent on market activity. As such, the company's sources for feedstock are not only stable but variable, lending confidence to PTTGC Olefins operations, ensuring that needs of downstream industries will be met.

Environmentally Friendly Operations

PTTGC Olefins plants adhere to compliance requirements and strict environmental laws. Operations are conducted according to ISO 14001 Environmental Standards. Priority has been given to limiting the adverse effects on the environment. PTTGC ensures that, the Environmental Impact Assessments or EIA are performed to protect against and reduce effects on the environment. Additional efforts are made to increase both the environmental friendliness and efficiency of the resources of PTTGC, including the constant monitoring and enacting quality control measures.

PTTGC is highly aware of the way operations could affect those in nearby communities. Steps have been taken to reduce these possible effects, such as the installation of an Enclosed Ground Flare at Olefins No.3 Plant, eliminating hydrocarbons and exhaust emissions. Heat and sound absorbers have been installed as well to reduce any impact on surrounding communities. Furthermore, the enclosed nature of the Ground Flare prevents light from radiating outwards. Its operations are controlled automatically so that gas is let into the combustion system in a effective manner. A summary of activities conducted to reduce effects on the environment can be seen below:

- PTTGC has made efforts to decrease pollution levels by the planting of trees to increase the amount of green space within the vicinity of company plants.

- The 3Rs principle (Reduce, Reuse and Recycle) has been implemented to minimize waste and, from 2012, it earned PTTGC 'Zero Waste to Landfill Achievement' Award, and, '3Rs Award' from the Department of Industrial Works.

- The Community Relations Department has joined with the Quality, Safety, Occupational Health and Environment Department to conduct regular visits to the surrounding communities and listen to opinions they have on any environmental impact on the communities. Furthermore, when turnaround works are due to be undertaken, PTTGC always informs local communities well in advance.

- The Office of the Map Ta Phut Industrial Estate, together with, representatives of communities located near the Map Ta Phut Industrial Estate, joined a site visit to the company facilities located in this industrial estate to increase their confidence in PTTGC operations. The company also received a White Flag-Green Star Award for its excellent environmental practices.

POLYMERS

Overview

Polymers are a downstream petrochemical product primarily used as feedstock in the manufacturing of everyday plastic products. They are used in the molding of plastic containers such as plastic bags, plastic bottles, engine lubricant containers, or plastic crates, and can also be used as feedstock in the manufacturing of other downstream industries such as the appliances industry, fishery, agriculture and construction businesses. The following is a list of important polymer-based PTTGC products.

1) HDPE (High Density Polyethylene)
2) LLDPE (Linear Low Density Polyethylene)
3) LDPE (Low Density Polyethylene)
4) PS (Polystyrene)

Polyethylene resins are a downstream product that produces from Ethylene. All Polyethylene resins are sold under the trademark “InnoPlus”. Polystyrene resins, which are available in both GPPS (General Purpose Polystyrene) and HIPS (High Impact Polystyrene) types, are produced by Thai Strynics Co., Ltd. (TSCL), which is a company operated under the supervision of the PTTGC Polymers Business Unit. Polystyrene resins are sold under the trademark “DIAREX”.

PTTGC currently operates a total of five commercial polymers plants. Their overall capacity have been summarized as below table.

Company	Product	Capacity (Thousand ton/year)
PTTGC	HDPE	800
	LLDPE	400
	LDPE	300
TSCL	PS	90

The Ethylene used in the Company’s Polyethylene Polymers plants is supplied by the Company’s own Olefins plants, except for the Polystyrene plants which use Styrene Monomer (SM) imported from Southeast Asia as a primary feedstock. In addition, the Company has signed agreements to purchase with SM suppliers within Thailand as well, in order to maintain its bargaining and competitive edges for effective cost management.

Environmentally Friendly Operations

PTTGC has made environmental performance a primary focus. Resources are used efficiently and cost-effectively to minimize impact on the environment by designing all of its factories and systems to be in compliance with applicable environmental laws both in Thailand and overseas. In addition, the Company has thoroughly compiled relevant studies on environmental impact in its Environmental Impact Assessment (EIA), and has strictly adhered to measures on minimizing environmental

impact as specified in the EIA both during the construction of its factories and during the production process. Quality of environment is also closely monitored to ensure the quality of wastewater released from its factories, as well as, the quality of air emitted from production processes. Waste is properly managed by dividing it into general waste and industrial waste. Production noise level is also to be monitored and maintained at the levels specified by law. All these measures are already in place to ensure that the environment is properly cared for and assure total peace of mind for people in surrounding communities.

In order to create an effective environmental management system that is highly regarded internationally, the PTTGC Polymers Business Unit has specified the following measures to lay a foundation for continual improvement.

1. Equipment has been installed to increase efficiency in an effort to reduce environmental impact. This includes a Bag Filter System that collects dust from product loading and unloading and deposits it into silos, as well as, silencers which have been installed at production machines.

2. Regular checks are to be maintained for all production machines of the Polymers Business Unit to detect and prevent any leakage of Volatile Organic Compounds (VOCs).

3. Production waste is to be systematically managed as the following.
   - Production wastewater is to be properly treated in the Company's wastewater treatment system before release.
   - Solid wastes are to be separated for sale or elimination by professional waste elimination companies listed with the Department of Industrial Works
   - Liquid wastes, such as Oligomer, are to be eliminated by professional waste elimination companies listed with the Department of Industrial Works

4. The Company always informs surrounding communities in advance through notices, community radio programs and its own dedicated CSR staff members if and when there will be any activity organized by the Company that may present loud noise, bright lights or images that may result in any discomfort or dissatisfaction for other people. The Company is always willing to listen to the opinions and suggestions of surrounding communities so it can continue to improve itself for sustainable growth alongside the communities nearby.

5. The 'Green Shutdown Program' has been applied to our production lines which are plan for annual maintenance shutdowns. For example, the recycle of Insulation, the reduction of wastes from oil and polymers from the cleaning of production machines, etc.

6. Each of PTTGC's Polymers products has had its Carbon Footprint of Products certified by the Thailand Greenhouse Gas Management Organization (Public Organization). Currently, a total of 69 grades of the Company's HDPE, LLDPE, LDPE and PS Polymers-based products have been certified.

In 2013, the PTTGC Polymers Business Unit received the White Flag-Green Star award from the Industrial Estate Authority of Thailand. Such an award reflects the Company's genuine commitment to good environmental governance and a transparent environmental management. The prestigious White Flag-Green Start award has been granted for the 7th time in a row to the Polymers Business Unit's PS production line with the award being promoted to 'White Flag - Golden Star'. The award was one for the 4th time by the Company's HDPE No.1 production line and for the 1st time by its LLDPE and LDPE production lines.

EO-BASED PERFORMANCE

Overview

PTTGC has expanded its business to cover the production of EO-Based Performance Products for a number of reasons. Not only are they seen as an option to increase the value of Olefins products and meet the rising needs of industry and consumers, EO-based performance production will also fill a domestic void that normally is filled by imports from various countries. The PTTGC's range of Ethylene Oxide (EO) and EO-Based Performance Products and their intended uses can be described as follows.

Ethylene Oxide (EO) and Ethylene Glycol (EG)

EO is a downstream product of Ethylene which is a feedstock in the production of EG. Products that are EG-based include Mono Ethylene Glycol (MEG), Di Ethylene Glycol (DEG), Tri Ethylene Glycol (TEG), and Poly Ethylene Glycol (PEG). MEG is mainly used as a feedstock together with PTA in the production of polyester meant for industrial use, as well as textiles and PET bottles.

Ethanolamine (EA)

EA is produced from EO and primarily comes in the forms of Monoethanolamine (MEA), Diethanolamine (DEA), and Triethanolamine (TEA). EA is used as an ingredient in the production of shampoos, conditioners, fabric softeners, cosmetics, and pharmaceutical products.

Fatty Alcohol Ethoxylates

They are downstream products of EO and can be used as feedstock in the production of shampoo, dishwashing detergent, cleaning solutions, as well as, in the textile industry. Fatty Alcohol Ethoxylates can also be used as feedstock for scouring agents, as well as, an agent to assist in the process of thread softening and finishing process.

PTTGC' s production of EO, EG and EA is supervised by TOC Glycol Co., Ltd. (TOCGC), while Fatty Alcohol Ethoxylates are produced by Thai Ethoxylate Co., Ltd. (TEX), a joint-venture between PTTGC and BASF.

Company	Product	Capacity (Thousand ton/year)
TOCGC	MEG	395
	EA	50
TEX	Fatty Alcohol Ethoxylates	50

The Primary feedstock for MEG production is Ethylene which TOCGC obtains from PTTGC under a long-term contract. PTTGC's Olefins plants have sufficient production capacity to produce enough Ethylene for the production of EO/EG. Meanwhile, the production of Ethoxylate relies on EO obtained from TOCGC also under a long-term trade contract, as well as, Fatty Alcohol produced by Thai Fatty Alcohol Co., Ltd., which is an affiliated company of PTTGC. In 2013, a certain amount of Fatty Alcohol was imported from overseas when the main Fatty Alcohol supplier, Thai Ethoxylate Co., Ltd. (TEX), shutdown their production for scheduled maintenance for 24 days.

Environmentally Friendly Operations

PTTGC's EO-Based Performance Business Unit has made environmental performance a primary focus. Resources are used efficiently and cost-effectively to minimize impact on the environment by designing all of its factories and systems to be in compliance with applicable environmental laws both in Thailand and overseas. In addition, the Company has strictly adhered to measures on minimizing environmental impact as specified in its Environmental Impact Assessment (EIA), and has trained its staff members to always be socially aware of any impact on the environment. Such efforts signify the Company's determination to operate its business in sustainable harmony with the nature.

A variety of environmental contribution activities have been consistently organized by the EO-Based Performance Business Unit. They include the close monitoring of such impact as Atmospheric chemical contamination, quality of underground water, quality of air when released from production plants, quality of wastewater released from plants, as well as, regular checks to detect and prevent any leakage of Volatile Organic Compounds (VOCs).

Such efforts contributed to the PTTGC's EA Business Unit award of the Carbon Footprint Label granted by the Thailand Greenhouse Gas Management Organization (Public Organization) to signify that the Company's carbon dioxide emissions was reduced by 10% or higher in 2013, in comparison with the same carbon dioxide emissions in 2012. In addition, Thai Ethoxylate Co., Ltd. (TEX), an affiliated company of PTTGC, received the White Flag - Green Star award from the Industrial Estate Authority of Thailand, which underlines its genuine commitment to good environmental governance.

GREEN CHEMICALS

Overview

Green Chemicals are products created mostly from natural feedstock such as palm oil, palm kernel oil, vegetable oil, and corn. These products, when processed, leave a variety of valuable by-products that can be used in downstream industrial processes. These include processes in the personal care industry, pharmaceutical industry and the bio-plastic industries. PTTGC's Green Chemical products can be summarized into the following three categories.

Value Added Oleochemicals (VAO)

- Methyl Ester is a basic Oleochemical substance. The use of Methyl Ester combined with diesel oils can create a biodiesel that meets EN14213 European standards. Methyl Ester helps to increase the efficiency of diesel oils, both in its lubrication and ignition processes in engines. When used in engines it also increases their lifespan and minimizes environmental impact.

- Fatty Alcohol is a basic Oleochemicals product. It is used as an important substrate in a number of different processes in the personal care industry.

- Glycerin is a by-product from the production of Methyl Ester and Fatty Alcohol. It is used in the pharmaceutical industry, food industry, and personal care products.

- Fatty Acid is basic Oleochemicals product used in the production of soap and cosmetics as well as in personal care products.

- Specialty Oleochemicals are created from basic Oleochemicals substance. These specialty products are used in a variety of industries, such as industries covering cleansing products, personal care products, lubricants, and plastics. Examples of specialty oleochemicals include Triacetines, Polyol, Ozone Acids, plastic additives, and chemicals used in the oil drilling industry.

Food and Nutraceuticals Group

Carotenoids are created from the color extraction process of Methyl Ester and they come in both liquid and powder forms. Carotenoids are used primarily in food industry and in and nutraceutical industries as a coloring additive.

Bioplastics/Biochemicals Group

Bio-Based Chemicals and Bio-Plastic are produced from natural feedstock. For example, sugar, tapioca, cassava, and corn. They are used in the production of Lactic Acid and Succinic Acid, which are used as substrates in the production of Bio Plastics such as Polylactic Acid (PLA) and polyesters such as 1, 4 Butanediol.

The Company's production of Value Added Oleochemicals (VAO) was performed by Thai Oleochemicals Co., Ltd. (TOL) and Thai Fatty Alcohol Co., Ltd. (TFA), currently Thailand's only producer of Fatty Alcohol. Another company contributing to the VAO production is Emery Oleochemicals (M) Sdn. Bhd. (Emery) in Malaysia, which is a joint-venture between PTTGC and Sime Darby Plantation Limited (Malaysia).

PTTGC's production of Bioplastics/Biochemicals was conducted by Myriant Corporation and Natureworks LLC. Myriant is a company specializing in Bioplastics/ Biochemicals production technology development and is a proprietor of several intellectual properties regarding the production of Succinic Acid. Myriant has a pilot-plant of Succinic Acid (capacity of 14,000

tons per annum), and is preparing for commercial production in the foreseeable future. Natureworks LLC is a joint venture between PTTGC and Cargill Inc. from the United States. Natureworks is the proprietor of the PLA production technology and has a production capacity of 150,000 tons per annum.

In 2013, the Green Chemicals Business Unit operated a number of commercial production plants both in Thailand and overseas. Their overall production capacity are summarized below.

Company	Product	Capacity (Thousand ton/year)
TOL/TFA	Methyl Ester (ME)	200
	Glycerin	31
	Fatty Alcohol	100
Emery[1)]	Fatty Acid	530
	Glycerin / Triacetin	77
	Fatty Alcohol	80
	Methyl Ester (ME)	116
	Ester-Plastic	53
	Ozone Acid	18
	Home & Personal Wellness Surfactants	40
NatureWorks	Polylactic Acid (PLA)	150

Remarks:

1) In 2013, Emery closed down a Fatty Acid and Glycerin production plant in Canada, which had a production capacity of 36,000 tons per year, because the plant was running high operation costs and therefore their high-cost products were not able to compete in the market.

The primary feedstock for the production of Methyl Ester, Fatty Alcohol and Glycerin is palm oil and palm seed oil. The producing companies - TOL and TFA - usually procure palm oil and palm seed oil from domestic sources to help generate income for Thai farmers and promote Thailand's domestic supply chains. However, there were times when the domestic supply of palm seed oil was not enough for the demand of TOL and TFA, so they occasionally had to import the palm seed oil or coconut oil from Malaysia and Indonesia. However, both companies have a policy to procure their feedstock from domestic sources first.

Environmentally Friendly Operations

By nature, Green Chemicals are made from natural feedstock and are kind to the environment. PTTGC's Green Chemicals Business Unit has a policy to always maximize the use of natural resources, while at the same time, minimize any impact on the environment by strictly adhering to environmental standards and applicable laws.

HIGH-VOLUME SPECIALTIES

Product Descriptions

High-volume specialties are used as a component in a variety of high-potential industries including the automotive industry, the construction industry, and the engineering plastics industry. The following is a list of PTTGC specialty products and their uses.

Phenol

Phenol is an intermediate-stream petrochemical product and is created from Benzene and Propylene feedstock. It is used as an important substrate in the production of Bisphenol A (BPA) and Phenolic resin.

Bisphenol A (BPA)

Bisphenol A is an intermediate-stream petrochemical product that is used as feedstock in the production of Polycarbonate (PC). PC is an engineering plastic that is used in various industries including the automotive components industry, the computer industry, the CD/DVD disk industry, and the home appliance industry.

Toluene Diisocyanate (TDI)

Toluene diisocyanate (TDI) is an important intermediate-stream petrochemical product that is used as feedstock in the production of Polyurethane (PU). PU is important in both the construction as well as the automotive industries. It can be used as insulation in buildings to make them more energy efficient, as well as in the form of an all-purpose foam used in furniture, bedding, and car seats.

Hexamethylene Diisocyanate (HDI) And HDI Derivatives.

These intermediate-stream petrochemical products are used as feedstock in the production of PU Coating. PU coating is an important product in both the construction and automotive industries. It is used to coat the surfaces of wood, furniture, and automobiles to make them more resistant to scratches.

The Company's production of Phenol and BPA is performed by PTT Phenol Company Limited (PPCL), while TDI, HDI and other HDI derivatives products are produced overseas by Vencorex Holding in France (Vencorex).

PPCL operated a total of two commercial production plants. At the same time, Vencorex operated three commercial production plants. Their overall capacity is summarized below.

Company	Product	Capacity (Thousand ton/year)
PPCL	Phenol	200
	Acetone	124
	Bis Phenol A	150
Vencorex	TDI	125
	HDI and HDI Derivatives	35

Currently, PPCL operates with the use of primary feedstock such as Benzene and Propylene supplied by PTTGC's Aromatics and Olefins plants under a long-term trade contract. On the other hand, Vencorex's TDI production uses Toluene and Nitric Acid as the primary feedstock, and the Company's HDI production depends on Hexamethylene Diamine (HMDA) as the primary feedstock. All feedstock used by Vencorex has been sourced by suppliers in France under both short-term and long-term trade contracts.

Environmentally Friendly Operations

The High Volume Specialty Business Unit of PTTGC has made environmental performance a primary focus. Resources are used efficiently and cost-effectively to minimize impact on the environment by designing all of its factories and systems to be in compliance with applicable environmental laws both in Thailand and overseas. In addition, the Company has strictly adhered to measures on minimizing environmental impact as specified in its Environmental Impact Assessment (EIA), and has trained its staff members to always be socially aware of any impact on the environment. Such efforts signify the Company's determination to operate its business in sustainable harmony with nature.

In 2013, a variety of environmental contribution activities were consistently organized by the High Volume Specialty Business Unit. For example, PPCL has made sure that all of its production wastes were professionally treated by authorized industrial waste management companies, and certain organic wastes, which were safe to the environment, were made good use of by turning them into fertilizers. As well as this, regular checks were also maintained to detect and prevent any leakage of Volatile Organic Compounds (VOCs). In addition to these efforts from PPCL, Vencorex in France has invested substantially in its environmental projects such as the installation of Toluene Strippers to help minimize any leakage of Volatile Organic Compounds (VOCs)

SERVICES AND OTHERS

Apart from the 7 business groups, PTTGC also focuses on support activities that help to increase the stability and integration of its main business areas as well as for its customers. These various activities are listed below:

1. Jetty and Chemical Tank Farms

These activities are managed by Thai Tank Terminal Limited (TTT). Services are also provided as a concession to industrial organizations that are located within the Map Ta Phut Industrial Estate.

2. Utility Businesses

The Global Power Synergy Company Limited (GPSC) manages these businesses and is responsible for the production and sale of industrial electricity, steam, and industrial water to PTT group and nearby plants.

3. Plant Maintenance and Engineering Design Services

Such services are provided by PTT Maintenance and Engineering Company Limited (PTTME). A variety of services are provided which include plant maintenance, design and engineering consultation, construction, procurement, material work, as well as, production administration. PTTME also assists those industrial organizations located in the Map Ta Phut Industrial Estate, as well as industrial organizations located throughout Thailand and in neighboring Asian countries. Additionally, PTTGC, together with other companies in the PTT Group, invest in PTT Energy Solutions Company Limited (PTTES), a company responsible for providing technical engineering consultations for the PTT Group.

4. Safety, Occupational Health and Environmental Services

The NPC Safety and Environmental Services Company Limited (NPC S&E) provides the above services. Examples of these services include safety training, occupational health and environmental training of all types, as well as, design and installation of fire protection systems. Consultation is also provided in regards to management systems, quality control systems, as well as, safety, occupational health, and environmental systems.

5. Pipeline Infrastructural Services

These services are provided by the Eastern Fluid Transport Company Limited (EFT) which supervises pipeline infrastructure for petroleum and petrochemical enterprises located within the Map Ta Phut Industrial Estate and nearby areas.

6. Information Technology Services

Information technology is provided by PTT ICT Solutions Company Limited (PTT ICT), which offers this, as well as, communications services to entities within the PTT Group. Their comprehensive services include the design, development and maintenance of IT systems that respond to the demands of PTTGC businesses.

7. Labor Outsourcing Services

PTT and other companies within the PTT Group are provided these services through the Business Services Alliances Company Limited (BSA).

8. Marketing and Sales for Health and Nutrition Products

Bio Creation Company Limited (BIO Creation) handles marketing and sales for these products. BIO Creation is a subsidiary of PTTGC, and is responsible for trading related to Health & Nutrition Products in the Food and Supplement Industry, Personal Care products and related compounds, plus various other by-products.

9. Polymers Sale and Marketing Survices

PTT Polymer Marketing Company Limited (PTTPM) operates a business and it is responsible for the marketing and distribution of PTTGC's Polymers-based products. Currently, PTTPM performs with a far-reaching network of designated dealers in Thailand and all regions of the world.

INDUSTRY OVERVIEW IN 2013 AND OUTLOOK

Global Economic Overview in 2013

The International Monetary Fund, or IMF, estimated in January 2014 that the World Gross Domestic Product (GDP) in 2013 will have expanded 3.0%, a slowdown when compared with the growth rates in 2012 at 3.1%. This drop was a result of the economic slowdown in the United States, as well as the fragile European economy due to debt crisis of some Euro member governments remains occur in the first half of the year. This situation led to the economic slowdown in China and the ASEAN countries where the export-based economy heavily relies on Western markets. However, the economy of the United States and China showed signs of stronger recovery in the second half of 2013 as evidenced by the US Federal Reserve (FED)'s decision to reduce credit levels according to Quantitative Easing (QE) measures, and the Chinese government's issue of additional monetary and financial support measures.

Petroleum and Petrochemical Market Overview in 2013

Petroleum Market

In 2013, the global crude oil market remained volatile. Dubai crude oil price fluctuated in the range of 95 - 115 USD per barrel, at an average of 105.52 USD per barrel. This was a decrease of 3.26% from 2012. One of the reasons for this decrease included more crude oil supplies from Non-OPEC members, especially the shale oil output from the United States, which increased by 1.2 million barrels per day from the previous year and continued to rise in the future. Another reason is concerns over the FED began tapering Quantitative Easing (QE). After it has announced to cut its monthly bond buying program by 10 billion USD (effective in January to February 2014) from 8.5 billion USD. This was due to US economic already starting to show the sign of recovery.

The factors contributing to the increased crude oil prices included concerns over the supply shortage due to unrest in Middle Eastern and North African countries, such as Egypt, Syria, Iraq and Libya.

In 2013, high levels of volatility were also seen in the price of petroleum products just as in crude oil prices. Causes of this included the seasonal demand for products, as well as both planned and emergency shutdowns of refineries in many countries, In addition, uncertainty of the global economy outlook.

As for competition in the refinery industry of Thailand in 2013, production capacity was still higher than domestic demand, particularly Diesel and Jet fuels, some of which were then exported. However, with domestic demand gradually moving up while there is no new domestic refinery capacity, the proportion of domestic sales is then expected to rise.

Aromatics Market

In 2013, the Aromatics market of both Benzene and Paraxylene, expanded slightly from the previous year. This was due to the increasing demand for end-use markets such as electronic devices, computer and auto parts, toys, furniture items and polyester products sectors. The Aromatics supply was insufficient due to Reformate feedstock shortage caused by the reduction in oil refinery operations from both economic situation and production difficulties. Also due to Pyrolysis Gasoline

feedstock shortage as a result of the reduced production of Naphtha cracker units, as well as the shift in utilizing petrochemical feedstock from Naphtha to Shale gas. Planned shutdowns of Aromatics plants also put pressure on Aromatics supplies. In addition, the crude oil and Naphtha feedstock prices continued to remain at high levels, causing the price of Paraxylene to average at 1,479 USD per ton. Benzene prices averaged at 1,301 USD per ton throughout the year.

In 2013, the competition in the Aromatics market was not so intense, particularly in the first half of the year. The market remained tight as a result of the feedstock shortage for the production of Paraxylene and Benzene as well as the shutdown for annual maintenance. As a result, the spread between Paraxylene, as well as Benzene and condensate remained high at about 557 and 380 USD per ton respectively.

Olefins Market

For Olefins market in 2013, It was considered a good year for Olefins producers in Asia when compared with the previous year by the product prices. The average Ethylene price was 1,352 USD per ton. This was a 11% increase from 2012, due to the feedstock (crude oil and Naphtha) costs remaining high as well as the Ethylene market was tight occasionally because of the shutdown for annual maintenance and the reducing operating rate due to both planned and technical difficulties of many crackers in Asia, especially in China, Japan, and the Middle East. This caused Ethylene loss in the market throughout the year at about 6 million tons more than when compare with 2012 was at about 5.7 million tons.

The Propylene market in Asia went in the same direction as the Ethylene market but was less tight. The price was at an average of 1,326 USD per ton, an increase of 5% from last year. A crucial factor contributing to the rise in prices was the shutdown of many Propylene on-purpose units in Asia, due to both planned maintenance and production difficulties. Combining these causes with the shutdown and reduced production capacities of other cracker plants, the quantity of Propylene then lessened from the market at about 4.1 million tons or 8.6% of the Propylene nameplate capacity in Asia. However, more new cracker plants and on-purpose units, especially in China, India, Taiwan, and Singapore (total nameplate capacity at about 4.3 million tons per year) came on stream in 2013 which helped the tight market condition to ease.

In 2013, the Olefins market was not too competitive in Asia. Severe competition was only seen in the first half of the year, mostly in regard to pricing. Due to the slowdown in market demand and uncertain global economic outlook.

Polymers Market

Overall, the average price of key Polymers products in 2013 increased from previous year. Although the Polymers prices were decreased in Q2 due to decreased feedstock prices and the sluggish demand in line with economic situation. In Q3, there were concerns over the reduced supply resulting from production stoppages of many producers in Asia while those in the Middle East exported their products to Asia less than expected. In addition increased demand from end-used producers in China to be used for the production of goods before Chinese New Year Festival in January 2014.This caused the Polymers market to be recovered in the end of year. To summarize, prices in 2013 for HDPE, LLDPE, LDPE, and PP products were an average of 1,488, 1,487, 1,534, and 1,517 USD per ton respectively.

EO-Based Product Market

Mono Ethylene Glycol (MEG) is a Commodity Product and used as a main feedstock for the production of Polyester - a main feedstock in downstream industries mainly textile and PET-bottle production sectors. As such, in general, the movement of the MEG market is

in line with the Polyester industry. The MEG market in 2013 remained tight due to the strong growth in product demand while there was no more new MEG supplies came on stream in 2013.

While Ethanolamine (EA) market in 2013 remained expanded due to the market demand for EA products in the household, personal care, and construction industries remain grow continuously. However, more new EA capacities in the Middle East can come on stream last year, resulting in the EA supply growth outpace the demand. As for the Fatty Alcohol Ethoxylate market in 2013, the product demand remained come from personal care and home care industries. However, this market growth was rather steady due to the economic control measures of China, along with a sluggish recovery of other regions, leading to more severe competition in the market.

Green Chemicals Market

In general, the global and domestic demand for Methyl Ester (ME) tends to be lower than the supply, mostly due to the policies and support from the government. In Thailand, an improvement was seen in the ME market as the government mandated to use Biodiesel B5 throughout the year (by mixing 5% of ME in Diesel). This led the demand for ME in 2013 to be at 0.86 million tons per year or an average increase of 10%. While the Fatty Alcohols and Glycerin markets in 2013, a consistent improvement were seen over 2012, reflecting the continuous demand growth for those products in the personal care industry.

Demand for Specialty Oleochemicals, comprising Ozone Acid, Green Polymers, Agro Green, Oilfield Chemicals, Biochemicals and Bioplastics, increased significantly. This was due mainly to the higher consumption levels of consumers, especially in the Asia Pacific region.

Specialty Chemical Products

The global economic slowdown in the beginning of 2013 was the main factor that pressured on the demand for Specialty Chemical products to be declined. Additionally, Phenol and Bis-phenol A (BPA) products were affected by the new plants in China, which started commercial production and the increase in Benzene and Propylene feedstocks prices at the end of the year. These effects caused the spread between the Phenol and its feedstock prices to decrease when compared to 2012. In regard to the Toluene Di-isocyanate (TDI) market, increased feedstock prices affected the margin of TDI producers to also shrink when compared to 2012.

Global Economic and Petroleum and Petrochemical Market Outlook in 2014

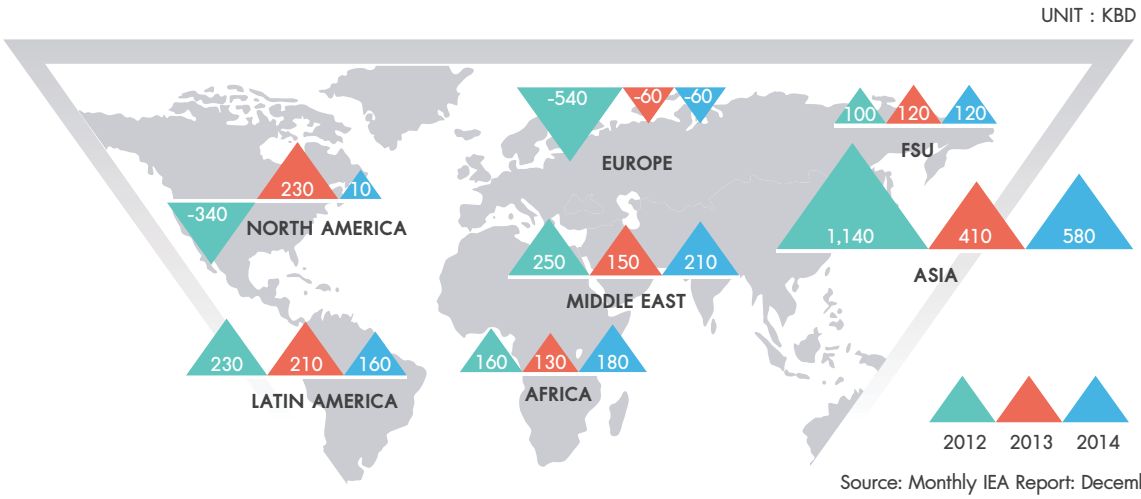
The IMF estimation is that the global economy in 2014 will expand approximately 3.7% (Estimation as of January 2014) which will occur at a slow pace. The U.S. economy continues to recover due to the increased consumption and investments in the real estate sector, and the labor sector where the unemployment rate is reducing. However, there remains a high risk regarding uncertainty of the gradual reduction in credit levels in the FED's QE measures, the public debt crisis affecting the GDP, and the government's spending cuts over a designated period: 2013 - 2021 (sequestration).

In regard to the European Zone economies, are expected to improve by 1.0%. The Euro depreciation will contribute to the economic expansion in Germany and France. However, some risks will also be happened, such as high unemployment rates and labor strikes over benefit cuts for expenditure control of the government sector in many countries. The economy in China is projected to expand slightly according to its measures to reduce overheating economic growth, aiming to achieve sustainable growth as per its 12th Five-Year Plan. China's economic growth rate will decrease from 7.7% in 2013 to 7.5% in 2014.

In addition, China is likely to enjoy positive factors from the global economic recovery as well as the increased consumption of key trading partners (such as the United States and Eurozone countries), as well as its domestic investments in public infrastructure, the urban community expansion and growth of the middle class.

The International Energy Agency (IEA) of the United States projects that in 2014 the global oil demand will increase from 2013 by 1.2 million barrels per day, to a total of 92.4 million barrels per day. This increased demand will come mainly from East Asia, the Middle East, and the former Soviet Union. The largest increase in demand for refined products is Diesel (about 60% of total demand growth), mainly from various industries in developing countries following Benzene and Naphtha demand respectively.

GLOBAL OIL DEMAND GROWTH 2012/2013/2014
(THOUSAND BARRELS PER DAY)

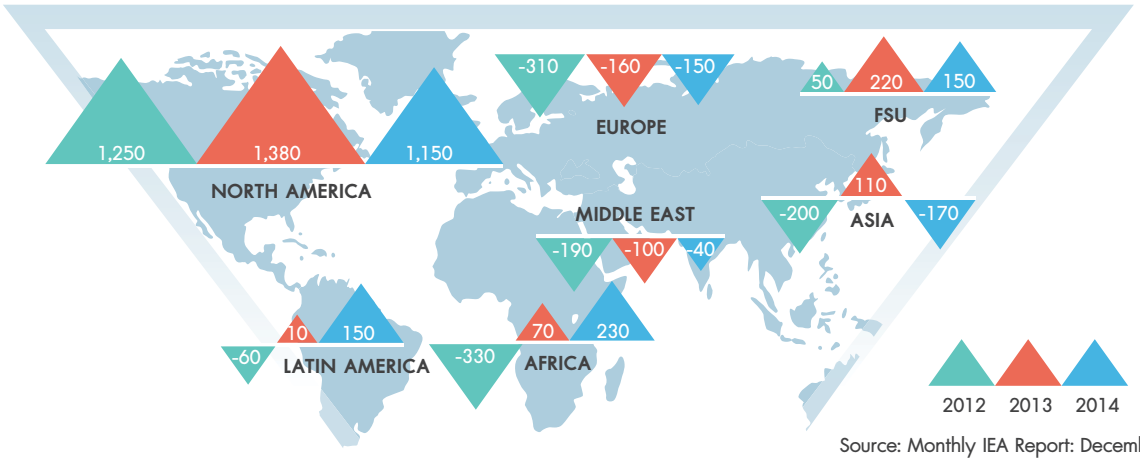


Source: Monthly IEA Report: December 2013

In addition, IEA expected the crude oil production from Non-OPEC members will increase by 1.7 million barrels per day, to a total of 56.5 million barrels per day, despite a slight decrease of 0.15 million barrels per day in the production from North Sea sources. This is the highest level of Non-OPEC production since 2010, with the increases in production being from Brazil and the United States. This resulted in less reliance on OPEC oil production, which decreased to 29.3 million barrels per day from 29.4 million barrels per day seen in 2012.

GLOBAL OIL SUPPLY GROWTH 2012/2013/2014 (THOUSAND BARRELS PER DAY)

UNIT : KBD



Source: Monthly IEA Report: December 2013

The petrochemicals market in 2014 is expected to be supported from the global economy recovery as a result of economic stimulus measures taken in the United States, China, and European countries. However, these markets are likely to be affected by a number of factors. These factors will include the volatility in crude oil and Naphtha feedstock prices, the scheduled shutdown maintenance of petrochemical plants, and the new plants in Asia, especially in China as well as in the Middle East will come on stream. All these factors will have effects on the price and margin of petrochemicals products throughout the year.

Regarding the outlook for markets of Green Chemicals, such as Based Oleochemicals (Methyl Ester, Fatty Alcohol, Glycerin), Specialty Oleochemicals (Ozone Acid, Green Polymers, Agro Green, and Oilfield Chemicals) including Biochemicals and Bioplastics, these markets are expected to gain advantage from the strengthening economies in Asia. Additionally, the demand for Green Chemicals tends to rise, and this leads to the continued growth of the market.

In regard to the Specialty Chemicals market outlook in 2014, the price and spread of products (Phenol & derivatives and TDI) will be pressured by the feedstocks (Propylene, Benzene, and Toluene) prices will remain at high level and more new plants in Asia, especially in China and South Korea will start up. However, the market demand expanding in line with the global economic recovery will encourage the product prices and markets to grow continuously.

MANAGEMENT'S DISCUSSION AND ANALYSIS

Executive Summary

In 2013, PTT Global Chemical Public Company Limited ("the Company") and its subsidiaries reported a net profit of 33,277 Million Baht (MB) with earnings per share (EPS) of 7.38 Baht per share, decreased 2% from year 2012, which reported a total net profit of 34,001 MB or earnings per share of 7.54 Baht per share. The performance details are summarized below.

Table: Performance summary

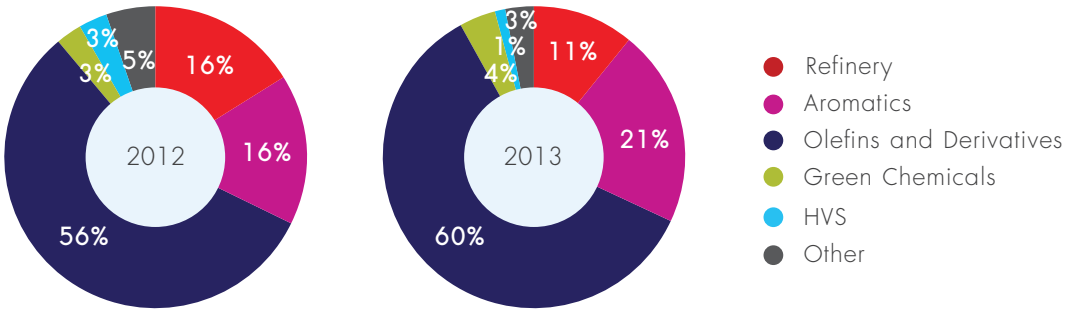
(Unit: Million Baht)	2012	2013	YoY %+/(-)	4Q/2013
Sale Revenue	562,811	549,189	-2%	154,599
EBITDA	57,168	58,362	2%	14,089
EBITDA Margin (%)	10%	11%	1%	9%
Net Profit	34,001	33,277	-2%	7,421
EPS (Baht/Share)	7.54	7.38	-2%	1.65
Dividend Paid (Baht/Share)	3.40	3.40**	-	-
Adjusted EBITDA*	56,993	55,333	-3%	12,763
Adjusted EBITDA Margin (%)	10%	10%	0%	8%

Note: * Adjusted EBITDA refers to EBITDA excluding impact of inventory value (excludes Inventory and NRV)

** The Board of Directors of PTT Global Chemical Public Company Limited at the Meeting No. 2/2014 held on February 18, 2014, passed the resolution to propose the 2014 Annual General Meeting of Shareholders for approval on the dividend payment for the year 2013 operating performance of Baht 3.40 per share or 46% of the net profit, of which Baht 1.62 per share was paid as an interim dividend on September 12, 2013 and the final dividend payment will be Baht 1.78 per share. However, the right to receive dividend is subject to the approval of Shareholders at the 2014 Annual General Meeting.

In 2013 the Company faced various challenges from both external and internal factors including the slow economic recovery as well as the following incidents: LDPE plant unplanned shutdown, Oil Spill and the shutdown of PTT's GSP#5 from lightning strikes. In addition, year 2013 was the first full year that the new formula of gas price for Olefins and derivatives was applied. This new gas price was formulated under the mutual agreement between the Company and PTT on a fair profit-sharing basis. Amidst the mentioned challenges, the Company was still able to deliver its operating performance slightly lower than previous year or a decrease in its net profit by 2%.

Adjusted EBITDA by business unit



56,993MB 55,333 MB

Adjusted EBITDA Margin (%)	2012	2013
Refinery	3	2
Aromatics	8	10
Olefins and Derivative	27	27
Green Chemicals	5	8
HVS	7	2
Average	10	10

In 2013, the Adjusted EBITDA (EBITDA excluding impact of inventory value) decreased from previous year by 3% mainly resulted from the 3 incidents mentioned earlier. However, the Company was able to maintain its Adjusted EBITDA margin at the same level as previous year at 10%. This was mainly contributed by Olefins and derivatives business with the highest portion of Adjusted EBITDA of which Adjusted EBITDA margin was able to be maintained as previous year at 27% although it was impacted by the adjustment of the raw material price (gas price) for the whole year, the unplanned shutdown of LDPE plant, and the shutdown of PTT's GSP#5.

The performance of the refinery business unit in 2013 decreased from the previous year due to the oil spill incident. Crude oil price was averaged at 105.52 USD/BBL in 2013, reduced by 3% from 2012. Moreover, the Jet-Dubai spread and Diesel-Dubai spread decreased by 2% and 6%, respectively. Sales volume also decreased with the utilization rate of CDU at 91% decreased from 100% utilization in 2012. With the prices and volume factors, the Market GRM of the refinery unit decreased to 3.52 USD/BBL (CDU GRM was at 4.37 USD/BBL and CRS GRM was at 2.87 USD/BBL) from 4.71 USD/BBL in 2012 (CDU GRM was at 5.84 USD/BBL and CRS GRM was at 2.97 USD/BBL).

The performance of the aromatics business unit in 2013 improved as a result of the prices and volume improvement. The paraxylene-condensate and benzene-condensate spreads were widen by 3% and 45%, respectively. In the meantime, the utilization rate of BTX increased to 90% from 86% in 2012 resulting in an increase of the P2F to 297 USD/ton BTX, increased by 16%.

The improvement in the P2F Margin (spread between the sales revenue and feedstock cost) indicated that the performance of Olefins and Olefins derivatives business unit improved in 2013. Such improvement has been influenced by the increased in the product prices in 2013, with an average HPDE price at 1,488 USD/ton, climbed up 8% from 2012. In addition, the utilization rate of Olefins plants increased to 90% from 88% in the previous year.

Additionally, in 2013, the Company has recorded the effects of the oil prices and currency exchange fluctuations. The Company recognized stock gain and NRV amounting to 3,029 MB, which was a result of the increased in oil price during the year and the depreciation of the foreign exchange. Moreover, the Company also recorded a foreign exchange loss of 2,272 MB due to the depreciation of Thai Baht against USD at 2.17 Baht per USD.

Summary of the Company's major events in 2013 as follows:

- On January 10, 2013, PTTUT amalgamated with IPT and became Global Power Synergy Company Limited (GPSC). At present, the Company holds 30.31% of GPSC.

- On April 3, 2013, IRPC Public Company Limited ("IRPC") and the Company signed memorandum of understanding (MOU) to jointly study the possibility of business opportunity in downstream petrochemical such as Polyol and Styrenic. The study is in accordance with the Company's strategy

- On April 4, 2013, the Company's shareholders approved the dividend payment for the year 2012 at the rate of 3.40 Baht per share, totaling 15,329 MB.

- Since April 2013, Myriant Corporation has completed the construction of a 14,000 ton/year Succinic Acid Plant in Louisiana State and is currently commissioning.

- Since April 2013, NatureWorks has completed the construction of the expansion capacity of PLA plant which increases the nameplate capacity of PLA from 140,000 ton/year to 150,000 ton/year.

- On May 2, 2013, the Company acquired 40% share of PTT Phenol Company Limited (PPCL) from PTT Public Company Limited (PTT) which resulted in the Company's 100% shareholding in PPCL. Subsequently, on June 21, 2013 the Board of Director of the Company approved PPCL to increase its capital for an investment in Phenol 2 project.

- On July 10, 2013, the Company shut down LDPE plant (capacity 300,000 tons per year) to repair the cylinder of the Booster/Primary Compressor. The plant came back in operation on September 26, 2013.

- On July 27, 2013, a leakage in the flexible hose was found while discharging crude oil resulted in oil spill of approximately 54,000 liters. The Company has completed the cleaning of oil slick and recorded expenses and provision related to the incident.

- On August 14, 2013, there were lightning strikes on the equipment of PTT's Gas Separation Plant Unit 5 ("GSP#5"). This resulted in cease of its operation, and being unable to feed raw materials for production to the Company. The GSP#5 has came back on 50% operation since October 21, 2013.

- On August 16, 2013, the Company's Board of Directors has approved a resolution for the payment of interim dividend for the first 6-month period of 2013 at the rate of 1.62 Baht per share.

- On October 1, 2013, Mr. Bowon Vongsinudom, President, was appointed the Chief Executive Officer and Secretary to the Board of Directors and acting President.

- On December 10, 2013, the Company signed JV agreement for conduct both PT Pertamina's (Persero) and PTTGC's polymer products marketing and distribution throughout Indonesia and signed head of agreement in a joint investment in construction of world-scale petrochemical complex which is expected to be commissioning in 2018.

- On December 24, 2013, the Company exercised right to purchase Myriant Corporation's shares from existing shareholder in total of 6,049,443 shares for 25.44% of registered capital at the investment cost of 6,691,569 USD and this resulted in the Company's shareholding in Myriant of 72.62% from 47.18%. Also, Myriant has purchased shares from a group of existing shareholders of 3,406,569 shares and reduced its issued and outstanding capital by cancellation of those purchased shares. As a consequence, the Company currently holds 84.21% of Myriant.

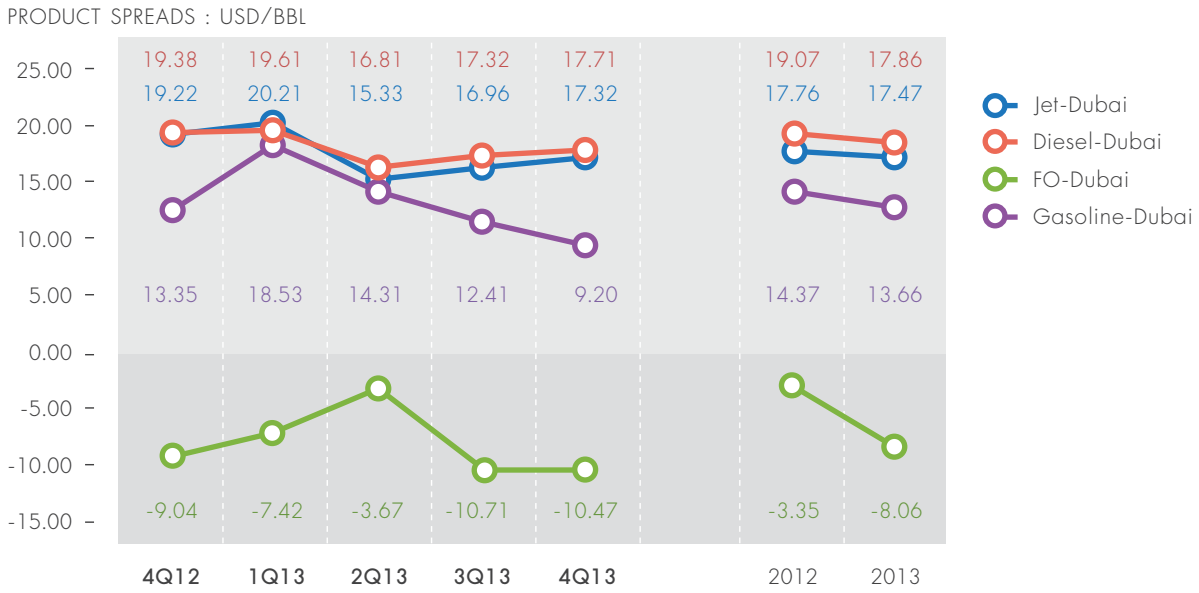
The events that had significant impact on the financial statements of 2012 and 2013 are as follows:

- On May 2, 2013, the Company acquired 40% share of PPCL from PTT which resulted in the Company's 100% shareholding in PPCL. Subsequently, non-controlling interest of PPCL decreased from 40% to 0%.

- On January 10, 2013, PTTUT amalgamated with IPT and became GPSC which diluted the Company's shareholding portion from 60% to 30.31%. In this regard, the Company has changed the method of recording transactions from recognition of all revenue & expenses of PTTUT's profit and loss into the Company's consolidated financial statement (Consolidation) to realizing only gain/loss of the investment portion into the Company's financial statements (Take equity). This method has been applied since 1Q/2013. However, year-on-year comparison is based on different accounting basis.

- On December 24, 2013, the Company exercised right to purchase Myriant Corporation's shares from existing shareholders. In addition, Myriant had diluted their equity, as a result, portion of the Company's shareholding in Myriant changed from 47.18% to 84.21%. Consequently, Myriant became the Company's subsidiary. This share purchase will enable the Company to support business management of Myriant in order to achieve transformation into its Biotechnology Research and Development Center as well as to strengthen its fundamentals for commercial production in the future.

Petroleum Market Overview



PRODUCT SPREADS : USD/BBL	2012	2013	YoY % +/(-)
Jet-Dubai	17.76	17.47	-2%
Diesel-Dubai	19.07	17.86	-6%
FO-Dubai	-3.35	-8.06	-140%
Gasoline-Dubai	14.37	13.66	-5%

In 2013, Crude oil price fluctuated in the range of 95 - 115 USD/BBL. Dubai crude averaged at 105.52 USD/BBL in 2013, decreased from the previous year by 3.55 USD/BBL. The lower crude oil price was resulted from higher supply of Shale Oil products from Non-OPEC member which largely increased its production by 1.2 MBBL per day and tended to increase production capacities in the future.

The average Jet-Dubai spread in 2013 was at 17.47 USD/BBL, decreased from previous year by 0.29 USD/BBL or 2% decrease. The average Diesel-Dubai spread in 2013 was at 17.86 USD/BBL, decreased from year 2012 by 1.21 USD/BBL or 6% decrease. This was due to uncertainty in Europe economic recovery, lower demand of Jet fuel during holiday season, and the later winter season in the year.

The average Gasoline-Dubai spread in year 2013 was at 13.66 USD/BBL, decreased from previous year by 0.71 USD/BBL. The spread continued to reduce after ending of U.S. holiday season in 3Q/2013. Also, the ending of Ramadan season caused a drop in Indonisia import to 8-8.5 MBBL/day from previous level of 10-12 MBBL/day. In addition, local demand was lower from the reduction of subsidies on domestic retail fuel prices and weak currencies which made imports more expensive.

The average Fuel Oil-Dubai spread in year 2013 was at -8.06 USD/BBL with higher deficit of 4.71 USD/BBL. This was resulted from demand of Fuel Oil in Japan for power generation which substituted nuclear power plant has started to decrease gradually. Moreover, demand for marine Fuel Oil from a cargo ship was at a reduced rate and capacity of independent refineries in China

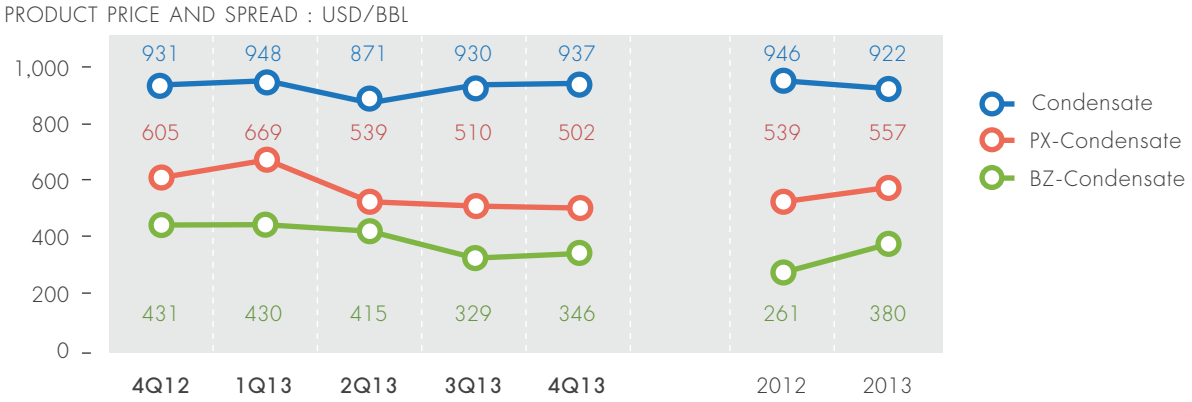
(Teapot Refineries) decreased from government policy that wants to reduce the number of small refineries with low efficiency causing higher crude reserve in China.

2014 Market Trend

The International Energy Agency (IEA) of the United States forecasts 2014 market trends of petroleum products that the global consumption of petroleum will increase from 2013 by 1.2 MBBL/day to a total of 92.4 MBBL/day. This increasing demand is mainly from East Asia, the Middle East and the former Soviet Union, while diesel will be the product with the highest growth (about 60% of total demand growth), mainly from many industries in developing countries, followed by demand growth of gasoline and naphtha.

Meanwhile, IEA forecasts that the production for crude oil among Non-OPEC members is expected to increase by 1.70 MBBL/day, to a total of 56.5 MBBL/day. This is the highest level of production since 2010, with the largest increases in production mainly from Brazil and the United States. Meanwhile, crude oil production from the North Sea is declining marginally by 0.15 MBBL/day. As a result, this reduces dependency on oil from OPEC to about 29.3 MBBL/day from 29.4 MBBL/day in 2012.

Aromatic Market Overview



PRODUCT PRICE AND SPREAD : USD/BBL	2012	2013	YoY % +/(-)
PX-Condensate	539	557	3%
BZ-Condensate	261	380	45%

In 2013, the global supply of paraxylene (PX) increased by 2.3 M.Tons in Asia. However, the increase was not sufficient for the demand of PX used in production of new PTA capacities in China, Indonesia and Brazil. In addition, many new paraxylene capacities with start-up plan in China, India, and Saudi Arabia have been postponed totaling to 2.5 M.Tons/year. This has resulted in supply tightness and uplifting of PX price in 2013. As a result PX-condensate spread averaged at 557 USD/ton in 2013, 3% increase from previous year at 539 USD/ton.

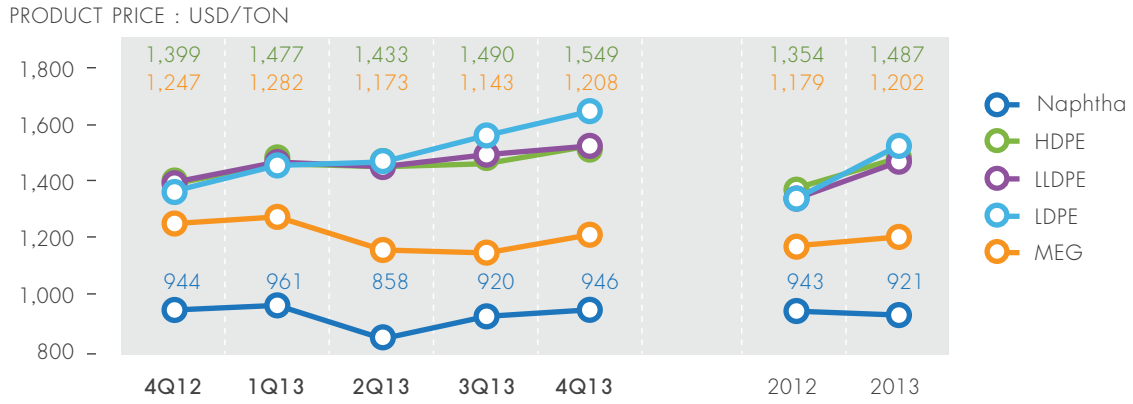
The global demand for benzene (BZ) in year 2013 increased by 1.3 M.Tons/year or 3.0% increase to 43.4 M.Tons/year from the increasing import for expanding automotive industry in China and U.S. Meanwhile, supply of BZ in year 2013 tightened as a result of the shortage of feedstock for BZ production such as reformate and pyrolysis gasoline as well as the cut run of refineries and naphtha crackers. In 2013, the average BZ-condensate spread significantly increased to 380 USD/ton from 261 USD/ton or 45% increase.

2014 Market Trend

In year 2014, demand for PX in Asia is forecasted to grow by 2.7 M.Tons/year to the total amount of 34.6 M.Tons/year or 8.3% increase, while supply of Asia inclines to grow by 3.2 M.Tons/year to the total amount of 33.0 M.Tons/year or 10.6% increase. Considering the total demand and supply amount, Asia still will have supply deficit of 1.6 Mton even though the marginal demand is less than marginal supply in 2014.

In 2014, the demand of BZ product will climb up by 1.5 M.Tons/year to the total amount of 44.6 M.Tons/year. This results from continuous growth in automotive and construction industries in U.S., Europe and China. Meanwhile, supply side in year 2014 will expand by 2.8 M.Tons/year to the total amount of 62.5 M.Tons/year from new capacities of aromatics plants in the future.

Olefins and Olefin Derivatives Market Overview



PRODUCT PRICE : USD/BBL	2012	2013	YoY % +/(-)
Naphtha	943	921	-2%
HDPE	1,380	1,488	8%
LLDPE	1,354	1,487	10%
LDPE	1,362	1,534	13%
MEG	1,179	1,202	2%

Ethylene and Derivatives Market Overview

In 2013, the ethylene market price averaged at 1,352 USD/Ton, increased from previous year by 132 USD/Ton. The increase was due mainly from an increase of crude oil price and naphtha price, which resulted from a political unrest situation in OPEC countries. In addition, ethylene supply remained tight from the reduction of some Asian cracker due to technical problem. Moreover, the ethylene supply to Asia from the Middle East has diminished from transportation and production difficulty. On the other hand, there were factors which pressure ethylene price to decline such as demand of derivative products has soften due to uncertainty of economic and the supply increase from 3 new crackers of total new capacity of 1.6 M.Tons/year.

Polyethylene price increased in 2013, High-Density Polyethylene (HDPE) price, Linear Low-Density Polyethylene (LLDPE) and Low-Density Polyethylene (LDPE) rose to 1,488 USD/ton (8% increase), 1,487 USD/ton (10% increase) and 1,534 USD/ton (13% increase), respectively. This has resulted from shutdowns of production in Asia and lowers than expected supply from the Middle East due to production problem and sanction. During the year, even though there were some economic uncertainty but economic index improved and so buyers' confidence especially toward the end of the year when demand in Chinese market has picked up to stock for yearend season and Chinese New Year. Naphtha price in 2013 decrease 2% from last year, hence, polymer spread over naphtha increased, HDPE-naphtha was at 566 USD/Ton, a 30% increase from 2012.

Monoethylene Glycol (MEG) is a commodity product and used as feedstock for polyester and downstream product such as textile and PET bottle. As such, the market for MEG generally moves in line with the polyester industry which softens in Asia. In regards to the supply of MEG product in 2013 was tight as there were no new capacity of MEG in the market in 2013 and resulted in an increase in MEG price at 2%, averaged of 2013 was at 1,202 USD/ton.

2014 Market Trend

The outlook for the polymer markets in year 2014 are expected to be bullish, due to a 6% growth of Asian economy which will be mainly driven by Chinese economy. In addition, 2014 production in Asia is expected to be less than demand, hence, volume from the Middle East will still be imported into the region. However, there are risk factors which will impact the overall polyethylene in Asia such as lackluster consumer confidence of economies and deficit in Indonesia's current account and trade balance.

In 2014, the outlook for MEG market price will tend to move up as a result of polyester market which forecasted to increase in the future following recovering economy.

Performance Analysis by Business Unit

Refinery Business Unit

Table: Refinery Intake

	2012	2013	YoY % +/(-)	4Q/2013
Crude (M.BBL)*	53.26	48.34	-9%	13.72
(KBD)**	145.92	132.44	-9%	149.13
Condensate Residue & Others (M.BBL)	18.61	19.96	7%	6.38
(KBD)	50.99	54.68	7%	69.35
Total Intake (M.BBL)*	71.87	68.30	-5%	20.10
(KBD)	196.90	187.12	-5%	218.48
CDU Utilization Rate	100%	91%	-	103%

CDU Capacity = 145 KBD
Condensate Residue Splitter Capacity = 58 KBD

* Million Barrel
** Kilo Barrel per Day

Performance of refinery business unit in 2013 declined from last year due to decline in market product spreads and there also was a planned shutdown of the Company's refinery. However, in 2013, the Company incurred extra expense related to oil spill incident, on the other hand, a gain from realization of stock gain.

In 2013, the Refining CDU utilization rate was at 91% compared to 100% in 2012, due to the maintenance shutdown of 38 days in 2Q/2013 and the maintenance shutdown for Hydrocracking Unit of 9 days in 3Q/2013.

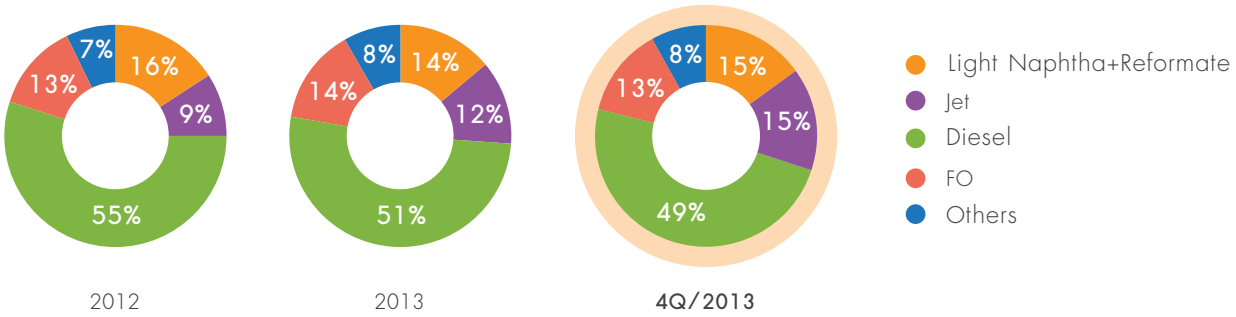
This led to the Company total intake of 187.12 KBD, of which 71% was crude intake and 29% was other feed intake, decreased 5% from the previous year due to the lower utilization

Over all averaged refinery product spread decreased. Diesel-Dubai spread decreased 6%, Jet-Dubai decreased 2%, and Fuel Oil-Dubai spread decreased 140%. The mentioned 3 products total to 77% of all petroleum product sales in 2013.

Table: Petroleum Sales

Unit: '000 BBL	2012	2013	YoY % +/(-)	4Q/2013
Light Naphtha	5,677	5,005	-12%	1,515
Reformate	5,494	3,701	-33%	1,220
Jet	6,293	7,472	19%	2,641
Diesel	38,799	31,005	-20%	8,806
Fuel Oil	9,245	8,507	-8%	2,381
Others	5,210	5,048	-3%	1,456
Total	70,717	60,738	-14%	18,018

Petroleum Sales Portion



2012 2013 4Q/2013

For the reasons mentioned above, the Market GRM of the refineries (excluding inventory gains and Hedging) decreased from 4.71 USD / barrel (the CDU GRM at 5.84 USD/BBL and CRS GRM at 2.97 USD/BBL) in 2013 to 3.52 USD/BBL (CDU GRM at 4.37 USD/BBL and CRS GRM at 2.87 USD/BBL) in 2012, down 25%.

Unit : USD/BBL	2012	2013	YoY % +/(-)	4Q/2013
Market GRM	4.71	3.52	-25%	3.42
CDU GRM	5.84	4.37	-25%	4.31
CRS GRM	2.97	2.87	-3%	2.98
Hedging Gain/(Loss)	0.35	0.78	123%	0.78
Stock Gain/(Loss) Net NRV	-0.30	0.84	+380%	1.11
Accounting GRM	4.76	5.14	8%	5.30

In 2013, the Company has gain on commodity hedging of 0.78 USD/BBL. In addition, from a continuous increase in crude oil price especially in 3Q/2013, the Company reported gain on stock net NRV of 0.84 USD/BBL while 2012 reported a stock loss net NRV of 0.30 USD/BBL. As a result, the Company's reported Accounting GRM of 5.14 USD/BBL while reported 4.76 USD/BBL in 2012, 8% increase.

On July 27, 2013, a leakage in the flexible hose was found while discharging crude oil resulted in oil spill of approximately 54,000 liters or equivalent to 340 BBL. The Company has completed the cleaning of oil slick. In this regard, the Company has also set up measures to take care of environment, community as well as improvement in standard of operations. In addition, the Company has recorded expense and provision related to the incident in 3Q/2013 in total amount of 1,059 MB of which 241 MB was for recovery expense, 736 MB was for restoration and 82 MB for other expenses.

Aromatics Business Unit

Table: Aromatics Intake and Productions

	2012	2013	YoY % +/(-)	4Q/2013
Total Intake ('000 Tons)	5,911	6,012	2%	1,580
BTX Production ('000 Tons)	2,014	2,094	4%	545
BTX Utilization Rate	86%	90%	-	93%

Aromatics capacity 2.259 M.Tons/Year

In 2013, performance of aromatics business unit improved from the previous year with adjusted EBITDA increased 23% mainly due from the increase in both price and volume. The utilization rate of aromatics (BTX Utilization) increased to 90% in 2013 from 86% in 2012 which was due to the planned shutdown of aromatics in 1Q/2013 for 36 days whereas in 2013 there was shutdown of only some production units.

Aromatics unit has feedstock input of 6.0 M.Tons in 2013, increase 2%from 2012 in accordance to an increase in utilization rate.

Moreover, sales of BTX increased 4% from 2012 while PX and BZ sales portion was in the same level as prior year. As so, in 2013 PX sales was 36% and BZ sales was 18% of total sales volume, together with another 2% of other BTX sales, total BTX sales accounted for 56% of total aromatics sales.

Table: Aromatics Sales Volume

	2012		2013		YoY	4Q/2013	
	'000 Ton	%	'000 Ton	%	% +/(-)	'000 Ton	%
Benzene (BZ)	595	18%	610	18%	3%	174	21%
Paraxylene (PX)	1,141	35%	1,196	36%	5%	309	37%
Other BTX products	66	2%	64	2%	-2%	18	2%
Total BTX Products	1,803	55%	1,871	56%	4%	501	60%
Cyclohexane	183	6%	175	5%	-4%	28	3%
Naphtha and Reformate	786	24%	930	28%	18%	255	30%
Condensate Residue	49	1%	20	1%	-59%	-	0%
Other By-Products	441	14%	350	10%	-21%	52	6%
Total	3,262	100%	3,346	100%	3%	836	100%

Aromatics product spread in 2013 increased where PX-condensate increased 3% and BZ-condensate increased 45%.

Table: Aromatics market P2F

Unit: USD/Ton	2012	2013	YoY % +/(-)	4Q/2013
Market P2F	257	297	16%	222
(LCM)/LCM Reversal	-	-	N/A	-
Hedging Gain/(Loss)	(1.58)	(0.19)	88%	-
Stock Gain/(Loss)	12.57	17.47	39%	26.94
Accounting P2F	268	314	17%	249

As a result from movement of price and quantity mentioned above, aromatics business unit performance in 2013 improved illustrated by an increased in P2F to 297 USD/Ton BTX in 2013 from 257 USD/Ton BTX in 2012 or 16% increase. In addition, aromatics unit has gained from stock net NRV of 17.47 USD/Ton BTX, up from 2012 at 12.57 USD/Ton BTX. As a consequence the Company reported accounting P2F at 314 USD/Ton, 17% increase from 2012.

Olefins and Olefins Derivative Business Unit

Table: Sales volume and utilization rate of Olefins and derivatives

	2012		2013		YoY % +/(-)	4Q/2013	
	Sales Volume '000 Tons	Utilization Rate	Sales Volume '000 Tons	Utilization Rate		Utilization Rate	Sales Volume '000 Tons
Olefins*	748	88%	756	90%	(4%)	190	90%
HDPE	778	99%	834	104%	7%	217	106%
LLDPE	396	100%	397	100%	0%	107	103%
LDPE	273	88%	218	70%	(20%)	47	76%
Total Polyethylene	1,447	97%	1,449	99%	0%	371	111%
MEG	350	88%	372	94%	6%	89	86%

Note: * Sales Volume of Olefins is external sales volume.

In 2013, the Company had improvement in operating performance of Olefins and derivatives from the increasing price and production volume. HDPE price was averaged at 1,488 USD/ton increased by 8% from previous year, and the utilization of Olefins plants increased to 90% from 88% in the previous year despite the effect of feed stock interruption resulted from PTT's GSP#5 shutdown. The Company was able to maintain adjusted EBITDA margin for Olefins and derivatives business unit at 27%, same level as previous year, the ratio for feed stock gas : naphtha was 90:10 compared to the ration in 2012 of 87 : 13 due to the planned shutdown of Olefins I4/1, the naphtha cracker which resulted in lower portion of naphtha feed in 2013.

Performance: HDPE

In 2013, the utilization rate of 3 HDPE plants was totaled to 104% increased from 99% in 2012 due to the fact that planned shutdown of HDPE plant in 2013 totally took 45 days (HDPE I-1: 15 days and BPE: 30 days), while the shutdown of HDPE plant in 2012 took 71 days (HDPE I-1: 15 days and BPE: 56 days). The operating performance of HDPE in 2013 was improved from 2012 due mainly to the increase in sales volume and higher price. HDPE sales volume increased by 7%, while its price was averaged at 1,488 USD/ton increased by 8% from 2012 which resulted in an increase in HDPE sales revenue by 12%

Performance: LLDPE

In 2013, the operating performance of LLDPE was improved from 2012 due mainly to the maintained production and sales volume. Also, the utilization rate of LLDPE in 2013 was at 100% equal to that of 2012 in line with sales volume, while LLDPE price in 2013 was averaged at 1,487 USD/ton increased 10% from 2012. As a result, the revenue from LLDPE sales in 2013 increased by 12% from previous year.

Performance: LDPE

The utilization rate of LDPE plant in 2013 was down to 70% from 88% in 2012 due to the unplanned shutdown of LDPE plant to repair the cylinder of the Booster/Primary Compressor of LDPE plant 77 days from July 10, 2013 to September 25, 2013, while LDPE price increased in 1,534 USD/ton or increased by 3% from 2012. As a result, the revenue from LDPE sales in 2013 decreased by 15% from previous year.

Performance: Ethylene Oxide

The overall operating performance of Ethylene Oxide group declined due mainly to the decreasing price though the total sales volume increased in 2013. The utilization rate of Ethylene Oxide in 2013 increased to 106% from 101% in the previous year.

The total production capacity of Ethylene Oxide (feed stock for Ethylene Glycol (EG) products including MEG, DEG, TEG and EO derivatives: Ethoxylate and Ethanolamine) is 335,925 tons as of 2013 with the MEG portion of 79% of total Ethylene Oxide Equivalent (EOE) while the utilization rate of MEG in 2013 was 94% increased from 88% in 2012 (The reference for calculation of this utilization rate was the total capacity of 395,000 tons per year.) due to fact that the extended MEG capacity of 95,000 tons per year had not been back in normal operation in 2012.

In addition, MEG price decreased and also MEG-Ethylene spread was down by 15% to 323 USD/ton which resulted in a decline of the Ethylene Oxide business performance in 2013 compared to that of 2012 with 2% decrease in EBITDA from previous year.

Utilization rate and sales of EO

	2012	2013	YoY % +/(-)	1Q/2013	2Q/2013	3Q/2013	4Q/2013
Sales Volume ('000 Ton)	338	356	5%	84	96	90	86
Utilization Rate	101%	106%	5%	111%	112%	103%	98%

Operating Performance

		2012		2013		YoY		4Q/2013	
		MB	%	MB	%	MB	%	MB	%
Sales Revenue		562,811	100	549,189	100	-13,622	-2	154,599	100
Feedstock Cost		-468,595	-83	-444,890	-81	23,705	5	-128,428	83
Product to Feed Margin		94,216	17	104,299	19	10,083	11	26,172	17
Variable Cost	(1)	-17,148	-3	-26,610	-5	-9,462	-55	-7,407	5
Fixed Cost	(2)	-15,554	-3	-16,992	-3	-1,438	-9	-4,785	3
Stock Gain/(Loss) & NRV	(3)	175	0	3,029	1	2,854	N/A	1,326	1
Gain/(Loss) Hedging Commodity	(4)	659	0	1,626	0	967	147	499	0
Other Income	(5)	5,552	1	5,581	1	29	1	1,660	1
SG&A	(6)	-10,732	-2	-12,571	-2	-1,839	-17	-3,375	2
EBITDA		57,168	10	58,362	11	1,194	2	14,089	9
Depreciation & Amortization	(7)	-16,647	-3	-16,670	-3	-23	-0	-4,381	3
EBIT		40,521	7	41,692	8	1,171	3	9,708	6
Financing Expenses		-5,523	-1	-4,525	-1	998	18	-1,146	1
FX Gain/(Loss)	(8)	911	0	-2,272	-0	-3,183	-349	-794	-1
Shares of gain/(loss) from investments	(9)	-44	0	-78	0	-34	-77	-16	0
Corporate Income Tax	(10)	-1,416	0	-1,976	0	-560	-40	-557	0
Net Profit After Income Tax		34,449	6	32,841	6	-1,608	-5	7,227	5
Portion of Net Profit:									
Shareholders		34,001	6	33,277	6	-724	-2	7,421	5
Minorities		448	0	-436	0	-884	-197	-194	0
Adjusted EBITDA*		56,993	10	55,333	10	-1,660	-3	12,763	8

Note: * Adjusted EBITDA refers to EBITDA excluding impact of inventory value (excludes Inventory and NRV)

Performance Comparison 2013 VS 2012

(1) Variable Cost

Variable cost increased 9,462 MB or 55% increase mainly due from the change in the proportion of investment in PTTUT, and the change in the method to recognize the performance of GPSC (PTTUT amalgamation) from consolidation to take equity. Previously, the cost of electricity and steam purchased from GPSC were not in the consolidated financial statement. After the change in the proportion of investment in GPSC, and its status from the Company's subsidiary to associate, this transaction was realized as the Company cost in the consolidated financial statement with an increasing amount of 7,338 MB or 43%. In addition, international business has an increase in variable cost of 2,356 MB of which was largely from Vencorex and NatureWorks in total of 2,187 MB as the investments were done in May 2012.

(2) Fixed Cost

Fixed cost increased 1,438 MB or 9% increased from an increase in fixed cost of NatureWorks and Vencorex of 1,605 MB. As the investment was made on May 31, 2012, fixed cost for the 2 companies were recorded for 7 months in 2012 and full year for 2013. The increased portion was related to expense on human resource of 839 MB, maintenance and labor of 629 M and other fixed operating cost of 137 MB. In addition, fixed cost of PTTUT decreased 504 MB from the change in percent shareholding which resulted from accounting treatment for GPSC (formally known as PTTUT) from consolidation to take equity.

(3) Stock Gain/ (Loss) and NRV

Stock gain for 2013 was reported at 3,029 MB which comprised of stock gain of 3,139 MB (Aromatics stock gain of 1,391 MB and refinery stock gain of 1,748 MB) and NRV loss of 110 MB while in 2012 the Company reported stock gain of 99 MB and NRV gain of 76 MB. Stock gain in 2013 resulted from an increase of crude oil price from the beginning of the year at 106 USD/BBL to close at averaged of 108 USD/BBL. In addition, after the planned shutdown in 2Q/2013, crude oil price significantly improved and resulted in huge stock gain in 3Q/2013. However, when comparing crude oil price at the beginning and end, the different is minimal but with additional impact of soften Thai Baht against USD, the change in foreign exchange incurred more gain on stock gain in 2013 while change in both crude oil price and foreign exchange in 2012 leveled.

(4) Gain/(Loss) Commodity Hedging

Gain from Commodity Hedging increased 967 MB due to crack spread hedging that the Company did to hedge the Company's margin to the targeted level. In 2013, the actual petroleum spread was lower than the level the Company sells forward. The targeted GRM hedged was at 5.7 USD/BBL while actual GRM-Crude was at 4.4 USD/BBL. In addition, the Company hedge crack spread in the volume of 18 MBBL (27% of 2013 total petroleum sales) resulted in gain in hedging in 2013 higher than 2012 where crack spread was hedged for 9.4 MB (13% of 2013 total petroleum sales) therefore, gain from commodity hedge in 2012 was only at 659 MB.

(5) Other Income

Other income increase by 29 MB or 1% mainly due to the increase in other income including actuarial gain from decrease in employee benefit liability of Emery 141 MB as a result of discount rate assumption used that has increased due to an increase in interest rates of the United States and Europe. Moreover, there was gain from step up acquisition of 197 MB from the purchase of

shares in Myriant increasing the Company's shareholding in Myriant to change from 47.18% to 72.21% and changes Myriant from an associate to subsidiary. Whereas in 2012, there was adjustment in accounting transaction of employees' benefit on a share base program of 210 MB for Myriant and there was gain on bargain purchase from investment in Vencorex of 944 MB, which the whole amount was recognized as revenue in 2012 while in 2013 there was no such transaction.

(6) SG&A

In 2013, SG&A expenses increased by 1,839 MB or 17% mainly from the expenses related to the Oil Spill of 1,059 MB. Moreover, there was an increase of SG&A for Vencorex and Natureworks amounting to 801 MB from the investment in those companies since May 31, 2012. Whereas, in 2012 SG&A expenses from both companies was included for only 7 month while in 2013 the expenses was recognized for the full year. In addition, the incremental was from higher selling expenses of 361 MB, reduction of PTTUT SG&A of 170 MB from the change in method of performance recognition of PTTUT from Consolidation to Take Equity from lower shareholding portion in PTTUT.

(7) Depreciation and Amortization

Depreciation and amortization increased by 23 MB which was mainly from the decrease in depreciation and amortization of PTTUT of 926 MB and from the change in method of performance recognition of PTTUT from Consolidation to Take Equity from lower shareholding portion in PTTUT, whereas, the Company realized higher depreciation and amortization of 768 MB from the investment in Vencorex and Natureworks since May 31, 2012. In addition, for year 2012, there was higher depreciation and amortization of refinery, olefins and polymers business unit of 211 MB from complete construction of some projects and maintenance of plants.

(8) Gain/(Loss) from Foreign Exchange

In 2013, the Company reported loss in foreign exchange of 2,272 MB due mainly to soften of Baht of 2.17 Baht/USD or 7% softer (Reference BOT exchange as at year end 2013 at 32.95 Baht/USD and at year end 2012 at 30.78 Baht/USD) while, 2012 reported gain from foreign exchange of 911 MB from strengthen Baht of 1.05 Baht/USD or 3% strengthen (Reference BOT exchange as at year end 2012 at 30.78 Baht/USD and at year end 2012 at 31.83 Baht/USD) while the Company has foreign liability at end of 2013 was at 1,380 USD. However, the Company has hedging policies to use hedging instrument such as CCS and Sell Buy Forward which resulted in foreign exchange loss of 2,272 MB.

(9) Gain/(Loss) from Share of Investment

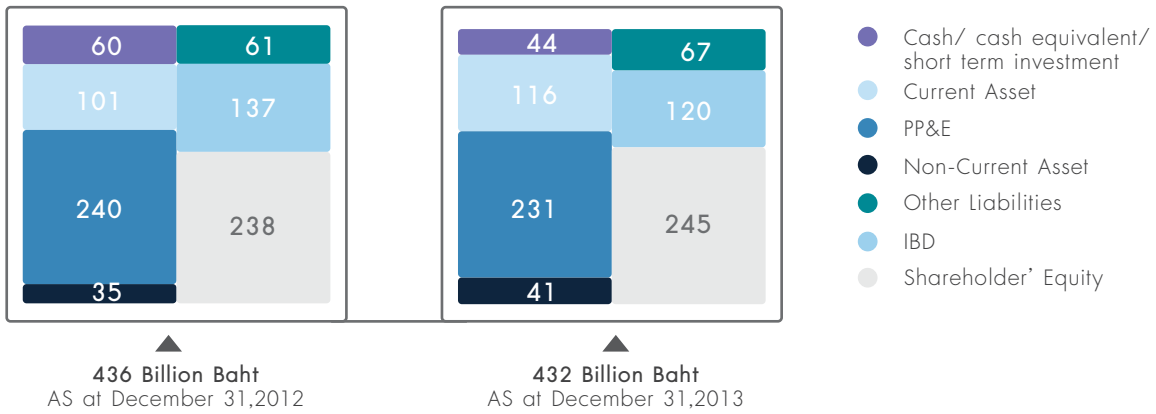
In 2013, the Company realized loss from investment of 78 MB which comprised of loss from Myriant 597 MB, gain from PTTICT of 88 MB, gain from PTTPM at 66 MB, and gain from GPSC of 327 MB while in 2012 the Company realized loss from investment of 44 MB.

(10) Corporate Income Tax

Corporate income tax increased 560 MB or 40% increased (Effective tax rate: ETR increased from 4% in 2012 to 6% in 2013) due mainly to tax privilege exercised from GT NOX project, thus causing lower corporate income tax than usual. In addition, HDPE I-1 plant tax privilege has expired since August 2012 from the expiry of BOI (Tax relief for CIT for 8 years) resulted for CIT of 10% (50% relief for normal CIT at 20%)

Statement of Financial Position

Unit : Billion Baht



Asset

As at December 31, 2013, the Company had total asset of 432,362 MB decreased 3,700 MB or decreased 1% from December 2012 which due mainly to decrease in current asset of 377 MB and non-current asset decreased 3,323 MB.

1) Current asset decreased 377MB mainly due to the following reasons.

- Cash, cash equivalent, and short term investment decreased 15,677 MB or 26% decrease, mainly due to an investment in PPCL of 4,644 MB (Increased in shareholding portion from 60% to 100%), investment in additional share of GPSC of 1,818 MB. Cash and cash equivalent items of PTTUT decreased 3,590 MB, mainly due to changing structure and shareholders' ratio which affected to the transforming of financial report practices in compliance to the generally accepted accounting standards. PTTGC thus changed from consolidated financial methodology to be Taking Equity methodology. In addition, declining in cash and cash equivalent was also resulted from repayment of principal, refinancing of interest, and dividend payment which totally accounted for 33,526 MB and cash outflow for purchasing news asset of 17,082 MB. While, cash generated from operations was 46,186 MB.
- Account receivable increased 5,647 MB or 11% increase; this was mainly due to an increase in account receivable of petroleum product 4,948 MB or 26% increase from an increase of 1.0 M.BBL in jet and bio-diesel export volume. In addition, Baht soften from prior year 5%. However, account receivable of Aromatics business unit decreased 584 MB from a decrease of light naphtha sales as light more light naphtha was sent to olefins plant for production.

	YE 2012 (Day)	YE 2013 (Day)	+/(-) (Day)
AR Turnover	30	37	7

- AR Turnover for 2013 averaged at 37 days, 7 days increased from 2012 which was due mainly to an increase in AR days in every business unit, especially from Refinery business unit which AR days increased from averaged at 24 days to 32 days in 2013. This was resulted from an increase in export portion in comparison to prior year. Export credit term is in nature to be longer than domestic sales.

- Inventory increased 9,191 MB or 22% increase mainly due to an increase in inventory of Petroleum business unit in total of 5,095 MB, Crude inventory intake rose by 1.79 M.BBL and intermediate product rose by 0.4 MBBL compared to the end of year 2012. Inventory of Olefins and Polymer business unit increased 1,500 MB mainly from inventory of polymer product.

	YE 2012 (Day)	YE 2013 (Day)	+/(-) (Day)
Inventory Turnover	20	23	3

- Inventory turnover for 2013 from an analysis of production and sales plan of preceding month averaged at 23 days, increased from end of year 2012 as 20 days due mainly to stocking of inventory in preparation of Polymer and EO/EG planned shutdown in the beginning of year 2013.

2) Non-current asset decreased 3,323 MB or 1% decrease which due mainly to:

- Plant property and equipment decreased 9,248 MB or 4% decrease from total PTTUT asset value 17,558 MB due to change in accounting policy and depreciation within the period increase 13,224 MB. However, there was an increase in new asset and work in progress of 21,495 MB from an increase in plant turnaround which partially realized as asset and an increase in project values.

- Non-current asset increased 5,925 MB or increased 17% due mainly from an increased in investment in associates 6,398 MB from change in shareholding structure in PTTUT from 60% to 30.31% resulting in the change in investment from being a subsidiary (with elimination) to an investment in associates. In addition, an increase in GPSC equity of 1,818 MB.

As at December 31, 2013, the Company had total liability of 187,129 MB, decreased 10,888 MB or 5% decrease from December 31, 2012 which resulted from a decrease in non-current liabilities of 24,450 MB and an increase in current liability of 13,562 MB.

1) Current liabilities increased 13,562 MB or 19% increase from the following reasons:

- Short term loan from financial institution increased 1,730 MB or 60% increase, due to full amount increase in short term loan of Vencorex and Emery.
- Account payable increased 7,170 MB or 19% increase, mainly due to an increase in account payable of Aromatics business unit of 2,761 MB which resulted from an increase in Aromatics production, hence, feedstock. Also, account payable of Olefins business unit increased from an increased in gas feedstock price with PTT which was revised last year.
- Long term loan payable within one year increased 6,304 MB or 47% increase due mainly to reclassification of debenture with maturity within one year to show under current liability of 15,066 MB (included PPA adjustment). The mentioned debenture will be due in April of 2014. Also, an increase in institutional loan due within a year of 1,030 MB which mainly belongs to PTTGC and PPCL. Also, long term loan due within one year of PTTUT which totally decreased 1,793 MB, resulted from changing the shareholding portion in PTTUT and accounting method from consolidation to take equity method.

2) Non-current liability decreased 24,450 MB or 19% decrease which mainly due to:

- Long-term loan decreased 24,640 MB or decreased 20% due mainly to a decrease in long term loan of GPSC (formally known as PTTUT) whole amount of 12,191 MB from change is shareholding portion in PTTUT. There was a reclassified of loan due within one year to current liability of 15,066 MB (payable in April 2015).

Shareholder's Equity

As of December 31, 2013, the Company recorded total shareholders' of 245,233 MB decreased 7,188 MB from December 31, 2012. The Company's equity portion increased 16,070 MB or 7% increase due to the Company's net profit of 33,277 MB and an increase in shareholding portion of PPCL from 60% to 100% in the amount of 70 MB. Also, loss in the foreign currency translation differences for in international operations of by 1,022 MB. In addition, dividend paid of 18,347 MB and loss from financial derivative valuation to reduce risk of cash flow for 48 MB.

Statement of Cash Flows

Statement of cash flows ending December 30, 2013 the Company had net cash from operating activities of 46,186 MB, net cash used in investing activities of 22,272 MB mainly from investment in subsidiaries, net cash used in financing activities of 33,534 MB from repaying long-term loan, debenture, and dividend. Therefore, the Company had cash and cash equivalents at ending 2013 of 18,582 MB from 31,269 MB at the beginning of the year. Cash and cash equivalent and short term investment totaled to 44,384 MB

Key Financial Ratios

Financial Ratio	2012	2013
Current Ratio (Times)	2.31	1.93
EBITDA to sales revenue (%)	10.16%	10.63%
Net Profit to sales revenue (%)	6.04%	6.06%
Return on total assets (%)	10.43%	9.42%
Return on equity (%)	16.16%	14.44%
Interest Bearing Debt to equity (Times)	0.57	0.49
Net interest bearing debt to equity (Times)	0.32	0.31
Net interest bearing debt to EBITDA (Times)	1.34	1.30

Note:

Current ratio	=	Current assets divided by current liabilities
EBITDA to sales revenue	=	EBITDA divided by sales revenue (for the last 4 quarters)
Net profit on sale revenue	=	Net profit divided by sales revenue (for the last 4 quarters)
Return on total assets	=	Net profit (for the last 4 quarters) divided by average total assets
Return on equity	=	Net profit (for the last 4 quarters) divided by average total shareholder's equity
Interest Bearing Debt to Shareholders' Equity	=	Interest Barring Debt divided by shareholder's equity
Net Interest Bearing Debt to Shareholders' Equity	=	Interest Barring Debt net from cash and cash equivalent and current investments divided by shareholder's equity
Net Interest Bearing Debt to EBITDA	=	Interest Barring Debt net from cash and cash equivalent and current investments divided by EBITDA (for the last 4 quarters)

RISK MANAGEMENT AND RISK FACTORS

Risk Management

PTT Global Chemical Public Company Limited ("The Company") is aware of risks associated with its business operation, investment and strategy and therefore has adopted enterprise-wide risk management in a systematic manner under corporate risk management policy, framework and guideline as approved by its Risk Management Committee (RMC) and within the Company's risk tolerance.

The Company emphasizes proactive risk management both in short and long terms. It pioneered its own EWS ("Early Warning System") to monitor and analyze external uncertainties and risks. If such risks were to materialize, they would considerably affect the performance and/or investment of the Company Group.

The Company has begun to manage an external-based risk that may disrupt its supply chain using Business Continuity Management (BCM) since November 2013. The use of BCM aims to lessen impact from the disruption if such risk were to occur. At present, the Company has BCM in place at its head office at Energy Complex (ENCO), Building A and branch 2 (Olefins Plant I-1 including high-density polyethylene (HDPE) plant). The Company is to expand BCM to the other areas of its supply chains in the near future.

The RMC governs risk management through the Company Management Committee (MC), its core mechanism, and through the Company Commercial and Financial Risk Management Committee (CFRM), a team in charge of formulating a hedging strategy and setting price and volume of raw material feedstock, products and funds to be hedged, all of which are in accordance with the Company's risk management policy and framework as approved by the RMC.

The Company conducts both qualitative and quantitative risk assessments of its group constantly. It uses a Risk Map, a 4x4 matrix, in evaluating risk severity in term of relationship between impact and likelihood. The Company's risk assessment processes and criteria are laid out in its Corporate Risk Management Manual and Investment Risk Management Manual for reference.

The Company conducts a Value-at-Risk (VaR) analysis using its financial model. The analysis helps the Company in identifying potential impact on its financial performance under possible scenarios. Analysis between impact severity and probability of occurrence is used to comprehend a potential risk that may affect the Company's business and project objectives. A risk owner will be requested to identify an existing control and formulate a mitigation plan, if appropriate or necessary, of his/her designated risk to be in accordance with the set guideline. A review of risk profile, including risk management results, is conducted following a set timeframe. Monitoring and analysis of internal and external factors that could possibly affect production, sales, and pricing of both feedstock and products, as well as of financial and economic conditions are performed on a continual basis. All these are to minimize the probability of the risks to occur and/or to reduce impact if such risks were to take place. This helps members of the Company management and other employees to understand the changes of information in the same way as to be able to make proper preparation for a potential risk scenario.

Risk Factors

The Company places importance in managing risk to meet, or exceed wherever possible, the international standard. However, due to the nature of the industries that the Company is involved in, it may not be possible to avoid certain risks inherent in such industries that, if these risks were to occur, they may significantly affect the Company Group's business objectives or performance, and/or shareholders' expected return from investment in the Company.

Outside risk factors that are discussed in this report, there may be a number of other risk factors that the Company does not know or is not aware of their significance at the time of this report preparation; are evaluated to fall within the Company's risk tolerance but they later develop to be severe risk factors, which, if they were to materialize, could impact business, investment or strategic objectives of the Company or members of its group seriously; or exacerbate beyond the Company's risk tolerance in the subsequent period.

Risks of the Company Group that are assessed to fall beyond its risk tolerance in 2014 are summarized as follows:

Market Risks - Crude Oil Price, Product Price and Margin Risks

The crucial market risks of the Company in 2014, which is evaluated without taking potential results from risk mitigations into account, that may fall outside the Company's risk tolerance are the following three risks: crude oil price, product price and margin risk.

Crude oil price risks that may greatly impact the Company performance derive mainly from three sources: crude oil price fluctuation, lower crude oil price during refinery process and lower value of crude oil inventory at the end of accounting period from prior period.

In regards to product and margin risks, prices and margins of major products of the Company Group may impact its performance critically should they change from the budget assumption and/or forecast to a certain extent. Important products whose prices are of importance to the Company Group are ethylene, high-density polyethylene (HDPE) and mono ethylene glycol (MEG). Important pairs of feedstock and product whose margins are of importance to the Company are diesel and Dubai crude oil, methyl ester (ME) and crude palm oil (CPO), phenol and benzene (BZ), paraxylene (PX) and condensate, and benzene (BZ) and condensate. These products and pairs of feedstock and product are major products or feedstock of Group Performance Center (GPC)/Business Unit (BU) of the Company Group. In fact, the last two pairs, which are of Aromatics GPC, may encounter somewhat lower margins in 2014 from the Company budget assumption.

As long as the market risks are of concern, the world economic outlook led by the United States, Europe and China, will lead to a change in the expected demand for crude oil and the Company's feedstock and products whose prices are of or linked to world markets.

Mitigation Measures: The Company has a transparent pricing policy it uses in its purchase and sales contracts of products and feedstock, both for the Company itself and members of its group. This policy results in pricing that reflects several market prices, with the aim of reducing pricing volatility. Additionally, it provides a pricing model that is included in its vendor contracts for the Company products and feedstock, as well as between the Company and members of its group or among members of the Company Group themselves. It provides flexibility in pricing of feedstock to reflect the value it represents for the end products that are produced from them, helping to avoid situations in which the investment cost to retrieve such feedstock is higher than its true market value. Through this pricing model,

the Company is able to protect itself from the adverse effects of price volatility, especially during industry down-cycles or times of sluggish market activities.

The Company also manages risks of product prices and margins, including that of crude oil price and other feedstock and products, whenever feasible and appropriate. In the past, the Company uses financial derivatives and/or a forward contract in managing these risks of Refinery and Aromatics GPCs under RMC policy and framework. The overall aim is to reduce the risk of price changes in feedstock and products that are influential to the business objectives of the Company Group.

In addition, the Company sets a plan to coordinate among GPCs and BUs within the Company Group whenever relevant and appropriate. This practice is emphasized among Olefins GPC, Polymers and Ethylene Oxide BUs in terms of ethylene allocation for the production units to use as feedstock that would yield the highest economic value to the Company Group under existing constraints of sales and purchase agreements and the market conditions. Effects on the Company Group from price volatilities in feedstock and products are thus reduced to a certain degree.

Overall, if the risk measures are taken efficiently, the effects on the Company Group will be reduced substantially particularly in Refinery GPC whose crude oil price risk may reduce considerably while the risks of product prices and margins of Aromatics BU may yet stay at the level beyond the Company's risk tolerance due to the fact that factors influencing these risks are usually out of the Company's control.

Feedstock Risk - Ethane Risk

The crucial feedstock risk of the Company in 2014, which is evaluated without taking potential results from risk mitigations into account, that may fall outside the Company's risk tolerance is ethane (supply) risk. Being a major ethane-based ethylene producer in the region, ethane is always one of the principal feedstock of the Company. Its ethane supply from PTT gas separation plants (GSPs) may be lower as well as less reliability than what specified in the contracts. If such events were to occur extremely and/or continuingly, there could be a negative impact on the Company financial performance significantly.

Mitigation Measures: The Company has discussed with PTT, from time to time, in receiving other feedstock for compensation for the lost ethane that its GSPs do not deliver as planned as well as closely coordinated with PTT in monitoring plans to improve efficiency of its GSPs.

This ethane risk is caused by an external factor which is out of the Company's control directly. Therefore, the risk severity would depend largely on the efficiency of PTT GSPs. However, should the Company manage such risk efficiently including the capability of the Company Olefins Plant I-4 in receiving alternative feedstock other than ethane such as LPG, the ethane risk could then significantly reduce to fall within the Company's risk tolerance.

Operational Risk - Underutilized LPG Risk and Disaster Risk

The crucial operational risks of the Company in 2014, which is evaluated without taking potential results from risk mitigations into account, that may fall outside the Company's risk tolerance are underutilized LPG and disaster risks.

Underutilized LPG risk is the case when the Company may not be able to utilize LPG feedstock as specified in its business plan because of a technical restraint of Olefins Plant I-4. Disaster risk is the case when there may be a severe accident in a production unit and feedstock/product transport and logistics both on land and in the sea of the Company and/or members of its group.

Mitigation Measures: For underutilized LPG risk, the Company is planning to sell excess LPG to external customers but its risk may yet fall outside the Company's risk tolerance. Nonetheless, if the Company can minimize the technical restraint of Olefins Plant I-4, the risk would be decreased dramatically to fall within its risk tolerance. For disaster risk, the Company Group is reviewing plans in response to emergency/crisis and setting up a system and process of Operational Risk Management (ORM), which is under Operational Excellence Management System (OEMS) of PTT Group. The ORM aims to raise the capability of the Company Group in response to an acute incident that may cause loss of life, deterioration of health of its employees and people in the communities surrounding its production units or logistics system, or hazard to the environment. The ORM will integrate operational risk management throughout the organization, moreover. Whenever applicable, the Company Group has a policy to hold an All Risks Insurance Policy, Business Interruption Insurance Policy, and a Thirty Party Liability Insurance Policy, all of which meets international standards. This practice aims to minimize losses to the Company and members of its group in case of any the disaster risk materialized.

Post International Investment Risks

Post international investment risks of the Company Group, which is evaluated without taking potential results from risk mitigations into account, of a certain investment may fall outside the Company's risk tolerance. Most crucially are financial risk, execution risk (of newly built plant), operational risk (of an ongoing plant), technology risk, market risk, human resource risk (of the acquired company and the Company Group themselves) and organizational risk (including culture risk). Should the Company or a member of its group be unable to manage these risks after it invest abroad, there could be a severe impact on the investment and strategic objective of the Company in the medium and long terms.

Mitigation Measures: The Company is always aware of the prevalence of its post international investment risk. It assigns a project owner to be a risk owner to be primarily accountable for investment risk management to be in accordance with RMC risk management policy, framework and guideline. The guideline includes project risk identification, risk impact and likelihood evaluation, risk mitigation setup and execution, and risk management report and review, all of them must be exercised on a regular basis. Should the Company Group manage risk as planned, the likelihood of and/or impact from such risk should reduce. Consequently, impact on the investment objectives and the Company strategic objectives would be reduced substantially.

In addition to all aforementioned risks that may cause the Company to miss its business or investment objectives, it is still encountering the other risks that are, at the time of this report preparation, evaluated to fall within the Company's risk tolerance such as other operational and domestic/international investment risks and foreign exchange risk. These currently acceptable risks may nonetheless cause the Company Group to fail to achieve its business and/or investment critically should any of them were to materialize.

Nevertheless, having a mechanism of the Company Group risk management which is executed in a systematic manner under the Risk Management Committee, the Management Committee and Corporate Risk and Internal Control Function with a risk owner as a frontline executor, it is believed that should the Company manage the existing controls and /or mitigation plans efficiently and effectively, other risks that are evaluated to fall within the Company's tolerance will likely to lessen in their severity and move closer to the Company's risk appetite. In that way, it will enable the Company Group to have a higher chance to achieve business, investment and strategic objectives in both short and long terms.

INTERNAL CONTROL

PTT Global Chemical Public Company Limited continuously recognizes on the importance of Internal Control Systems, which helps Company operations to maintain accuracy, transparency, accountability, reducing or preventing losses from unexpected risks. The Board of Directors has assigned the Audit Committee with the task of assessing PTTGC's Internal Control Systems on an annual basis, to assure the adequacy of its internal control by alignment with business operations.

During the Board of Directors Meeting No. 2/2014 held on February 18th, 2014, the Audit Committee presented its assessment of PTTGC's Internal Control Systems. In summary, it was found that the Internal Control Systems were functioning properly in an adequate and effective manner. The Board therefore expressed its approval with both the Company's internal control system as well as the Audit Committee. A list of the Audit Committee's findings can be found below:

1. Control Environment

Overall, it was found that the Control Environment was appropriate, efficient and effective in the way it assisted with the conduct of business operations. Management strived to promote corporate culture values that focused on integrity and ethics, setting a good example for policy compliance, good governance, and sound business code of conduct.

- PTTGC established guidelines and best practices outlining the principles of integrity and business code of conduct in working operations, as well as in relations with business partners, customers, and third parties. A Corporate Governance and Business Code of Conduct Handbook has been published and distributed to members of management as well as other staff members. These efforts have been made in creating management system that works in a transparent and fair manner in its treatment of all stakeholders. It outlines the appropriate sanctions to be implemented in response to the violation of these policies. A channel has been opened to facilitate notices from Whistleblowers. It includes processes governing the monitoring and evaluation of the adherence to the corporate governance and business code of conduct handbook. This is done both through a self-assessment as well as an assessment by the Thai Institute of Directors Association (IOD) as well as the Dow Jones Sustainability Indices (DJSI).

- PTTGC's organizational structure has been established in a way to best support its business operations in an efficient manner. This structure delegates duties and responsibilities in an appropriate way as determined by the Board of Directors. PTTGC also employs policies and working practices to recruit, develop, and retain personnel. Assessment methods are used to analyze the fairness of working processes and incentives provided to staff members.

- The Board of Directors maintains its independence from the PTTGC's management and it is responsible for the supervision and development of internal control systems. The Board is also responsible for setting clear and measurable goals for business operations, as well as determining PTTGC's direction and the framework under which it will operate in both the short and long-term. The Board must ensure that PTTGC follows appropriate working processes, and continuously reviews PTTGC's strategic vision and goals. Furthermore, it must offer its suggestions and observations to PTTGC's management for continuous improvements.

2. Risk Assessment

PTTGC recognizes on its risk management activities. A Risk Management Committee has been established to create and oversee policies related to PTTGC's risk management system. Such policies are to be carried out in an appropriate and efficient manner. PTTGC follows the policies set by the Risk Management Committee. These clearly-outlined objectives enable the identification and assessment of risk and the various factors that might cause future risk. This includes the overall business environment, outside factors that might have an effect on business, and internal factors that could also have an effect on business operations or PTTGC's strategic direction. A risk management plan has been put into place to prevent or at least reduce the amount of risk to an acceptable level. Furthermore, an early warning system functions to allow management to keep track of current business operations and any kind of risks that might occur. A summary of this is included in a report and submitted to the Board of Directors on a quarterly basis.

3. Control Activities

It has been found that in general, PTTGC's Control Activities are adequate and effective. The following control measures in place have contributed to reducing risks that may result in PTTGC's being unable to achieve its goals at an acceptable level.

- Various policies, procedures, and regulations have been drawn up to limit the power and the financial authority of PTTGC's management, in aspects such as finance, procurement, and administrative powers. Organizational structure has been set up to allow for a division of responsibilities and powers in a clear fashion. Additionally, control mechanisms have been put into place to reduce and prevent mistakes from happening. This includes various approval processes, accounting records, and data storage. Assets have been diversified to ensure good internal control, including a system of checks and balances. Furthermore, PTTGC has created an additional set of internal controls for the finance and accounting departments related to the deposit and dispersal of funds, bank deposits, and payment advances. This has been done in a systematic and accountable manner, recorded accurately and consistently.

- Various key performance indicators have been established to measure the performance of staff members throughout the organization in an effort to provide appropriate and sufficient controls helpful to the management.

- Strict measures are in place to govern transactions between PTTGC and major shareholders, Directors, Executives, and other connected persons. Guidelines have been set to deal with conflicts of interests according to principles of Good Corporate Governance. Disclosures are made of any conflicts of interest as per instruction from PTTGC's good corporate governance and business code of conduct handbook.

- PTTGC regularly monitors the operations of its subsidiaries and affiliated companies. Guidelines have been prepared regarding the governance and management of these companies in which PTTGC has a share of investment. Representatives are to be appointed by PTTGC to assume the role of Directors and/or other key management positions in those subsidiaries and affiliated companies. This is to ensure that PTTGC maintain a role in policy making, as well as being able to receive information, monitor activity, and conduct assessments as per key performance indicators in these companies.

4. Information and Communication

PTTGC recognizes on the information and communication systems, the information technology has been implemented to support the management's decision making. Examples in this regard are described below.

- Information systems related to areas PTTGC operations have been put into place. This includes a system for financial reporting that helps to ensure compliance with various policies and regulations, assisting in PTTGC's internal control processes and ensuring they remain up-to-date and easy to access. These systems also help manage the storage of accounting data in a comprehensive and categorized manner.

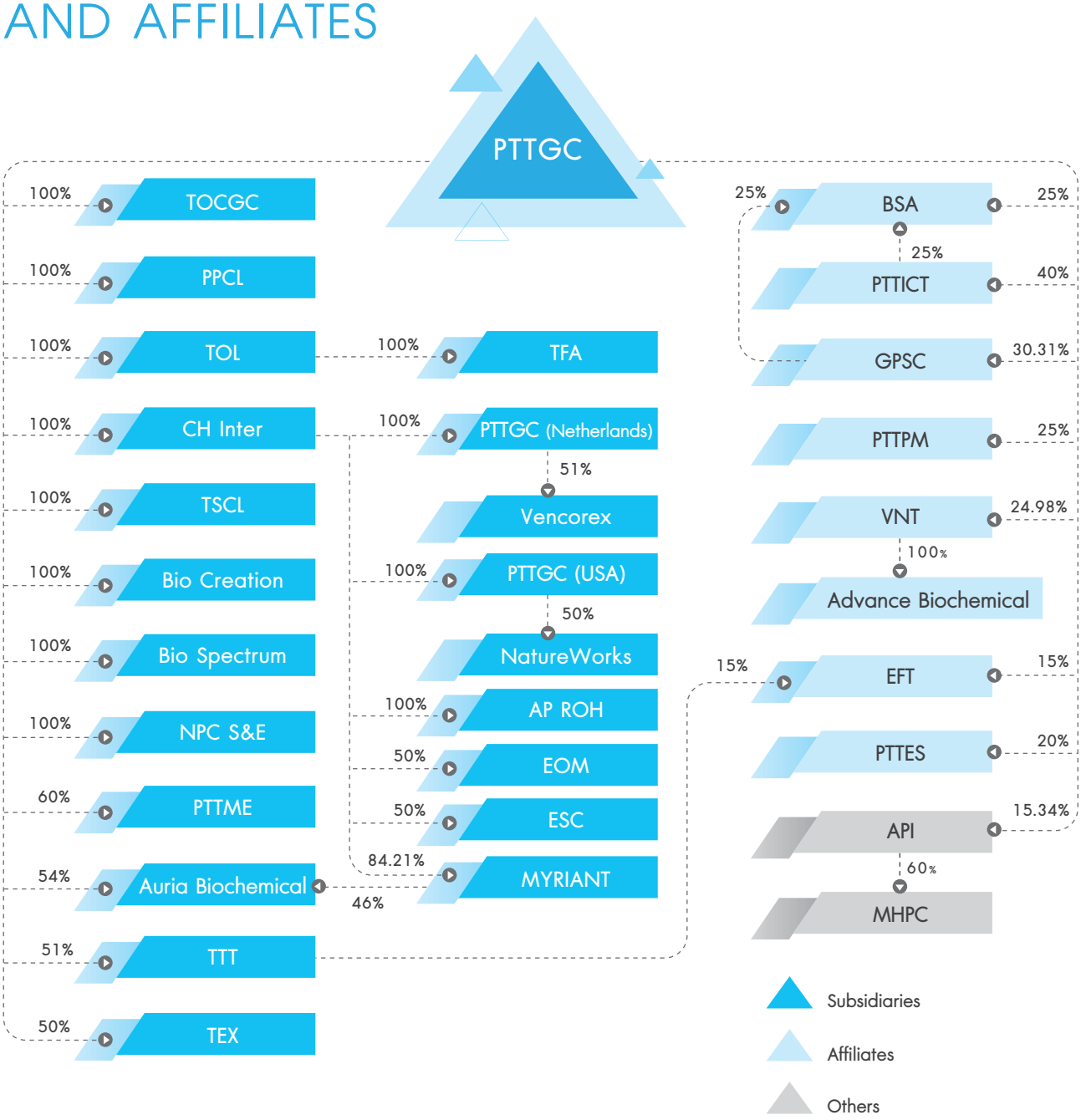
- The Board of Directors has access to a sufficient amount of information for consideration on issues they determine. Relevant documents are sent out before Meeting times, allowing the Board to make detailed inquiries so that they may make better informed decisions.

- PTTGC employs the use of important information systems to assist PTTGC management conduct their duties in a responsible, efficient, and effective manner to steer PTTGC to achieve its goals. Furthermore, PTTGC has opened the channels of communication that allow outside parties such as investor representatives and agencies to make inquiries and complaints.

5. Monitoring

PTTGC has implemented various monitoring processes which help PTTGC to obtain effective risk management and sufficiency of internal control mechanisms. Improvements are constantly being made to make sure that these processes best address the changing environment that PTTGC operates in, as well as to rectify any irregularities in a timely manner. The Board of Directors is presented with a comparison of PTTGC's operations with its goals, on a quarterly basis. Furthermore, an Internal Audit Department scrutinizes the internal control system to determine its adequacy and effectiveness. Their findings are presented to the Audit Committee on a quarterly basis. In 2013, the Audit Report did not find any issues related to conflicts of interest, fraudulent activities, or any other significant deficiency in the internal control system. Additionally, no violations of SEC and SET regulations were found. Nevertheless, PTTGC continues to make improvements to the effectiveness and efficiency of internal control systems in accordance with the recommendation in the Audit Report.

SHAREHOLDING IN SUBSIDIARIES AND AFFILIATES



Remarks : Changes in the shareholding structure of subsidiaries and affiliates

1) January 10th, 2013: PTT Utility Company Limited (PTTUT) and Independent Power (Thailand) Company Limited (IPT) amalgamated into Global Power Synergy Company Limited (GPSC).
2) May 2nd, 2013: The acquisition of 40% shareholding in PTT Phenol Company Limited (PPCL), As a result PTTGC holds 100% of the shares.
3) May 3rd, 2013: A joint venture in Auria BioChemicals Company Limited (Auria BioChemical) between PTTGC and Myriant Corporation (MYRIANT) As a result PTTGC holds 54% of the shares and MYRIANT holds 46% of the share.
4) July 1st, 2013: The acquisition of entire business transfer of Bangkok Polyethylene Public Company Limited (BPE) and PTT Polyethylene Company Limited (PTTPE), As a result PTTGC now holds 100% of the shares in Thai Styrenics Company Limited (TSCL); BPE and PTTPE has registered their dissolution on August 30th, 2013.
5) November 25th, 2013: Bio Spectrum Company Limited (Bio Spectrum) has reduced its issued capital to 25% of the shares in Inventa (As a result PTTGC now holds 100% of the shares).
6) December 24th, 2013: PTT Chemical International Private Limited (CH Inter) has purchased 25.44% of the shares in Myriant Corporation MYRIANT from existing shareholders, as a result CH INTER now holds 72.62% Later, at the beginning of 2014, MYRIANT has purchased shares from the existing group of shareholders totaling 3,406,569 shares and reduced its issued and outstanding capital by cancellation of those purchased shares. As a result CH Inter's shares in MYRIANT changed to 84.21%.

Subsidiaries

TOCGC	TOC Glycol Company Limited
PPCL	PTT Phenol Company Limited
TOL	Thai Oleochemicals Company Limited
TFA	Thai Fatty Alcohol Company Limited
TSCL	Thai Styrenics Company Limited
Bio Creation	Bio Creation Company Limited
Bio Spectrum	Bio Spectrum Company Limited
NPC S&E	NPC Safety and Environmental Service Company Limited
CH Inter	PTT Chemical International Private Limited
PTTGC (Netherlands)	PTTGC International (Netherlands) B.V.
PTTGC (USA)	PTTGC International (USA) Inc.
AP ROH	PTT Chemical International (Asia Pacific ROH) Limited
MYRIANT	Myriant Corporation
PTTME	PTT Maintenance and Engineering Company Limited
Auria Biochemicals	Auria Biochemicals Company Limited
TTT	Thai Tank Terminal Limited
TEX	Thai Ethoxylate Company Limited
Vencorex	Vencorex Holding
NatureWorks	NatureWorks LLC
EOM	Emery Oleochemicals (M) Sdn Bhd
ESC	Emery Specialty Chemicals Sdn Bhd

Affiliates

BSA	Business Services Alliance Company Limited
PTTICT	PTT ICT Solutions Company Limited
GPSC	Global Power Synergy Company Limited
PTTPM	PTT Polymer Marketing Company Limited
VNT	Vinythai Public Company Limited
Advanced Biochemical	Advanced Biochemical (Thailand) Company Limited
EFT	Eastern Fluid Transport Company Limited
PTTES	PTT Energy Solutions Company Limited

Others

API	Alliance Petrochemical Investment (Singapore) Private Limited
MHPC	Mehr Petrochemical Company Limited

REVENUE STRUCTURE

The Revenue Structure from Sales and Services of PTTGC and its Subsidiaries

Products	For the period from October 19th, 2011 to December 31th 2011		2012		2013	
	Revenue (Million THB)	%	Revenue (Million THB)	%	Revenue (Million THB)	%
Refinery and Shared Facilities						
1 Sales revenue from Light Naphtha	3,548	3	17,830	3	15,245	3
2 Sales revenue from Reformate	3,802	4	23,121	4	14,755	3
3 Sales revenue from Jet Fuel	6,489	6	25,170	4	37,842	7
4 Sales revenue from Diesel	25,912	25	159,404	28	131,655	24
5 Sales revenue from Fuel Oil	7,297	7	38,262	7	35,027	6
6 Others	2,062	2	6,472	1	10,149	2
Total	**49,109**	**47**	**270,259**	**48**	**244,673**	**45**
Aromatics						
1 Sales revenue from Bezene	2,628	3	14,651	3	15,670	3
2 Sales revenue from Paraxylene	9,764	9	52,636	9	54,585	10
3 Sales revenue from Cyclohexane	951	1	7,387	1	7,579	1
4 Sales revenue from Light and Heavy Naphtha	6,575	6	22,753	4	26,738	5
5 Sales revenue from Condensate Residue	2,832	3	1,455	0	471	0
6 Others	2,812	3	15,042	3	11,505	2
Total	**25,562**	**24**	**113,923**	**20**	**116,548**	**21**
Olefins						
1 Sales revenue from Ethylene	2,693	3	16,427	3	18,027	3
2 Sales revenue from Propylene	1,999	2	10,982	2	11,144	2
3 Sales revenue from Derivatives	820	1	5,287	1	6,242	1
4 Others	742	1	3,864	1	3,892	1
Total	**6,254**	**6**	**36,560**	**6**	**39,305**	**7**
Polymers						
1 Sales revenue from Plastic Pellets	11,105	11	60,504	11	64,806	12
2 Sales revenue from Polystyrene	457	0	3,148	1	3,017	1
Total	**11,562**	**11**	**63,651**	**11**	**67,823**	**12**

Products	For the period from October 19th, 2011 to December 31th 2011		2012		2013	
	Revenue (Million THB)	%	Revenue (Million THB)	%	Revenue (Million THB)	%
EO-Based Performance						
1 Sales revenue from EO/EG	2,797	3	12,710	2	13,930	3
2 Sales revenue from EO Derivatives	638	1	3,528	1	3,211	1
Total	**3,435**	**4**	**16,239**	**3**	**17,141**	**3**
Green Chemicals						
1 Sales revenue from ME/FA	2,520	2	12,636	2	12,380	2
2 Revenue from Emery	3,029	3	16,098	3	13,826	3
3 Revenue from NatureWorks	-	-	1,349	0	2,798	1
Total	**5,548**	**5**	**30,083**	**5**	**29,004**	**5**
High-Volume Specialties						
1 Revenue from Distribution of Phenol	527	1	6,602	1	5,578	1
2 Revenue from Distribution of Acetone and Derivatives	426	-	3,728	1	4,432	1
3 Revenue from Distribution of Bis Phenol A	1,056	1	6,086	1	8,076	1
4 Sales revenue from HDI/TDI	-	-	10,156	2	16,585	3
5 Others	-	-	750	0	1,219	0
Total	**2,009**	**2**	**27,321**	**5**	**35,890**	**6**
Services & Others						
1 Revenue from Distribution of Electricity/ Water/Steam	945	1	5,475	1	119	0
2 Others	406	0	2,105	0	2,378	0
Total	**1,351**	**1**	**7,580**	**1**	**2,497**	**0**
Net Total	**104,830**	**100**	**565,617**	**100**	**552,881**	**100**

Remark : Net total after deduction from connected transaction

CONNECTED TRANSACTION

Connected Transaction between Related Companies

For the 2013 accounting period, PTTGC conducted significant business transactions with its subsidiaries and related companies with common shareholders and/or Directors, as can be considered from the notes to the Company's financial statements. Connected transactions are based on market or contractual prices (the prices agreed in previous contracts) - if there are no reference market prices. Details of the relationships with these companies are as follows:

Company	Relationship (As of December 31st 2013)	Connected Transaction	For the period from October 19th 2011 to December 31st 2011	2012	2013
					Baht (Million)
1. PTT Public Company Limited (PTT)	▸ Major shareholder holding 48.89% of the shares in PTTGC ▸ Common Directors : 1. Mr. Prasert Bunsumpun 2. Mr. Suthep Liumsirijarern 3. Mr. Pailin Chuchottaworn ▸ Directors who are PTT Executives : 1. Mr. Sarun Rungkasiri 2. Mr. Atikom Terbsiri 3. Mr. Bowon Vongsinudom ▸ Sales/Purchase transaction of products and services	**Statements of Income Transactions**			
		Sales of goods or rendering of services	51,838	264,841	192,740
		Purchases of goods or services	60,671	395,808	363,601
		Other incomes	135	27	105
		Other expenses	891	199	241
		Financial costs	61	167	-
		Statements of Financial Position Balances			
		Trade accounts receivable - related parties	17,576	22,347	16,113
		Other accounts receivable - related parties	241	293	289
		Trade accounts payable - related parties	23,152	31,553	33,850
		Other accounts payable - related parties	1,207	585	171
		Payables to contractor - related parties	-	-	1

Company	Relationship (As of December 31st 2013)	Connected Transaction	For the period from October 19th 2011 to December 31st 2011	2012	2013
					Baht (Million)
2. PTT Polymer Marketing Company Limited (PTTPM)	▸ Affiliate company (PTTGC holds 25% of the shares) ▸ Major shareholder ▸ PTT holds 50% of the shares ▸ Executives who are Directors of PTTPM : 1. Mr. Athavudhi Hirunburana 2. Mrs. Sriwan Eamrungroj ▸ Sales transaction of products	**Statements of Income Transactions**			
		Sales of goods or rendering of services	11,561	63,646	67,820
		Purchases of goods or services	-	1	3
		Other incomes	3	12	14
		Other expenses	-	10	16
		Statements of Financial Position Balances			
		Trade accounts receivable - related parties	5,411	6,462	7,023
		Other accounts receivable - related parties	3	6	4
		Other accounts payable - related parties	-	1	1
3. Vinythai Public Company Limited (VNT)	▸ Affiliate company (PTTGC holds 24.98% of the shares) ▸ Common Director : Mr. Bowon Vongsinudom ▸ Executives who are Directors of VNT : 1. Mr. Dhanes Charoensupaya 2. Mrs. Puntip Oungpasuk ▸ Sales/Purchase transaction of products	**Statements of Income Transactions**			
		Sales of goods or rendering of services	1,187	6,529	6,996
		Purchases of goods or services	7	61	51
		Other incomes	-	2	5
		Statements of Financial Position Balances			
		Trade accounts receivable - related parties	631	602	992
		Other accounts payable - related parties	6	12	13
4. PTT ICT Solutions Company Limited (PTTICT)	▸ Affiliate company (PTTGC holds 40% of the shares) ▸ Executives who are Directors of PTTICT : 1. Mr. Patiparn Sukorndhaman 2. Mr. Varit Namwong ▸ Services transaction	**Statements of Income Transactions**			
		Purchases of goods or services	2	9	2
		Other incomes	18	43	38
		Other expenses	55	306	317
		Statements of Financial Position Balances			
		Other accounts receivable - related parties	17	21	13
		Other accounts payable - related parties	79	84	40
		Payables to contractors - related parties	9	32	51

Company	Relationship (As of December 31st 2013)	Connected Transaction	For the period from October 19th 2011 to December 31st 2011	2012	2013
					Baht (Million)
5. Star Petroleum Refining Company Limited (SPRC)	▶ Major shareholder (PTT holds 36% of the shares) ▶ Sales/Purchase transaction of products	**Statements of Income Transactions**			
		Sales of goods or rendering of services	1,936	12,422	12,260
		Purchases of goods or services	3,074	12,112	12,540
		Other incomes	5	-	2
		Other expenses	4	15	15
		Statements of Financial Position Balances			
		Trade accounts receivable - related parties	327	666	755
		Other accounts receivable - related parties	8	7	2
		Trade accounts payable - related parties	464	443	710
		Other accounts payable - related parties	23	20	10
6. PTTEP Siam Limited (PTTEPS)	▶ Subsidiary of PTTEP ▶ Sales transaction of products and services	**Statements of Income Transactions**			
		Sales of goods or rendering of services	12	71	78
		Statements of Financial Position Balances			
		Trade accounts receivable - related parties	6	11	9
		Other accounts receivable - related parties	-	-	1
7. PTT Exploration and Production Public Company Limited (PTTEP)	▶ Major shareholder (PTT holds 65.29% of the shares) ▶ Common Directors : 1. Mr. Prajya Phinyawat 2. Mr. Pailin Chuchottaworn ▶ Sales transaction of products and services	**Statements of Income Transactions**			
		Sales of goods or rendering of services	11	39	22
		Statements of Financial Position Balances			
		Trade accounts receivable - related parties	3	2	3
		Other accounts receivable - related parties	-	1	-

Company	Relationship (As of December 31st 2013)	Connected Transaction	For the period from October 19th 2011 to December 31st 2011	2012	2013
					Baht (Million)
8. PTT Asahi Chemical Company Limited (PTTAC)	▸ Major shareholder (PTT holds 48.50% of the shares) ▸ Common Director : Mr. Prajya Phinyawat ▸ Sales/Purchase transaction of products and services	**Statements of Income Transactions**			
		Sales of goods or rendering of services	176	1,220	896
		Purchases of goods or services	-	60	196
		Other incomes	-	78	2
		Statements of Financial Position Balances			
		Trade accounts receivable - related parties	77	320	103
		Other accounts receivable - related parties	24	30	9
		Trade accounts payable - related parties	-	20	17
		Other accounts payable - related parties	1	1	-
9. IRPC Public Company Limited (IRPC)	▸ Major shareholder (PTT holds 38.51% of the shares) ▸ Common Director : Mr. Sarun Rungkasiri ▸ Sales/Purchase transaction of products	**Statements of Income Transactions**			
		Sales of goods or rendering of services	1,358	22,949	26,110
		Purchases of goods or services	212	18,827	20,339
		Other incomes	1	6	1
		Other expenses	-	-	2
		Statements of Financial Position Balances			
		Trade accounts receivable - related parties	2,147	1,458	3,495
		Other accounts receivable - related parties	1	-	1
		Trade accounts payable - related parties	13	1,696	2,771
		Other accounts payable - related parties	13	12	11

Company	Relationship (As of December 31st 2013)	Connected Transaction	For the period from October 19th 2011 to December 31st 2011	2012	2013
					Baht (Million)
10. HMC Polymers Company Limited (HMC)	▶ Major shareholder (PTT holds 41.44% of the shares) ▶ Shareholder of PTTGC with 1.85% of the shares ▶ Executive who is Director of HMC : Mr. Narong Bunditkamol ▶ Sales/Purchase transaction of products and services	**Statements of Income Transactions**			
		Sales of goods or rendering of services	1,264	6,192	4,965
		Purchases of goods or services	61	210	384
		Statements of Financial Position Balances			
		Trade accounts receivable - related parties	550	803	470
		Other accounts receivable - related parties	12	5	1
		Trade accounts payable - related parties	25	71	106
		Other accounts payable - related parties	425	237	-
11. Bangchak Petroleum Public Company Limited (BCP)	▶ Major shareholder (PTT holds 27.22% of the shares) ▶ Sales/Purchase transaction of products	**Statements of Income Transactions**			
		Sales of goods or rendering of services	-	42	1,381
		Purchases of goods or services	-	32	23
		Statements of Financial Position Balances			
		Trade accounts receivable- related parties	-	-	58
		Trade accounts payable - related parties	1	-	9
12. PTT International Trading Private Limited (PTTT)	▶ Major shareholder (PTT holds 100% of the shares) ▶ Sales/Purchase transaction of products	**Statements of Income Transactions**			
		Sales of goods or rendering of services	129	2,621	35,521
		Purchases of goods or services	224	1,059	642
		Other expenses	-	-	9
		Statements of Financial Position Balances			
		Trade accounts receivable - related parties	-	1,284	6,094
		Trade accounts payable - related parties	57	97	51
		Other accounts payable - related parties	-	-	7

Company	Relationship (As of December 31st 2013)	Connected Transaction	For the period from October 19th 2011 to December 31st 2011	2012	2013
					Baht (Million)
13. Dhipaya Insurance Public Company Limited (DHIPAYA)	▸ Major shareholder (PTT holds 13.33% of the shares) ▸ Services transaction	**Statements of Income Transactions**			
		Purchases of goods or services	42	473	713
		Other incomes	-	346	121
		Other expenses	31	63	59
		Statements of Financial Position Balances			
		Other accounts receivable - related parties	257	702	690
		Other accounts payable - related parties	77	85	7
		Payables to contractor - related parties	-	-	15
14. Energy Complex Company Limited (ENCO)	▸ Major shareholder (PTT holds 50% of the shares) ▸ Services transaction	**Statements of Income Transactions**			
		Purchases of goods or services	1	4	5
		Other expenses	37	145	158
		Statements of Financial Position Balances			
		Other accounts receivable - related parties	1	1	-
		Other accounts payable - related parties	4	3	2
15. Thai Oil Public Company Limited (TOP)	▸ Major shareholder (PTT holds 49.10% of the shares) ▸ Sales/Purchase transaction of products and services	**Statements of Income Transactions**			
		Sales of goods or rendering of services	2,552	1,912	1,019
		Purchases of goods or services	1,183	3,322	860
		Other incomes	-	8	7
		Statements of Financial Position Balances			
		Trade accounts receivable - related parties	45	33	23
		Other accounts receivable - related parties	-	2	2

Company	Relationship (As of December 31st 2013)	Connected Transaction	For the period from October 19th 2011 to December 31st 2011	2012	2013
					Baht (Million)
16. Business Services Alliance Company Limited (BSA)	▶ Major shareholder (PTTGC holds 25% of the preference shares) ▶ Services transaction	**Statements of Income Transactions**			
		Purchases of goods or services	56	202	218
		Other expenses	8	56	134
		Statements of Financial Position Balances			
		Other accounts receivable - related parties	-	13	13
		Other accounts payable - related parties	34	38	69
		Payables to contractor - related parties	-	-	1
17. PTT Polymers Logistic Company Limited (PTTPL)	▶ Major shareholder (PTT holds 100% of the shares) ▶ Services transaction	**Statements of Income Transactions**			
		Sales of goods or rendering of services	8	48	15
		Purchases of goods or services	94	872	585
		Other expenses	50	191	227
		Statements of Financial Position Balances			
		Trade accounts receivable - related parties	5	7	7
		Other accounts receivable - related parties	1	2	1
		Other accounts payable - related parties	134	225	219
18. Eastern Fluid Transport Company Limited (EFT)	▶ Affiliate company (PTTGC holds 22.65% of the shares) ▶ Executive who is Director of EFT : Mr. Varit Namwong ▶ Services transaction	**Statements of Income Transactions**			
		Purchases of goods or services	2	27	24
		Statements of Financial Position Balances			
		Other accounts receivable - related parties	4	2	7
		Other accounts payable - related parties	9	-	-

Company	Relationship (As of December 31st 2013)	Connected Transaction	For the period from October 19th 2011 to December 31st 2011	2012	2013
					Baht (Million)
19. PTT Energy Solutions Company Limited (PTTES)	▸ Affiliate company (PTTGC holds 20% of the shares) ▸ Executive who is Director of PTTES : Mr. Kun Patumraj ▸ Services transaction	**Statements of Income Transactions**			
		Purchases of goods or services	7	83	103
		Other incomes	1	12	4
		Other expenses	-	4	9
		Statements of Financial Position Balances			
		Other accounts receivable - related parties	2	6	-
		Other accounts payable - related parties	-	1	9
20. PTT Maintenance and Engineering Company Limited (PTTME)	▸ Subsidiary company (PTTGC holds 60% of the shares) ▸ Major shareholder (PTT holds 40% of the shares) ▸ Common Director : Mr. Bowon Vongsinudom ▸ Executive who is Director of PTTME : Mr. Kun Patumraj ▸ Services transaction	**Statements of Income Transactions**			
		Purchases of goods or services	128	313	465
		Other incomes	51	190	161
		Other expenses	6	-	17
		Dividends	-	43	14
		Statements of Financial Position Balances			
		Other accounts receivable - related parties	131	58	87
		Other accounts payable - related parties	96	72	155
		Payables to contractors - related parties	66	375	473
21. Global Power Synergy Company Limited (GPSC)	▸ Affiliate company (PTTGC holds 30.31% of the shares) ▸ Major shareholder (PTT holds 30.10% of the shares) ▸ Common Director : Mr. Bowon Vongsinudom	**Statements of Income Transactions**			
		Sales of goods or rendering of services	-	-	41
		Purchases of goods or services	300	1,688	7,387
		Other incomes	4	15	17
		Other expenses	-	-	6

Company	Relationship (As of December 31st 2013)	Connected Transaction	For the period from October 19th 2011 to December 31st 2011	2012	2013
					Baht (Million)
	▶ Executives who are Directors of GPSC : 1. Mrs. Sriwan Eamrungroj 2. Mr. Narong Bunditkamol ▶ Sales/Purchase transaction of products and services	**Statements of Financial Position Balances**			
		Trade accounts receivable - related parties	-	-	7
		Other accounts receivable - related parties	5	6	538
		Trade accounts payable - related parties	114	340	1,987
		Other accounts payable - related parties	1	2	3
22. PTT Phenol Company Limited (PPCL)	▶ Subsidiary company (PTTGC holds100% of the shares) ▶ Common Director : Mr. Bowon Vongsinudom ▶ Executives who are Directors of PPCL : 1. Mr. Dhanes Charoensupaya 2. Mrs. Puntip Oungpasuk 3. Mr. Patiparn Sukorndhaman 4. Mr. Narong Bunditkamol ▶ Sales transaction of products and services	**Statements of Income Transactions**			
		Sales of goods or rendering of services	1,231	11,409	-
		Other incomes	2	18	-
		Statements of Financial Position Balances			
		Trade accounts receivable - related parties	258	2,448	-
		Other accounts receivable - related parties	3	6	-
23. PTT Tank Terminal Company Limited (PTT TANK)	▶ Major shareholder (PTT holds 100% of the shares) ▶ Sales transaction of products and services	**Statements of Income Transactions**			
		Sales of goods or rendering of services	-	5	168
		Other incomes	-	4	-
		Statements of Financial Position Balances			
		Trade accounts receivable - related parties	-	2	141
		Other accounts receivable - related parties	1	1	19

Company	Relationship (As of December 31st 2013)	Connected Transaction	For the period from October 19th 2011 to December 31st 2011	2012	2013
					Baht (Million)
24. Thai Petroleum Pipeline Company Limited (THAPP LINE)	▸ Major shareholder (PTT holds 33.19% of the shares) ▸ Services transaction	**Statements of Income Transactions**			
		Sales of goods or rendering of services	-	2	2
25. PTT LNG Company Limited (PTTLNG)	▸ Major shareholder (PTT holds 100% of the shares) ▸ Sales transaction of products and services	**Statements of Income Transactions**			
		Sales of goods or rendering of services	-	1	2
26. PTTEP International Limited (PTTEPI)	▸ Subsidiary of PTTEP ▸ Services transaction	**Statements of Income Transactions**			
		Sales of goods or rendering of services	-	2	7
		Statements of Financial Position Balances			
		Trade accounts receivable - related parties	-	1	1
		Other accounts receivable - related parties	-	-	3
27. PTT International Company Limited (PTTI)	▸ Major shareholder (PTT holds 100% of the shares) ▸ Services transaction	**Statements of Income Transactions**			
		Sales of goods or rendering of services	-	-	2
		Statements of Financial Position Balances			
		Other accounts receivable - related parties	-	-	2
28. PTT Retail Management Company Limited (PTTRM)	▸ Major shareholder (PTT holds 100% of the shares) ▸ Services transaction	**Statements of Income Transactions**			
		Purchases of goods or services	-	-	1

Need and Justification of Connected Transaction

The sales of products by PTTGC to connected companies have been carried out mainly so that they may process its products into their own products for sale at prices corresponding to long-term off-take agreements or spot prices. Prices must prove mutually beneficial and based on market prices without any undue transfer of interests or extraordinary items to both parties. When providing services to connected companies, transactions must cover transportation or storage costs of products. The charges for services are both market-based and benefit-based without any undue transfer of interests or extraordinary items.

For the product and feedstock supply and/or services as well as the volume of products, feedstock or services given by connected companies must meet the needs and business operation of PTTGC. Prices of products trading or services are as agreed by PTTGC and connected companies without any undue transfer of interests or extraordinary items. In addition, PTTGC is required to purchase feedstock from connected companies because the capacity and quality of such feedstock meet its needs. PTTGC also saves on transportation expenses since the feedstock can be transferred safely by PTTGC's pipeline systems from their plants in Map Ta Phut Industrial Estate, Rayong.

Measure and Procedure for Approval of Connected Transaction

The Company's Articles of Association stated that a Director can acquire or dispose of PTTGC assets or perform any business transaction involving PTTGC either by himself or herself or on behalf of others only with the approval from the Board of Directors. Any Director who personally gains from any acquisition or disposal of PTTGC asset or any transaction of PTTGC is not allowed to vote on that matter. After receiving approval from the Board of Directors, PTTGC can perform any business transaction or acquire or dispose of major assets in line with the announcement of the Stock Exchange of Thailand (SET). This also applies to PTTGC's subsidiaries in the SET announcement concerning connected transaction of listed companies as well as the buying and selling of registered company assets.

Opinion of Independent Directors

The Independent Directors agreed with the Board of Directors.

Policy and Trend on Future Connected Transaction

Future connected transactions between PTTGC and connected companies will be conducted as part of the normal course of business with no special favors and no transfer of benefits. For the pricing policy between PTTGC and connected companies, the price of products or feedstock purchased will be set in agreement and or linked to market prices. In addition, service charges paid to connected companies will also be at arm's length. The price of product sold or purchased between PTTGC and connected companies will, as a rule, be linked to Map Ta Phut Market prices. Disclosure of PTTGC's connected transaction is to comply with the rules and regulations of the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET). The audit standards for connected parties will be as specified by the Federation of Accounting Professions and Office of the Auditor General.

SHAREHOLDING STRUCTURE

List of Top Ten Major Shareholders (register book closing date on October 31st, 2013)

No.	Shareholders	Shares	(%)
1	PTT Public Company Limited	2,204,318,913	48.89
2	Thai NVDR Company Limited	383,470,111	8.50
3	HSBC (SINGAPORE) NOMINEES PTE LTD	105,162,658	2.33
4	STATE STREET BANK EUROPE LIMITED	83,716,650	1.86
5	HMC Polymers Company Limited	83,427,636	1.85
6	The Siam Cement Public Company Limited	82,164,775	1.82
7	CHASE NOMINEES LIMITED 42	74,260,306	1.65
8	STATE STREET BANK AND TRUST COMPANY	68,414,184	1.52
9	THE BANK OF NEW YORK MELLON	65,341,674	1.45
10	THE BANK OF NEW YORK (NOMINEES) LIMITED	63,206,133	1.40

Remarks: (1) PTT Group Shareholders includes:

1. PTT Public Company Limited
2. HMC Polymers Company Limited (PTT Plc. holds 41.44% of the shares)

(2) Shareholders of Thai NVDR Company Limited holding Non-Voting Depository Receipt: NVDR, are ineligible for voting at shareholder's meeting except when exercising their voting rights on delisting the shares form SET.

(3) The Siam Cement Group Shareholders includes:

1. The Siam Cement Public Company Limited
   Number of Shares holding in PTTGC : 82,164,775 shares
2. Bangkok Synthetics Company Limited (SCC Plc. holds 48.84% of the shares)
   Number of Shares holding in PTTGC: 43,420,625 shares
3. Thai Plastic and Chemicals Public Company Limited (SCC Plc. and its subsidiaries hold 90.66% of the shares)
   Number of Shares holding in PTTGC: 8,541,081 shares

(4) In practice the major shareholders with significant influence on the establishment of PTTGC's policy and strategy is PTT Group Shareholders, which in total holds 49.66% in PTTGC.

(5) Foreign Shareholders
As of October 31st, 2013; there are 311 foreign shareholders, holding a combined of 1,110,830,915 shares (24.64% of paid-up capital)

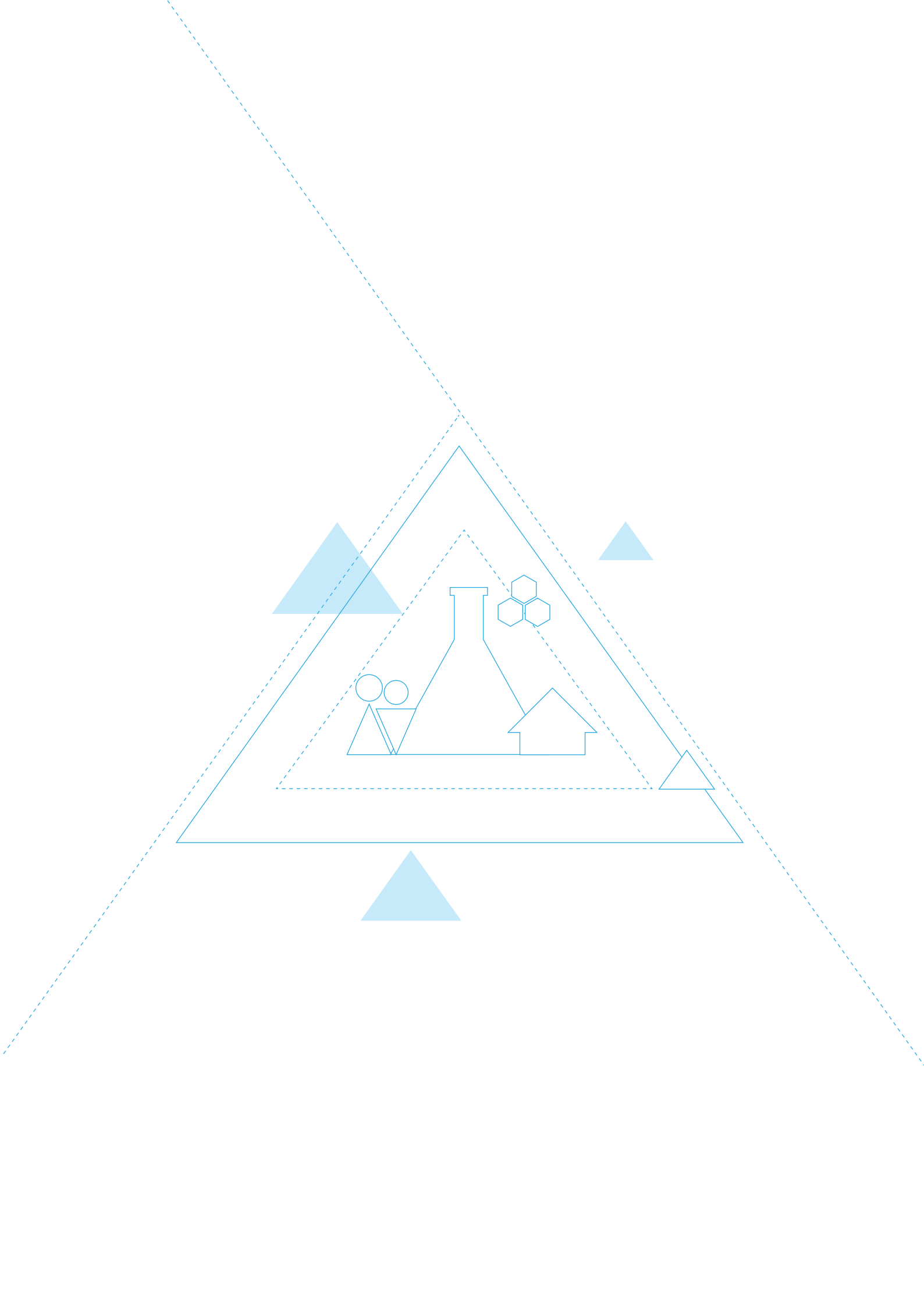
DIVIDEND PAYMENT POLICY

PTT Global Chemical Public Company Limited

The Board of Directors Meeting No. 1/2011, held on October 19th, 2011, resolved that the dividend payment policy of the Company is to pay dividend at a rate of no less than 30% of net profit after tax and allocation to all reserve funds of the Company. Such dividend payment however is subject to the investment plan, other necessary and appropriate considerations in the future.

Subsidiaries' Dividend Payment Policy

The dividend payment policy for PTTGC's subsidiaries shall be considered and proposed by the Board of Directors of each subsidiary for approval at the Annual General Meeting of each subsidiary. The dividend payment of subsidiaries shall be calculated based on the investment plans and other requirements and considerations, such as the adequacy of cash flow of each subsidiary after deducting reserve funds in accordance with the law.



BOARD OF DIRECTORS

Mr. Prasert Bunsumpun
Chairman

Age 61

Appointed : October 19th, 2011

Education/Training
- Honorary Doctoral of Arts (Innovation and Management) Faculty of Humanities and Social Sciences, Suan Sunandha Rajabhat University
- Honorary Doctoral of Management, Mahasarakham University
- Honorary Doctoral in Management Science, Phetchaburi Rajabhat University
- Honorary Doctoral in Management, National Institute of Development Administration (NIDA)
- Honorary Doctoral in Engineering, Chulalongkorn University
- MBA, Utah State University, U.S.A.
- B.Eng. (Civil Engineering), Chulalongkorn University
- Diploma, National Defence Course for the Joint State-Private Sector, Class 10, the National Defence College
- Certificate in Advance Management Program (Class 155), Harvard Business School, U.S.A.
- Advanced Certificate Course in Politics and Governance in Democratic System for Executives, Class 6, King Prajadhipok's Institute
- Capital Market Academy Leadership Program, Class 3, Capital Market Academy

Director Training
- Director Accreditation Program (DAP) Class 26/2004 and Role of the Chairman Program (RCP) Class 28/2012, Thai Institute of Directors Association (IOD)

Board member/management in Listed Company - The Stock Exchange of Thailand : 5
- Chairman, PTT Global Chemical Public Company Limited
- Director/Member of the Enterprise Risk Managment Committee, PTT Public Company Limited
- Chairman and Chairman of the Executive Board of Directors, Thoresen Thai Agencies Public Company Limited
- Independent Director, Chairman of the Risk Management Committee, Chairman of the Compliance Committee and Member of the Audit Committee, Krung Thai Bank Public Company Limited
- Independent Director, Shin Corporation Public Company Limited

Board member/management in Non-Listed Company - The Stock Exchange of Thailand : 1
- Chairman / Non-Executive Chairman, Mermaid Maritime Public Company Limited

Position in Other Organizations/Institutions : 5
- Chairman, Thailand Business Council for Sustainable Development (TBCSD)
- Chairman, Sustainable Energy Foundation
- Chairman, Small and Micro Community Enterprise
- Distinguished Member of Chulalongkorn University Council
- Distinguished Member of the Suranaree University of Technology Council Office

Work Experiences (5-years Past Experiences)

2003 - 2011	President and Chief Executive Officer, Director and Secretary to the Board of Directors, PTT Public Company Limited
2010 - Apr. 2013	Chairman and Chairman of the Executive Board of Directors, IRPC Public Company Limited
2005 - Apr. 2013	Chairman, Thai Lube Base Public Company Limited
Oct. 2008 - Mar. 2011	Chairman, PTT Exploration and Production Public Company Limited
2000 - 2011	Director, PTT Exploration and Production Public Company Limited
2007 - 2011	Director, PTT Aromatics and Refining Public Company Limited
2005 - 2010	Chairman, PTT Chemical Public Company Limited
Sep. 2003 - Mar. 2011	Chairman, Electricity Generating Authority of Thailand
Apr. 2003 - Mar. 2011	Chairman/Director, Thaioil Power Company Limited
2008 - 2010	Director, Siam City Bank Public Company Limited
2004 - 2010	Director, Thai Oil Public Company Limited
2006 - Mar. 2008	Member of the National Legislative Assembly,Thailand

Shareholding : 271,142 shares (0.006014%)
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Suthep Liumsirijarern
Director / Chairman of the
Risk Management Committee

Age 59

▲▲ Appointed : October 19th, 2011, April 4th, 2013 (re-elected)

▲▲ Education/Training
- Post-Graduate Diploma, Hydraulic Engineering, International Institute of Hydraulic Engineering, Delft, the Netherlands
- B.Sc., Chiang Mai University
- Energy Executive Program (Class 1), Ministry of Energy
- Joint Staff Program (Class 43), National Defence Studies Institute, Supreme Command Headquarters
- Civil Service Executive Program 1 (Class 44), Civil Service Training Institute (CSTI), Office of the Civil Service Commission (OCSC)
- National Defence Course, Class 51, National Defence College

▲▲ Director Training
- Director Accreditation Program (DAP) Class 96/2012, Audit Committee Program (ACP) Class 39/2012 and Director Certification Program (DCP) Class 177/2013, Thai Institute of Directors Association (IOD)

▲▲ Board member/management in Listed Company - The Stock Exchange of Thailand : 2
- Director, PTT Public Company Limited
- Director/Chairman of the Risk Management Committee, PTT Global Chemical Public Company Limited

▲▲ Board member/management in Non-Listed Company - The Stock Exchange of Thailand : None

▲▲ Position in Other Organizations/Institutions : 1
- Permanent Secretary, Ministry of Energy

▲▲ Work Experiences (5-years Past Experiences)
- 2011 - 30 Sep 2013 Director-General, Energy Policy and Planning Office, Ministry of Energy
- 2009 - 2011 Deputy Director-General, The Department of Alternative Energy Development and Efficiency (DEDE), Ministry of Energy
- 2007 - 2009 Director, Bureau of Alternative Energy Development, DEDE, Ministry of Energy

Shareholding : None
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Somchai Kuvijitsuwan
Independent Director /
Chairman of the Audit Committee

Age 62

▲▲ Appointed : October 19th, 2011, April 2nd, 2012 (re-elected)

▲▲ Education/Training
- LL.B., Ramkhamhaeng University Class 1
- Barrister at Law, Class 27, Institute of Thai Bar Association
- Master of Political Science, National Institute of Development Administration
- Provincial Public Prosecutor Program, Class 9/1987
- Capital Market Academy Leadership Program, Class 9, Capital Market Academy

▲▲ Director Training
- Director Certification Program (DCP) Class 76/2006
  Director Accreditation Program (DAP) Class 56/2006
  Understanding the Fundamental of Financial Statement (UFS) Class 3/2006 and Role of the Chairman Program (RCP) Class 28/2012, Thai Institute of Directors Association (IOD)

▲▲ Board member/management in Listed Company - The Stock Exchange of Thailand : 1
- Independent Director/Chairman of the Audit Committee, PTT Global Chemical Public Company Limited

▲▲ Board member/management in Non-Listed Company - The Stock Exchange of Thailand : None

▲▲ Position in Other Organizations/Institutions : 3
- Director-General, Department of Economic Crime Litigation
- Commissioner/Chairman of the Audit Committee and Chairman of the Board of Appeals Office of the Securities and Exchange Commission, Thailand
- Director/Chairman of Corporate Governance and Social Responsibility Committee/Chairman of Risk Management and Internal Control Committee, Provincial Electricity Authority

▲▲ Work Experiences (5-years Past Experiences)
- 2011 - 2013 Director-General, Department of Public Prosecutor Commission, Office of the Attorney General
- 2001 - 2013 Chairman, Krungthai Laws Company Limited
- 2008 - 2011 Independent Director, Chairman/Director of the Corporate Governance Committee, Director of the Remuneration Committee, PTT Chemical Public Company Limited
- 2008 - 2011 Director-General, Office of Regional Appellate Litigation, Region 9
- 2008 - 2011 Director-General, Department of Policy, Strategy and Budget Planning
- 2009 - 2011 Managing Director, Forest Industry Organization
- 2008 - 2011 Director, Metropolitan Electricity Authority
- 2006 - 2008 Director and Audit Committee, Small and Medium Enterprise Development Bank of Thailand (SME Bank)
- 2005 - 2008 Deputy Director, Department of Intellectual Property and International Trade Litigation
- 2005 - 2008 Deputy Director General, Department of Southern Bangkok Criminal Litigation
- 2005 - 2008 Deputy Director General, Department of Prosecutor Commission

Shareholding : None
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Vasin Teeravechyan
Age 65

Independent Director / Chairman of the Nomination and Remuneration Committee

▲▲ Appointed : October 19th, 2011, April 2nd, 2012 (re-elected)

▲▲ Education/Training
- M.A. (Law), Chulalongkorn University
- B.A. (Law), Chulalongkorn University
- Barrister at Law, Thailand, 1972
- The National Defence College of Thailand, Class 40

▲▲ Director Training
- Director Accreditation Program (DAP) Class 94/2012
  Director Certification Program (DCP) Class 155/2012
  and Role of the Nomination and Governance Committee (RNG)
  Class 5/2013, Thai Institute of Directors Association (IOD)

▲▲ Board member/management in Listed Company - The Stock Exchange of Thailand : 1
- Independent Director/Chairman of the Nomination and Remuneration Committee, PTT Global Chemical Public Company Limited

▲▲ Board member/management in Non-Listed Company - The Stock Exchange of Thailand : None

▲▲ Position in Other Organizations/Institutions : 8
- Legal and Boundary Advisor, Ministry of Foreign Affairs
- Chairman (Thailand), Thai - Malaysia Land Boundary Committee
- Vice Chairman, Thai - Korean Friendship Association
- Member of the Special Committee for the Consideration of Treaties, Ministry of Foreign Affairs
- Vice-Chairman (Thailand), Thai - Cambodia Joint Technical Committee (Delimitation of Sea Boundary)
- Chairman (Thailand), Senior Officials' Meeting on Thai - Laos Boundary
- Chairman (Thailand), Thai - Myanmar Joint Committee on Demarcation for Land Boundary
- Advisor, Mitr Phol Sugar Corp. Ltd.

▲▲ Work Experiences (5-years Past Experiences)
- 2012 - Aug. 2013 Director, Bank for Agriculture and Agricultural Co-Operatives
- 2009 - 2011 Special Lecturer on Public and Private International Law, Mae Fah Luang University, Chiang Rai
- 2008 - 2010 Chairman (Thailand), Thai - Cambodian Joint Commission on Demarcation for Land Boundary
- 2008 - 2009 Thai Eminent Person, ASEAN - Korea Eminent Persons Group
- 2008 - 2009 Chairman, ASEAN's High Level Legal Experts Group on Follow - Up to the ASEAN Charter
- 2005 - 2008 Ambassador to the Republic of Korea

Shareholding : None
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Police General Sombat Amornvivat
Age 67

Chairman of the Independent Directors / Chairman of the Corporate Governance Committee

▲▲ Appointed : October 19th, 2011, April 2nd, 2012 (re-elected)

▲▲ Education/Training
- Master Degree in Public Administration (Honor Degree) National Institute of Development Administration
- The Royal Police Cadet Academy
- The Federal Bureau of Investigation (FBI)
- National Defence Course, Class 34, National Defence College

▲▲ Director Training
- Director Certification Program (DCP) Class 107/2008 and Director Accreditation Program (DAP) Class 73/2008 Thai Institute of Directors Association (IOD)

▲▲ Board member/management in Listed Company - The Stock Exchange of Thailand : 1
- Chairman of the Independent Directors/Chairman of the Corporate Governance Committee, PTT Global Chemical Public Company Limited

▲▲ Board member/management in Non-Listed Company - The Stock Exchange of Thailand : None

▲▲ Position in Other Organizations/Institutions : 1
- Retired Police Officer

▲▲ Work Experiences (5-years Past Experiences)
- 2010 - 2011 Advisor to the Chairman of the Board of Directors, CAT Telecom Public Company Limited
- 2008 - 2009 Advisor to the Minister of Foreign Affairs
- 2008 Advisor to the Minister of Justice
- 2008 Director, Airports of Thailand Public Company Limited

Shareholding : None
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Prajya Phinyawat
Age 62

Independent Director / Director to the Corporate Governance Committee

Appointed : November 11th, 2011

Education/Training
- Ph.D. (Civil Engineering), University of Texas at Austin, U.S.A.
- M.S. (Civil Engineering), Stanford University, U.S.A.
- B.E. (Civil Engineering), Chulalongkorn University
- Diploma, National Defence Course for the Joint State-Private Sector, Class 15, the National Defence College
- Certificate of Leadership Program, Class 7, Capital Market Academy
- Certificate of Energy Literacy for a Sustainable Future Program, Class 1/2012, Thailand Energy Academy

Director Training
- Director Certification Program (DCP) Class 14/2002 Thai Institute of Directors Association (IOD)

Board member/management in Listed Company - The Stock Exchange of Thailand : 2
- Independent Director/Director to the Corporate Governance Committee, PTT Global Chemical Public Company Limited
- Independent Director/ Chairman of the Risk Management Committee, PTT Exploration and Production Public Company Limited

Board member/management in Non-Listed Company - The Stock Exchange of Thailand : 1
- Chairman, PTT Asahi Chemical Company Limited

Position in Other Organizations/Institutions : None

Work Experiences (5-years Past Experiences)
- 2008 - 2011 Chief Operating Officer, Downstream Petroleum Business Group and Senior Executive Vice President, Oil Business Unit, PTT Public Company Limited
- 2005 - 2013 Vice Chairman, Bangkok Polyethylene Public Company Limited
- 2004 - 2013 Director, Thai Lube Base Public Company Limited
- 2012 Chairman, PTT Polyethylene Company Limited
- 2012 Director, Thai Paraxylene Company Limited
- 2007 - 2011 Director, PTT Aromatics and Refining Public Company Limited
- 2006 - 2011 Director, IRPC Public Company Limited
- 2005 - 2011 Director, PTT Chemical Public Company Limited
- 2004 - 2011 Director, Thai Oil Public Company Limited

Shareholding : 146,645 shares; Spouse 12,953 shares (0.003540%)
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Pailin Chuchottaworn
Age 57

Director

Appointed : October 18th, 2013

Education/Training
- Honorary Doctorate Degree in Sustainable Energy and Environment Technology and Management, Rajamangala University of Technology Rattanakosin
- Doctor of Engineering in Chemical Engineering, Tokyo Institute of Technology, Japan
- Master of Engineering in Chemical Engineering, Tokyo Institute of Technology, Japan
- Bachelor of Engineering in Chemical Engineering (Hons.), Chulalongkorn University
- PTT Executive Leadership Program 2008, GE Crotonville, U.S.A.
- NIDA Executive Leadership Program 2007, Wharton 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 22th)
- 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)
- Top Executive Program in Commerce and Trade (TEPCoT), (Class of 1st), University of the Thai Chamber of Commerce

Director Training
- Director Accreditation Program (DAP) Class 24/2004
  Director Certification Program (DCP) Class 51/2004
  Finance for Non-Finance Director (FND) Class 14/2004 and
  Anti-Corruption for Executive Program (ACEP) Class 4/2012
  Thai Institute of Directors Association (IOD)

Board member/management in Listed Company - The Stock Exchange of Thailand : 3
- Director and Secretary to the Board, Member of the Nominating Committee, President & Chief Executive Officer, PTT Public Company Limited
- Director, PTT Global Chemical Public Company Limited
- Director/Member of the Nominating Committee, PTT Exploration and Production Public Company Limited

Board member/management in Non-Listed Company - The Stock Exchange of Thailand : None

Position in Other Organizations/Institutions : None

Work Experiences (5-years Past Experiences)
- Jun. - Sep. 2011 Chief Operating Officer, Upstream Petroleum and Gas Business Group, PTT Public Company Limited
- Jan. 2009 - Jun. 2011 Senior Executive Vice President, PTT, working as President, IRPC Public Company Limited
- 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
- 2006 - 2008 Executive Vice President, Petrochemicals & Refining Business Unit, PTT, working as President of PTT Asahi Chemical Company Limited

Shareholding : None
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mrs. Raweporn Kuhirun
Age 69

Independent Director /
Director to the Audit Committee

▲▲ Appointed : October 19th, 2011, April 4th, 2013 (re-elected)

▲▲ Education/Training
- Master of Business Administration - MBA (Accounting), Central Michigan University, U.S.A.
- Bachelor of Laws, Ramkhamhaeng University
- Bachelor of Accountancy, Chulalongkorn University
- National Defence Course, Class 38, National Defence College
- The Program for Senior Executives on Justice Administration, Batch 14, National Justice Academy, Office of the Judiciary
- Top Executive Program in Commerce and Trade (TEPCoT 4)
- Capital Market Academy Leadership Program, Class 7, Capital Market Academy
- The International Auditor's Fellowship Program, Government Accountability Office (U.S. GAO), U.S.A.
- Audit of Computer Systems, Kingston Polytechnic, England
- Internal Audit and Computer Audit, National Audit Office (NAO), England
- Procurement Audit, Board of Audit and Inspection, Republic of Korea

▲▲ Director Training
- Director Accreditation Program (DAP) Class 94/2012
  Director Certification Program (DCP) Class 155/2012
  and Audit Committee Program (ACP) Class 38/2012,
  Thai Institute of Directors Association (IOD)

▲▲ Board member/management in Listed Company - The Stock Exchange of Thailand : 1
- Independent Director/Director to the Audit Committee, PTT Global Chemical Public Company Limited

▲▲ Board member/management in Non-Listed Company - The Stock Exchange of Thailand : None

▲▲ Position in Other Organizations/Institutions : 3
- Advisor to the Audit Committee, Thai Airways International Public Company Limited
- Committee on Overseeing the NBTC's Operation, National Broadcasting and Telecommunication Commission (NBTC)
- Distinguished Member, Srinakharinwirot University

▲▲ Work Experiences (5-years Past Experiences)
- 2008 - 2010 Expert Member, Board of Special Case, Department of Special Investigation (D.S.I.)
- 2000 - 2006 State Audit Commissioner, State Audit Commission

Shareholding : None
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Sarun Rungkasiri
Age 56

Director /
Director to the Risk Management Committee

▲▲ Appointed : October 18th, 2013

▲▲ Education/Training
- Master of Science in Management, Polytechnic Institute of New York, U.S.A.
- Bachelor of Engineering in Industrial Engineering, Chulalongkorn University
- Thirty Fourth Oxford Energy Seminar, St. Catherine's College, Oxford University, U.K.
- NIDA-Wharton Executive Leadership Program 2009, The Wharton School of the University of Pennsylvania, U.S.A.
- The Joint State - Private Sector Course, National Defence College, (Class of 23rd)

▲▲ Director Training
- Company Secretary Program (CSP) Class 8/2004
  Director Certification Program (DCP) Class 61/2005 and
  Finance for Non-Finance Director (FND) Class 19/2005,
  Thai Institute of Directors Association (IOD)

▲▲ Board member/management in Listed Company - The Stock Exchange of Thailand : 3
- Chief Operating Officer, Downstream Petroleum Business, PTT Public Company Limited
- Director/Director to the Risk Management Committee, PTT Global Chemical Public Company Limited
- Director/Executive Director, IRPC Public Company Limited

▲▲ Board member/management in Non-Listed Company - The Stock Exchange of Thailand : None

▲▲ Position in Other Organizations/Institutions : None

▲▲ Work Experiences (5-years Past Experiences)
- 2011 - 30 Sep. 2013 Senior Executive Vice President, Oil Business Unit, PTT Public Company Limited
- 2010 - 2011 Executive Vice President, Retail Marketing, PTT Public Company Limited
- 2009 - 2010 Executive Vice President, Commercial & International Marketing, PTT Public Company Limited
- 2008 - 2009 Executive Vice President, Corporate Communication & Social Responsibility, PTT Public Company Limited

Shareholding : None
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Atikom Terbsiri

Age 51

Director

▲▲ Appointed : October 18th, 2013

▲▲ Education/Training
- Doctoral Course in Human Resources Management and Managerial Economics, Golden Gate University, U.S.A.
- M.B.A. (Finance & International Business), High Distinction, Armstrong University, Berkeley, U.S.A.
- Bachelor of Business Administration, Assumption University
- Executive Education Program, Harvard Business School, Harvard University, U.S.A.
- Diploma, National Defence College, The State Private Sector and Political Sectors Course Class 5
- PTT Group EVP Leadership Development Program in corporation with Development Dimension International
- Advance Security Management Program (ASMP1) The National Defence College Association of Thailand
- Capital Market Academy Leadership Program, Class 17, Capital Market Academy

▲▲ Director Training
- Director Certification Program (DCP) Class 125/2009 Thai Institute of Directors Association (IOD)

▲▲ Board member/management in Listed Company - The Stock Exchange of Thailand : 2
- Senior Executive Vice President, Petrochemicals & Refining Business Unit, PTT Public Company Limited
- Director, PTT Global Chemical Public Company Limited

▲▲ Board member/management in Non-Listed Company - The Stock Exchange of Thailand : None

▲▲ Position in Other Organizations/Institutions : None

▲▲ Work Experiences (5-years Past Experiences)
- 2011 - 30 Sep 2013 Director/Executive Director/President, IRPC Public Company Limited
- 2009 - 2011 Senior Executive Vice President Corporate Strategy & Planning and Acting Senior Executive Vice President I Port & Asset Management Business Unit, IRPC Public Company Limited
- 2007 - 2009 Executive Vice President Corporate Strategy & Commercial, PTT Aromatics and Refining Public Company Limited

Shareholding : None
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Air Chief Marshal Somchai Thean-anant

Age 62

Independent Director/Director to the Nomination and Remuneration Committee

▲▲ Appointed : October 19th, 2011, April 2nd, 2012 (re-elected)

▲▲ Education/Training
- Master of Electricity Engineering, Aerospace Systems, Cranfield Institute of Technology, U.K.
- Bachelor of Electrical Engineering, Royal Air Force Academy
- National Defence College (Class 46)
- Airport Management, Kasetsart University
- Air War College (Class 30)
- Air Command and Staff College (Class 32)
- Top Executive Programme (Class 5), Capital Market Academy (CMA), Stock Exchange of Thailand
- Corporate Governance for Directors and Senior Executive of State Enterprises and Public Organizations, Class 3-2009, King Prajadhipok's Institute

▲▲ Director Training
- Director Accreditation Program (DAP) Class 47/2005 Role of the Nomination and Governance Committee (RNG) Class 2/2012, Role of the Compensation Committee (RCC) Class 14/2012 Director Certification Program (DCP) Class 155/2012 and Role of the Chairman Program (RCP) Class 30/2013, Thai Institute of Directors Association (IOD)

▲▲ Board member/management in Listed Company - The Stock Exchange of Thailand : 1
- Independent Director/Director to the Nomination and Remuneration Committee, PTT Global Chemical Public Company Limited

▲▲ Board member/management in Non-Listed Company - The Stock Exchange of Thailand : 2
- Chairman, PEA ENCOM International Company Limited
- Director, Aeronautical Radio of Thailand Limited

▲▲ Position in Other Organizations/Institutions : 1
- Court Martial Judge

▲▲ Work Experiences (5-years Past Experiences)
- 2008 - 2011 President of Aeronautical Radio of Thailand Limited
- 2007 - 2008 Executive Expert, Royal Thai Air Force (a position for an officer of the rank of Air Chief Marshal)
- 2006 - 2007 Chief of Staff attached to the Commander-in-Chief, Royal Thai Air Force (a position for an officer of the rank of Air Marshal)
- 2005 - 2006 The Commander of the Science and Weapon System Development Centre, Royal Thai Air Force (a position for an officer of the rank of Air Marshal)
- 2009 - 2011 Vice Chairman of Volleyball Association

Shareholding : None
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Amnuay Preemonwong
Age 55

Independent Director /
Director to the Audit Committee

▲▲ Appointed : October 19th, 2011

▲▲ Education/Training
- B.A. in Economics, Ramkhamhaeng University
- L.L.B., Sukhothai Thammathirat Open University
- M.P.A., National Institute of Development Administration
- Advanced Executive Program, Kellogg School of Management, Northwestern University, U.S.A.
- National Defence College, Class 51

▲▲ Director Training
- Director Certification Program (DCP) Class 80/2006
  Financial Statement for Directors (FSD) Class 11/2011
  and Audit Committee Program (ACP) Class 38/2012,
  Thai Institute of Directors Association (IOD)

▲▲ Board member/management in Listed Company - The Stock Exchange of Thailand : 2
- Independent Director/Director to the Audit Committee, PTT Global Chemical Public Company Limited
- Committee Member, Nusasiri Public Company Limited

▲▲ Board member/management in Non-Listed Company - The Stock Exchange of Thailand : None

▲▲ Position in Other Organizations/Institutions : 3
- Inspector General, Ministry of Finance
- Committee Member, Government Savings Bank
- Director, Tourism Authority of Thailand

▲▲ Work Experiences (5-years Past Experiences)
- 2006 - 2008 Deputy Director General, Treasury Department
- 2004 - 2006 Director, Bureau of Bangkok State Property Management, Treasury Department
- 2008 - 2009 State Property Development Advisor, Treasury Department
- 2012 Chairman, Thailand Tobacco Monopoly
- 2009 - 2012 Chairman, CAT Telecom Public Company Limited

Shareholding : None
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Police Lieutenant General Prawut Thavornsiri
Age 57

Independent Director /
Director to the Corporate Governance Committee

▲▲ Appointed : April 4th, 2013

▲▲ Education/Training
- Doctor of Social Sciences and Humanities in Criminology and Criminal Justice Mahidol University
- Master of Social Sciences and Humanities in Criminology and Criminal Justice Mahidol University
- Bachelor of Laws Thammasat University
- Armed Forces Academies Preparatory School Batch 15
- Royal Police Cadet Academy Batch 31
- Superintendent Course Batch 21
- The Programme for Senior Executive on Police Administration Batch 21
- The Programme for Senior Executives on Justice Administration Batch 15

▲▲ Director Training
- Director Certification Program (DCP) Class 108/2008, Thai Institute of Directors Association (IOD)

▲▲ Board member/management in Listed Company - The Stock Exchange of Thailand : 1
- Independent Director/Director to the Corporate Governance Committee, PTT Global Chemical Public Company Limited

▲▲ Board member/management in Non-Listed Company - The Stock Exchange of Thailand : 1
- Director, Sport Services Alliance Limited

▲▲ Position in Other Organizations/Institutions : 1
- Commissioner of Office of Information and Communication Technology, Royal Thai Police

▲▲ Work Experiences (5-years Past Experiences)
- 2008 Deputy Commissioner of Office of Information and Communication Technology, Royal Thai Police
- 2008 Deputy Inspector General (Level 7)
- 2007 Deputy Commissioner of Immigration Bureau CMS, Royal Thai Police

Shareholding : None
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Areepong Bhoocha-oom

Age 56

Independent Director/Director to the Nomination and Remuneration Committee/Director to the Risk Management Committee

▲▲ Appointed : October 25th, 2013

▲▲ Education/Training
- Ph.D. Finance, University of Mississippi, U.S.A.
- M.B.A. Finance, Marshall University, U.S.A.
- B.S. International Management, Boston University, U.S.A.
- Government Debt Monitoring System (World Bank)
- Global Trend and Public Enterprise Reform, Harvard University, U.S.A.
- Awareness, Vision, Imagination, Responsibility, Action (INSEAD)

▲▲ Director Training
- Director Certification Program (DCP) Class 3/2000 Thai Institute of Directors Association (IOD)

▲▲ Board member/management in Listed Company - The Stock Exchange of Thailand : 2
- Independent Director/Director to the Nomination and Remuneration Committee/Director to the Risk Management Committee, PTT Global Chemical Public Company Limited
- Vice Chairman, Thai Airways International Public Company Limited

▲▲ Board member/management in Non-Listed Company - The Stock Exchange of Thailand : None

▲▲ Position in Other Organizations/Institutions : 2
- Secretary-General, Office of the Public Sector Development Commission (OPCD)
- Chairman, Government Housing Bank

▲▲ Work Experiences (5-years Past Experiences)

- 2010 - Sep. 2013	Permanent Secretary, Ministry of Finance
- 2009 - 2010	Director-General, the Excise Department, Ministry of Finance
- 2007 - 2009	Deputy Director-General, State Enterprise Policy Office, Ministry of Finance
- 2010 - 2011	Chairman, TOT Public Company Limited
- 2009 - 2010	Director, Siam Commercial Bank Public Company Limited
- 2009 - 2010	Director of Audit Committee, PTT Chemical Public Company Limited
- 2007 - 2009	Director, Bangkok Insurance Public Company Limited
- 2008	Thanachart Bank Public Company Limited
- 2000 - 2008	Director, Ratchburi Electricity Generating Holding Public Company Limited
- 2007	Director, The Aromatics (Thailand) Public Company Limited

Shareholding : None
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Bowon Vongsinudom

Age 59

Director and Secretary to the Board of Directors / Director to the Risk Management Committee

▲▲ Appointed : October 19th, 2011

▲▲ Education/Training
- Master of Management, Sasin Graduate Institute of Business Administration of Chulalongkorn University
- M.Eng. in Chemical Engineering, Chulalongkorn University
- B.Eng. in Chemical Engineering, Chulalongkorn University
- National Defence Course, Class 17, National Defence College

▲▲ Director Training
- Director Accreditation Program (DAP) Class 76/2008, Thai Institute of Directors Association (IOD)

▲▲ Board member/management in Listed Company - The Stock Exchange of Thailand : 3
- Senior Executive Vice President, Downstream Petroleum Business Group, PTT Public Company Limited
- Director and Secretary to the Board of Directors/ Director to the Risk Management Committee/President & Chief Executive Officer, PTT Global Chemical Public Company Limited
- Vice Chairman, Vinythai Public Company Limited

▲▲ Board member/management in Non-Listed Company - The Stock Exchange of Thailand : 7
- Chairman, NPC Safety and Environmental Service Company Limited
- Chairman, PTT Phenol Company Limited
- Chairman, PTT Maintenance and Engineering Company Limited
- Director, PTT Chemical International Private Limited
- Director, PTT Chemical International (Asia Pacific ROH) Limited
- Director, Thai Tank Terminal Limited
- Director, Global Power Synergy Company Limited

▲▲ Position in Other Organizations/Institutions : 1
- Director, Thai Listed Companies Association

▲▲ Work Experiences (5-years Past Experiences)

- Oct. 2011 - Oct. 2013	President, PTT Global Chemical Public Company Limited
- Oct. 2010 - Oct. 2011	Director/Risk Management Committee/ President & CEO and Secretary to the Board of Directors, PTT Aromatics and Refining Public Company Limited
- 2009 - 2010	Senior Executive Vice President - Operations and Acting Executive Vice President - Supply Planning & Business Development, PTT Aromatics and Refining Public Company Limited
- 2011 - 2013	Director and Managing Director, PTT Polyethylene Company Limited
- 2008 - 2009	Co-Chief Executive Officer, Alliance Refining Company Limited

Shareholding : 223,868 shares (0.004965%)
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

EXECUTIVE TEAM

04 05 06 07 08 09 10 11

01

Mr. Bowon Vongsinudom
President
& Chief Executive Officer

01

04

Mrs. Sriwan Eamrungroj
Executive Vice President,
Marketing, Commercial
and Supply

05

Mr. Dhanes Charoensupaya
Executive Vice President,
Strategic Execution and
Excellence

06

Mrs. Puntip Oungpasuk
Executive Vice President,
Corporate Strategy

07

Mr. Patiparn Sukorndhaman
Executive Vice President,
Finance and Accounting

08

Mr. Varit Namwong
Executive Vice President,
Organization Effectiveness

09

Mrs. Thasnalak Santikul
Executive Vice President,
Corporate Affairs

10

Mr. Athavuth Vikitsreth
Executive Vice President,
External Affairs

11

Mr. Kongkrapan Intarajang
Executive Vice President

12 | 13 | 14 | 15 | 16 | 17 | 18 | 19

02 | 03

02

Mr. Kun Patumraj
Chief Operating Officer -
Upstream Petrochemical Business

03

Mr. Athavudhi Hirunburana
Chief Operating Officer -
Downstream Petrochemical Business

12

Mr. Suvit Tinnachote
Executive Vice President,
Group Performance Center -
Olefins

13

Mr. Narong Bunditkamol
Executive Vice President,
Group Performance Center -
Aromatics

14

Mr. Anutin Chuaypen
Senior Vice President,
Group Performance Center -
Refinery and Shared Facilities

15

Mr. Booncherd Suwantip
Senior Vice President, Quality,
Safety, Occupational Health
and Environment

16

Mr. Pairote Utaisup
Senior Vice President,
Polymers Business Unit

17

Mr. Sermsak Sriyaphai
Executive Vice President,
EO-Based Performance
Business Unit

18

Mr. Vanchai Tadadoltip
Executive Vice President,
Green Chemicals Business Unit

19

Mr. Toasaporn Boonyapipat
Senior Vice President,
High-Volume Specialties
Business Unit

EXECUTIVES

Mr. Bowon Vongsinudom

President & Chief Executive Officer

Age : 59

Appointed : October 1st, 2013

Education / Training

: Master of Management, Sasin Graduate Institute of Business Administration of Chulalongkorn University
: M.Eng. in Chemical Engineering, Chulalongkorn University
: B.Eng. in Chemical Engineering, Chulalongkorn University
: National Defence Course, Class 17, National Defence College
: Director Accreditation Program (DAP) Class 76/2008, Thai Institute of Directors Association (IOD)

Board member / management in Listed Company - The Stock Exchange of Thailand : 3

: Senior Executive Vice President, Downstream Petroleum Business Group, PTT Public Company Limited
: Director and Secretary to the Board of Directors / Director to the Risk Management Committee / President & Chief Executive Officer, PTT Global Chemical Public Company Limited
: Vice Chairman, Vinythai Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : 7

: Chairman, NPC Safety and Environmental Service Company Limited
: Chairman, PTT Phenol Company Limited
: Chairman, PTT Maintenance and Engineering Company Limited
: Director, PTT Chemical International Private Limited
: Director, PTT Chemical International (Asia Pacific ROH) Limited
: Director, Thai Tank Terminal Limited
: Director, Global Power Synergy Company Limited

Position in Other Organizations / Institutions : 1

: Director, Thai Listed Companies Association

Work Experiences (5-years Past Experiences)

: Oct. 2011 - Oct. 2013 President, PTT Global Chemical Public Company Limited
: Oct. 2010 - Oct. 2011 Director / Risk Management Committee / President & CEO and Secretary to the Board of Directors, PTT Aromatics and Refining Public Company Limited
: 2009 - 2010 Senior Executive Vice President - Operations and Acting Executive Vice President - Supply Planning & Business Development, PTT Aromatics and Refining Public Company Limited
: 2011 - 2013 Director and Managing Director, PTT Polyethylene Company Limited
: 2008 - 2009 Co-Chief Executive Officer, Alliance Refining Company Limited

Shareholding : 223,868 shares (0.004965%)
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Kun Patumraj

Chief Operating Officer - Upstream Petrochemical Business

Age : 57

Appointed : November 1st, 2013

Education / Training

: B.Sc., in Chemical Engineers, New Jersey Institute of Technology, U.S.A.
: M.Eng., in Chemical Engineers, Manhattan College, New York, U.S.A.
: Certificate of Senior Executive Program (SEP), Sasin Graduate Institute of Business Administration of Chulalongkorn University
: Advance Management Program (AMP), Harvard Business School, U.S.A.
: PTT Executive Leadership Program, GE Crotonville, U.S.A.
: Director Accreditation Program (DAP) Class 91/2011 and Role of the Chairman Program (RCP) Class 27/2012, Thai Institute of Directors Association (IOD)

Board member / management in Listed Company - The Stock Exchange of Thailand : 1

: Chief Operating Officer - Upstream Petrochemical Business and Acting Executive Vice President Engineering and Maintenance, PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : 3

: Chairman, PTT Energy Solutions Company Limited
: Director, NPC Safety and Environmental Service Company Limited
: Director, PTT Maintenance and Engineering Company Limited

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: 2011 - 2013 Executive Vice President, Engineering and Maintenance, PTT Global Chemical Public Company Limited
: 2010 - 2011 Executive Vice President - Technology Engineering & Maintenance, PTT Aromatics and Refining Public Company Limited
: 2013 Director, PTT Polyethylene Company Limited
: 2013 Director, Global Power Synergy Company Limited
: 2006 - 2011 Director, PTT Phenol Company Limited
: Jan. - Apr. 2010 Executive Vice President - Asset Management, PTT Aromatics and Refining Public Company Limited
: 2007 - 2009 Executive Vice President - Operations, PTT Aromatics and Refining Public Company Limited

Shareholding : 223,868 shares (0.004965%)
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Athavudhi Hirunburana

Chief Operating Officer - Downstream Petrochemical Business

Age : 58

Appointed : November 1st, 2013

Education / Training

: Master of Science (Mechanical), Manhattan College, New York, U.S.A.
: Bachelor of Science (Mechanical), New York Institute of Technology, U.S.A.
: Senior Executive Program 2007, Stanford University, U.S.A.
: Executive Program for Senior Management 2005, Fiscal Policy Research Institute Foundation
: Managing People for HR Executive, Thammasat University
: Senior Executive Program, Sasin Graduate Institute of Business Administration of Chulalongkorn University
: Director Certification Program (DCP) Class 79/2006, Thai Institute of Directors Association (IOD)

Board member / management in Listed Company - The Stock Exchange of Thailand : 1

: Chief Operating Officer - Downstream Petrochemical Business PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : 6

: Chairman, Thai Styrenics Company Limited
: Member of the Board Directors and President, PTTGC International (USA) Inc.
: Member Representative to the Governance Board, NatureWorks LLC
: Director, Polymer Marketing Company Limited
: Director, Alliance Petrochemical Investment (Singapore) Private Limited
: Director, Mehr Petrochemical Company Limited

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: 2011 - 2013 Executive Vice President Polymers Business Unit, PTT Global Chemical Public Company Limited
: 2005 - 2011 Executive Vice President, Organizational Effectiveness, PTT Chemical Public Company Limited
: 2013 Director, Bangkok Polyethylene Public Company Limited
: 2013 Director, PTT Polyethylene Company Limited
: 2009 - 2011 Director, Thai Oleochemicals Company Limited
: 2009 - 2011 Director, Thai Fatty Alcohols Company Limited
: 2009 - 2011 Director, Global Power Synergy Company Limited
: 2009 - 2011 Director, Eastern Fluid Transport Company Limited
: 2008 - 2011 Director, PTT Chemical International Private Limited
: 2008 - 2011 Director, PTT Chemical International (Asia Pacific ROH) Limited
: 2008 - 2011 Director, TOC Glycol Company Limited
: 2008 - 2011 Director, PTT ICT Solutions Company Limited
: 2005 - 2011 Director, Thai Ethanolamines Company Limited
: 2005 - 2010 Director, Bio Creation Company Limited

Shareholding : 16,991 shares; Spouse 25,000 shares (0.000931%)
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Dhanes Charoensupaya

Executive Vice President Strategic Execution and Excellence

Age : 59

Appointed : December 1st, 2012

Education / Training

: Ph.D. (Mechanical Engineering), Illinois Institute of Technology, U.S.A.
: Master of Science (Mechanical Engineering), Texas A & I University, U.S.A.
: Bachelor's Degree in Mechanical Engineering, Chulalongkorn University
: Advance Management Program, Harvard Business School, U.S.A.
: Director Certification Program (DCP) Class 97/2007, Thai Institute of Directors Association (IOD)

Board member / management in Listed Company - The Stock Exchange of Thailand : 2

: Executive Vice President Strategic Execution and Excellence PTT Global Chemical Public Company Limited
: Director, Vinythai Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : 6

: Chairman, Bio Creation Company Limited
: Director, Thai Tank Terminal Limited
: Director, PTT Chemical International Private Limited
: Director, PTT Chemical International (Asia Pacific ROH) Limited
: Director, Myriant Corporation
: Director, PTT Phenol Company Limited

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: Oct. 2011 - Nov. 2012 Executive Vice President Growth Sustainability and Innovation, PTT Global Chemical Public Company Limited
: 2008 - 2011 Executive Vice President, Marketing, Commercial & Supply Chain Governance, PTT Chemical Public Company Limited
: 2011 - 2013 Chairman, Advanced Biochemical (Thailand) Company Limited
: 2008 - 2012 Director, Alliance Petrochemical Investment (Singapore) Private Limited
: 2008 - 2012 Director, Mehr Petrochemical Company Limited
: 2008 - 2011 Director, PTT Polymer Marketing Company Limited
: 2008 - 2011 Director, Thai Styrenics Company Limited
: 2008 - 2011 Director, Global Power Synergy Company Limited

Shareholding : 50,000 shares (0.001109%)
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mrs. Puntip Oungpasuk

Executive Vice President Corporate Strategy

Age : 53

Appointed : October 19th, 2011

Education / Training

: Master's Degree in Business Administration (Commerce & Accountancy), Thammasat University
: Bachelor's Degree in Chemical Engineering, Prince of Songkla University
: The Advance Management Program (AMP), Harvard Business School, U.S.A
: Chief Finance Officer (CFO) Class 1/2004, the Institute of Certified Accountants and Auditors of Thailand
: Director Certification Program (DCP) Class 67/2005, Thai Institute of Directors Association (IOD) and Australian Institute of Company Directors

Board member / management in Listed Company - The Stock Exchange of Thailand : 3

: Executive Vice President - Corporate Strategy / Acting Head - Science and Innovation, PTT Global Chemical Public Company Limited
: Director and Executive Committee, Vinythai Public Company Limited
: Chairperson of PTT Group Technology, PTT Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : 8

: Director, Vencorex Holding
: Director, PTTGC International (Netherlands) B.V.
: Director, TOC Glycol Company Limited
: Director, PTT Phenol Company Limited
: Director, PTT Chemical International Private Limited
: Director, Emery Oleochemicals (M) Sdn Bhd
: Director, PTT Chemical International (Asia Pacific ROH) Limited
: Director, Bio Creation Company Limited

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: 2008 - 2011 Executive Vice President, Strategy & International Affairs, PTT Chemical Public Company Limited
: 2011 - 2013 Director, Advanced Biochemical (Thailand) Company Limited
: 2011 - 2012 Director, Myriant Corporation
: 2009 - 2012 Director, Pimai Salt Company Limited
: 2008 - 2011 Director, Thai Tank Terminal Limited
: 2008 - 2010 Director, Thai Styrenics Company Limited
: 2007 - 2010 Director, PTT Polyethylene Company Limited

Shareholding : 158,389 shares (0.003513%)
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Patiparn Sukorndhaman

Executive Vice President Finance & Accounting

Age : 52

Appointed : October 19th, 2011

Education / Training

: M.B.A. (Finance), The American University, U.S.A.
: B.A. Political Science (Public Administration - Public Finance), 2nd Class Honors, Chulalongkorn University
: Graduate Diploma in Public Law and Management (PLM 8), King Prajadhipok's Institute
: Certification Program for Senior Management 5 (Ex - PSM 5), Fiscal Policy Research Institute Foundation
: Director Certification Program (DCP) Class 73/2006, Thai Institute of Directors Association (IOD)

Board member / management in Listed Company - The Stock Exchange of Thailand : 1

: Executive Vice President - Finance & Accounting, PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : 8

: Director, PTT Chemical International Private Limited
: Director, PTT Chemical International (Asia Pacific ROH) Limited
: Director, Thai Oleochemicals Company Limited
: Director, Thai Fatty Alcohol Company Limited
: Director, TOC Glycol Company Limited
: Director, Bio Creation Company Limited
: Director, PTT Phenol Company Limited
: Director, PTT ICT Solutions Company Limited

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: 2009 - 2011 Executive Vice President, Finance & Accounting, PTT Chemical Public Company Limited
: 2003 - 2009 Senior Executive Vice President Accounting and Finance (CFO), Bangchak Petroleum Public Company Limited
: 2009 - 2012 Director, PTT Polyethylene Company Limited
: 2009 - 2012 Director, Thai Ethanolamines Company Limited

Shareholding : None
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Varit Namwong

Executive Vice President Organization Effectiveness

Age : 50

Appointed : October 19th, 2011

Education / Training

: Master of Business Administration, Business Administration (International Program), Ramkhamhaeng University
: Bachelor of Business Administration, Marketing, Assumption Business Administration College
: Certificate of Senior Executive Program (SEP), Sasin Graduate Institute of Business Administration of Chulalongkorn University
: Director Accreditation Program (DAP) Class 91/2011 and Director Certification Program (DCP) Class 160/2012, Thai Institute of Directors Association (IOD)

Board member / management in Listed Company - The Stock Exchange of Thailand : 1

: Executive Vice President - Organization Effectiveness, PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : 6

: Director, PTT Chemical International Private Limited
: Director, PTT Chemical International (Asia Pacific ROH) Limited
: Director, Eastern Fluid Transport Company Limited
: Director, Thai Styrenics Company Limited
: Director, PTT ICT Solutions Company Limited
: Director, Sport Services Alliance Limited

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: 2009 - 2011 Executive Vice President - Human Resources & Corporate Administration, PTT Aromatics and Refining Public Company Limited
: 2002 - 2009 Manager Human Resources, Alliance Refining Company Limited
: 2011 - 2012 Director, Global Power Synergy Company Limited

Shareholding : 108,939 shares (0.002416%)
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mrs. Thasnalak Santikul

Executive Vice President Corporate Affairs

Age : 59

Appointed : October 19th, 2011

Education / Training

: Master and Doctorate Degree (D.E.S) International Laws, University D'Aix-Marseille, France
: Bachelor Degree in Political Science (International Affairs), Thammasat University
: Certification Business Program NIDA-Wharton (Class 2)
: Director Certification Program (DCP) Class 92/2007, Thai Institute of Directors Association (IOD)

Board member / management in Listed Company - The Stock Exchange of Thailand : 1

: Executive Vice President - Corporate Affairs PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : 5

: Director, PTT Chemical International Private Limited
: Director, PTT Chemical International (Asia Pacific ROH) Limited
: Director, Thai Oleochemicals Company Limited
: Director, Thai Fatty Alcohol Company Limited
: Director, NPC Safety and Environmental Service Company Limited

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: 2008 - 2011 Senior Vice President, Corporate Affairs, PTT Chemical Public Company Limited
: 2011 - 2013 Director, Bangkok Polyethylene Public Company Limited

Shareholding : 119 shares (0.000003%)
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mrs. Sriwan Eamrungroj

Executive Vice President Marketing, Commercial and Supply

Age : 56

Appointed : October 19th, 2011

Education / Training

: MBA., Thammasat University
: B.Eng. (Mechanical Engineering), Second Class Honors, Chulalongkorn University
: Advance Management Program (AMP), Class 183/2012, Harvard Business School, U.S.A.
: The Strategy Challenge (TSC) Program, Class 2010, IMD
: INSEAD Business School, Class 2010, INSEAD Executive Education, France
: NIDA-Wharton Executive Leaders, Class 2005, Wharton School of Business, University of Pennsylvania, U.S.A.
: The Board's Role in Mergers and Acquisitions Class 1/2011 and Director Certification Program (DCP) Class 160/2012, Thai Institute of Directors Association (IOD)

Board member / management in Listed Company - The Stock Exchange of Thailand : 2

: Executive Vice President, Petrochemicals & Refining Business Unit, PTT Public Company Limited
: Executive Vice President - Marketing, Commercial and Supply PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : 6

: Director, PTT Chemical International Private Limited
: Director, PTT Chemical International (Asia Pacific ROH) Limited
: Director, PTT Polymer Marketing Company Limited
: Director, Thai Styrenics Company Limited
: Director, Thai Tank Terminal Limited
: Director, Global Power Synergy Company Limited

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: 2009 - 2010 Executive Vice President, Strategy & Portfolio Management, PTT Public Company Limited
: 2007 - 2008 Executive Vice President, Corporate Strategies & Planning, PTT Public Company Limited
: 2011 - 2013 Director, PTT Phenol Company Limited
: 2009 - 2012 Director, HMC Polymers Company Limited

Shareholding : None
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Suvit Tinnachote

Executive Vice President Group Performance Center - Olefins

Age : 57

Appointed : October 19th, 2011

Education / Training

: Master of Public and Private Management, National Institute of Development Administration (NIDA)
: Bachelor's Degree in Electrical Engineering, King Mongkut's Institute of Technology (Ladkrabang)
: ASEAN Executive Program (AEP), GE Crotonville
: Director Certification Program (DCP) Class 92/2007, Thai Institute of Directors Association (IOD)

Board member / management in Listed Company - The Stock Exchange of Thailand : 1

: Executive Vice President Group Performance Center - Olefins, PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : 1

: Director, TOC Glycol Company Limited

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: 2008 - 2011 Executive Vice President, Polymers Products Value Center, PTT Chemical Public Company Limited
: 2008 Executive Vice President, EO-Based Performances Product Value Center, PTT Chemical Public Company Limited
: 2012 - 2013 Director, Global Power Synergy Company Limited
: 2011 - 2013 Director, PTT Polyethylene Company Limited
: 2011 - 2013 Director, PTT Phenol Company Limited
: May - Aug. 2012 Member Representative to the Governance Board, NatureWorks LLC
: 2011 - Aug. 2012 Member of the Board Directors and President, PTTGC International (USA) Inc.
: 2008 - 2012 Director, NPC Safety and Environmental Service Company Limited
: 2009 - 2012 Chairman, Thai Stylenics Company Limited
: 2009 - 2011 Director, Bangkok Polyethylene Public Company Limited

Shareholding : 96,086 shares; Spouse 24,313 shares (0.002670%)
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Narong Bunditkamol

Executive Vice President Group Performance Center - Aromatics

Age : 59

Appointed : October 19th, 2011

Education / Training

: M.B.A., Thammasat University
: B.Eng. (Electrical Engineering), Chulalongkorn University
: Senior Executive Program, Sasin Graduate Institute of Business Administration of Chulalongkorn University
: Advance Management Program, Harvard Business School, U.S.A.
: Director Certification Program (DCP) Class 97/2007, Thai Institute of Directors Association (IOD)

Board member / management in Listed Company - The Stock Exchange of Thailand : 1

: Executive Vice President Group Performance Center - Aromatics, PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : 4

: Director, HMC Polymers Company Limited
: Director, PTT Phenol Company Limited
: Director, Global Power Synergy Company Limited
: Director, NPC Safety and Environmental Service Company Limited

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: 2007 - 2011 Executive Vice President, Olefins & Shared Facilities
: 2010 - 2011 Director, PTT Polyethylene Company Limited
: 2008 - 2011 Director, Thai Tank Terminal Limited

Shareholding : 31,084 shares; Spouse 31,084 shares (0.001379%)
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Sermsak Sriyaphai

Executive Vice President EO-Based Performance Business Unit

Age : 58

Appointed : October 19th, 2011

Education / Training

: Master's Degree in Public and Private Management, National Institute of Development Administration (NIDA)
: Bachelor's Degree in Electrical Engineering, Feati University, the Philippines
: Certificate Senior Executive Program, Kellog / Sasin (SEP Class 19)
: Certificate Business Program, NIDA-Wharton (Class 3)
: Director Certification Program (DCP) Class 117/2009 and Financial Statements for Directors (FSD) Class 4/2009, Thai Institute of Directors Association (IOD)

Board member / management in Listed Company - The Stock Exchange of Thailand : 1

: Executive Vice President EO-Based Performance Business Unit / Project Executive Director, PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : 2

: Chairman / Managing Director, TOC Glycol Company Limited
: Director, Thai Ethoxylate Company Limited

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: 2009 - 2011 Senior Vice President, EO-Based Performance Product Value Center, PTT Chemical Public Company Limited
: 2012 Chairman / MD, Thai Ethanolamines Company Limited
: 2012 Director, PTT Maintenance and Engineering Company Limited

Shareholding : 97 shares (0.000002%)
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Vanchai Tadadoltip

Executive Vice President Green Chemicals Business Unit

Age : 56

Appointed : October 19th, 2011

Education / Training

: Bachelor of Science, Chemical Technology, Chulalongkorn University
: Director Accreditation Program (DAP) Class 90/2011
Thai Institute of Directors Association (IOD)

Board member / management in Listed Company - The Stock Exchange of Thailand : 1

: Executive Vice President Green Chemicals Business Unit,
PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : 7

: Chairman and Acting Managing Director, Thai Oleochemicals Company Limited
: Chairman and Acting President, Thai Fatty Alcohols Company Limited
: Director and Executive Committee, Emery Oleochemicals (M) Sdn Bhd
: Director, NatureWorks LLC
: Director and Secretary of Corporation, PTTGC International (USA) Inc.
: Director, Vencorex Holding
: Director, PTTGC International (Netherlands) B.V.

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: 2011 - 2012 Executive Vice President - High Volume Specialties Business Unit (HVS), PTT Global Chemical Public Company Limited
: 2010 - 2011 Executive Vice President - Supply Planning & Business Development, PTT Aromatics and Refining Public Company Limited
: 2009 - 2010 Executive Vice President - Aromatics Operations, PTT Aromatics and Refining Public Company Limited
: Feb. - Aug 2009 Executive Vice President - Refinery Operations, PTT Aromatics and Refining Public Company Limited
: 2006 - 2011 Manager - Major Projects, Alliance Refining Company Limited
: Feb. - Dec. 2011 Director, PTT Phenol Company Limited

Shareholding : 15,700 shares (0.000348%)
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Kongkrapan Intarajang

Executive Vice President

Age : 46

Appointed : November 1st, 2012

Education / Training

: Ph.D. Chemical Engineering, University of Houston, U.S.A.
: Bachelor of Science, Chemical Engineering (2nd Class Honors), Chulalongkorn University
: Director Certification Program (DCP) Class 119/2009 and Role of the Chairman Program (RCP) Class 21/2009, Thai Institute of Directors Association (IOD)

Board member / management in Listed Company - The Stock Exchange of Thailand : 1

: Executive Vice President, PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : 8

: Director / Executive Committee and Chief Executive Officer, Emery Oleochemicals (M) Sdn Bhd
: Director, Emery Oleochemicals LLC
: Director, Emery Oleochemicals GmbH
: Director, Emery Oleochemicals (UK) Pvt Ltd.
: Director, Erca Emery Surfactants B.V.
: Director, Emery Aekyung Sdn Bhd
: Director, PTT Chemical International Private Limited
: Director, PTT Chemical International (Asia Pacific ROH) Limited

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: 2011 - 2012 Senior Vice President, PTT Global Chemical Public Company Limited, Appointed as Chief Executive Officer - Emery Oleochemicals (M) Sdn Bhd
: 2009 - 2011 Senior Vice President, PTT Chemical Public Company Limited, Appointed as Chief Executive Officer - Emery Oleochemicals (M) Sdn Bhd
: Jan. - Oct 2009 Senior Vice President, EO-Based Performance Product Value Center, PTT Chemical Public Company Limited
: Feb. - Dec. 2008 Senior Vice President, Oleochemical Product Value Center, PTT Chemical Public Company Limited
: 2007 - 2009 Vice President, Corporate Business Development, PTT Chemical Public Company Limited
: 2009 Chairman, TOC Glycol Company Limited
: 2009 Chairman, Thai Ethanolamines Company Limited
: 2009 Chairman, Thai Choline Chloride Company Limited
: 2007 - 2010 Director, Thai Ethoxylate Company Limited
: 2007 - 2009 Vice Chairman, the Federation of Thai Industries, Petrochemical Industry Club

Shareholding : None
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Athavuth Vikitsreth

Executive Vice President External Affairs

Age : 54

Appointed : October 1st, 2013

Education / Training

: Bachelor of Business Administration (BBA.) Abilene Christian University, Texas, U.S.A.
: Bachelor of Business Administration, Accounting, Assumption Business Administration College
: National Defence Course, Class 23, National Defence College
: Advanced Certificate Course in Politics and Governance in Democratic System for Executives, Class 12, King Prajadhipok's Institute
: Corporate Governance for Directors and Senior Executive of State Enterprises and Public Organizations, Class 2, Public Director Institute (PDI)
: Training Course on Administrative Justice for Executives (BYP), Class 4, the Administrative Courts
: Director Certification Program (DCP) Class 106/2008
Audit Committee Program (ACP) Class 24/2008
Monitoring the System of Internal Control and Risk Management (MIR) Class 5/2009 and Monitoring the Internal Audit Function (MIA) Class 5/2009, Thai Institute of Directors Association (IOD)

Board member / management in Listed Company - The Stock Exchange of Thailand : 1

: Executive Vice President - External Affairs, PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : None

Position in Other Organizations / Institutions : 2

: Director to the Internal Audit Committee, Office of the National Broadcasting and Telecommunication Commission (NBTC)
: Sub-Committee on consideration of concession agreement for broadcasting and telecommunications, Sub-Committee council office of the National Broadcasting and Telecommunications Commission (NBTC)

Work Experiences (5-years Past Experiences)

: 2011 - 2013 Senior Executive Vice President - External Affairs, PTT Global Chemical Public Company Limited
: 2010 - 2011 Senior Vice President - Industry & Independent Organization Management, PTT Aromatics and Refining Public Company Limited
: 2010 - 2011 Advisor, Ministry of Industry
: 2010 - 2011 Executive Director / Member of evaluation of Managing Director Sub-Committee, Software Industry Promotion Agency (Public Organization), Ministry of Information and Communication Technology
: 2010 - 2011 Honorary Advisor to Commission on Economy, Commerce and Industry, Senate
: 2010 - 2011 Advisor to the Senate Sub-Committee on studying electrical energy costs in the industrial sector, the Senate Standing Committee for Economics, Commerce and Industry, Senate

Shareholding : None
Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Toasaporn Boonyapipat

Senior Vice President High-Volume Specialties Business Unit

Age : 49

Appointed : January 1st, 2012

Education / Training

: Master of Business Administration, Burapha University
: Bachelor of Mechanical Engineering (Second Class Honors), Chiang Mai University
: ASEAN Executive Program (AEP), GE Crotonville, U.S.A.

Board member / management in Listed Company - The Stock Exchange of Thailand : 1

: Senior Vice President, High-Volume Specialties Business Unit, PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : 1

: Director, PTT Phenol Company Limited

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: 2011 - 2012 Vice President Growth Project Management, PTT Global Chemical Public Company Limited
: 2010 - 2011 Project Director Growth Program Management, PTT Chemical Public Company Limited
: 2005 - 2010 Vice President Olefins Plant I-4, PTT Chemical Public Company Limited

Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Booncherd Suwantip

Senior Vice President Quality, Safety, Occupational Health and Environment

Age : 57

Appointed : August 1st, 2013

Education / Training

: Bachelor's Degree in Chemistry, Prince of Songkla University
: Senior Executive Program (SEP 16)
: Leadership Development Program (LDP)

Board member / management in Listed Company - The Stock Exchange of Thailand : 1

: Senior Vice President, Quality, Safety, Occupational Health and Environment, PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : None

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: 2011 - 2013 Vice President, Technical and Enhance SHE / Quality, Safety, Occupational Health and Environmental, PTT Global Chemical Public Company Limited
: 2005 - 2011 Vice President, Technical and Enhance SHE /, Safety, Occupational Health and Environmental, PTT Chemical Public Company Limited

Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Anutin Chuaypen

Senior Vice President Group Performance Center - Refinery and Shared Facilities

Age : 49

Appointed : January 1st, 2014

Education / Training

: Master of Science, Computer & Engineering Management, Assumption University
: B.Sc, in Chemical Engineering, Chulalongkorn University

Board member / management in Listed Company - The Stock Exchange of Thailand : 1

: Senior Vice President, Group Performance Center - Refinery and Shared Facilities, PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : None

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: 2011 - 2013 Vice President-Refinery and Shared Facilities & Aromatics Maintenance, PTT Global Chemical Public Company Limited
: 2008 - 2009 Vice President-Aromatics 2 Production, PTT Aromatics and Refining Public Company Limited
: 2005 - 2007 Deputy Project Director (Project Support), Aromatics and Reformer Complex II Project, The Aromatics (Thailand) Public Company Limited

Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Pairote Utaisup

Senior Vice President Polymers Business Unit

Age : 57

Appointed : January 1st, 2014

Education / Training

: B.Eng. (Mechanical Engineering), Chulalongkorn University
: NIDA-Wharton Executive Leadership Class 2008 Wharton School of Business, University of Pennsylvania. U.S.A.
: Director Certification Program (DCP) Class 127/2010, Thai Institute of Directors Associate (IOD)

Board member / management in Listed Company - The Stock Exchange of Thailand : 1

: Senior Vice President, Polymers Business Unit, PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : None

Work Experiences (5-years Past Experiences)

: 2009 - 2013 Managing Director, Bangkok Polyethylene Public Company Limited
: 2011 - 2013 Vice President, Operations - Polymers Business Unit, PTT Global Chemical Public Company Limited
: 2005 - 2013 Vice President, Operations - Polymers Business Unit, PTT Chemical Public Company Limited

Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mr. Adisorn Vichaikatka

Vice President - Internal Audit

Age : 56

Appointed : August 1st, 2013

Education / Training

: Bachelor's Degree in Engineering Program, King Mongkut's University of Technology Thonburi
: Effective Audit Committee Program
: Best Practices in Value-Added Auditing
: The Executive Program for Senior Management (EX-PMS)

Board member / management in Listed Company - The Stock Exchange of Thailand : 1

: Vice President - Internal Audit, PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : None

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: Oct 2011 - Aug 2013 Vice President - Corporate Risk Management and Internal Control, PTT Global Chemical Public Company Limited
: 2005 - Oct 2011 Vice President - Internal Audit, PTT Chemical Public Company Limited

Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

Mrs. Warawan Tippawanich

Vice President – Corporate Secretary

Age : 50

Appointed : January 1st, 2014

Education / Training

: Master of Business Administration, Management, Chulalongkorn University
: BSC in Chemical Engineering, Chulalongkorn University
: PTT Group VP Leadership Development Program IV (Nov. 2012)
: PTT Harvard Business School Leadership Development Program II (Feb. - Aug. 2014)

Board member / management in Listed Company - The Stock Exchange of Thailand : 1

: Vice President - Corporate Secretary, PTT Global Chemical Public Company Limited

Board member / management in Non-Listed Company - The Stock Exchange of Thailand : None

Position in Other Organizations / Institutions : None

Work Experiences (5-years Past Experiences)

: Oct. 2011 - Dec. 2013 Vice President - Strategy and Planning, PTT Global Chemical Public Company Limited
: 2010 - Oct 2011 Vice President - Corporate Planning, PTT Chemical Public Company Limited
: 2009 - 2010 Specialist - Corporate and Planning, PTT Chemical Public Company Limited

Relation among Family with other Directors, management, Major Shareholders of the Company or Subsidiaries : None

PTTGC's Senior Vice President

Mr. Suwat Suratchaikarn
Senior Vice President
CAPEX Excellence

Senior Vice President Appointed as Executives of PTTGC's Subsidiaries

Mr. Prakob Petcharuttana
Senior Vice President
Under Chief Executive Officer, Appointed as Managing Director,
NPC Safety and Environmental Service Company Limited

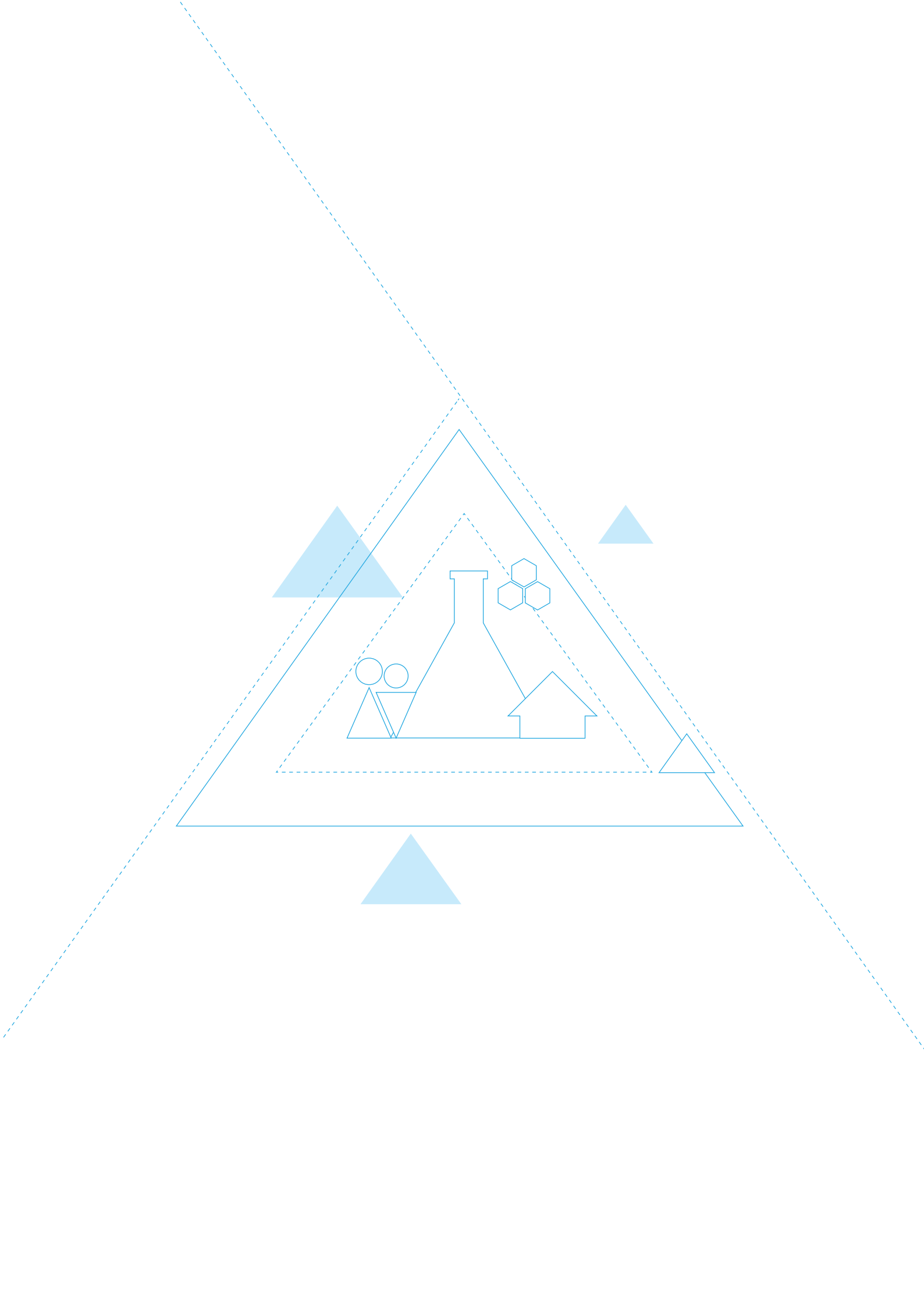
Mr. Narongsak Jivakanun
Senior Vice President
Under Chief Executive Officer, Appointed as Chief Executive Officer,
PTT Chemical International (Asia Pacific ROH) Limited

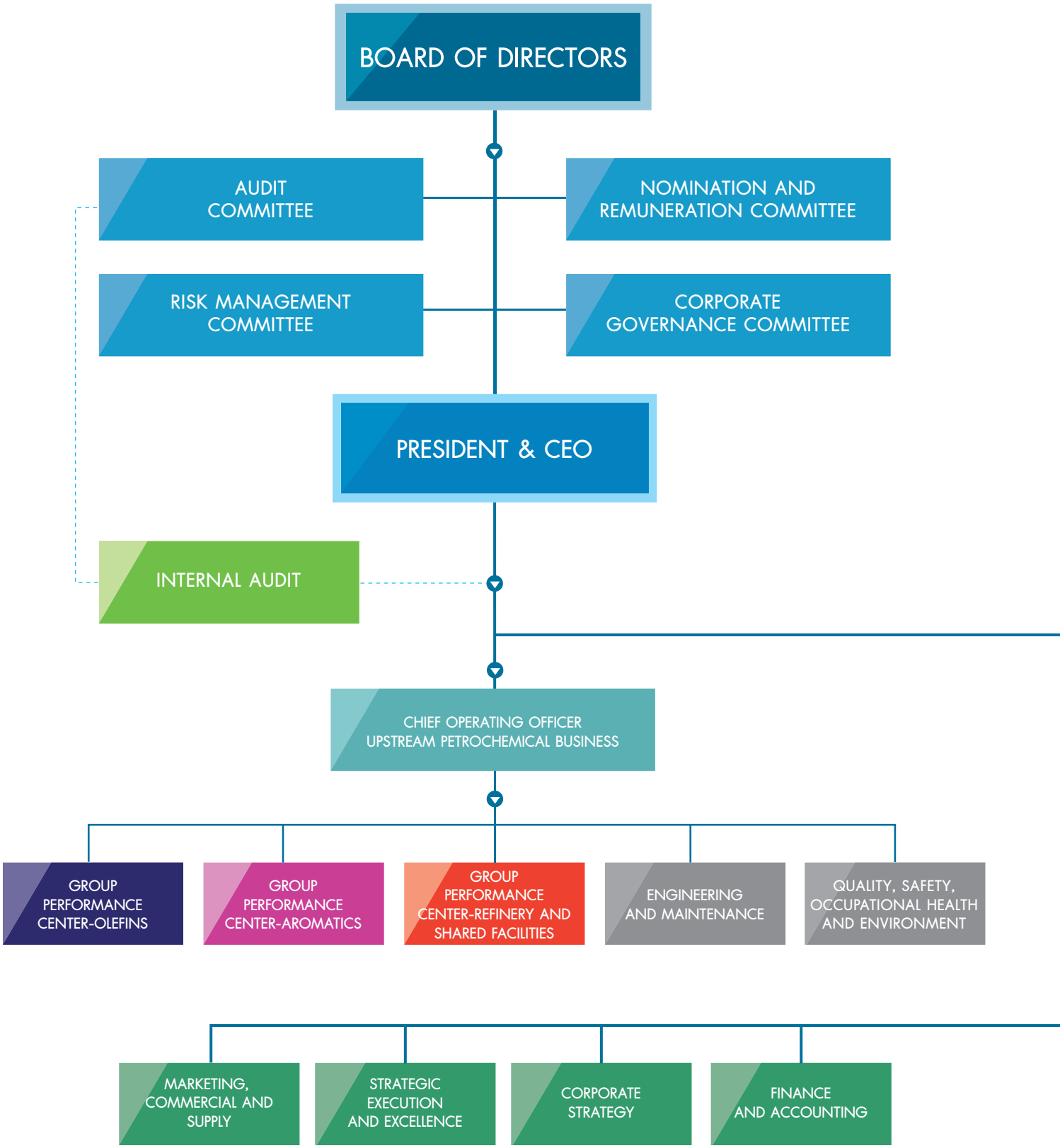
Mr. Somkiat Khunlertkit
Senior Vice President
Under Chief Executive Officer, Appointed as Managing Director,
Thai Tank Terminal Limited

Mr. Siridech Kumvongdee
Senior Vice President
Under Chief Executive Officer - Secondment to
PTT Phenol Company Limited

Mr. Dumrong Pinpuvadol
Senior Vice President
Under Chief Executive Officer - Secondment to
PTT Public Company Limited

Mr. Wirat Boonbumrungchai
Senior Vice President
Under Chief Executive Officer - Secondment to
PTT Maintenance and Engineering Company Limited

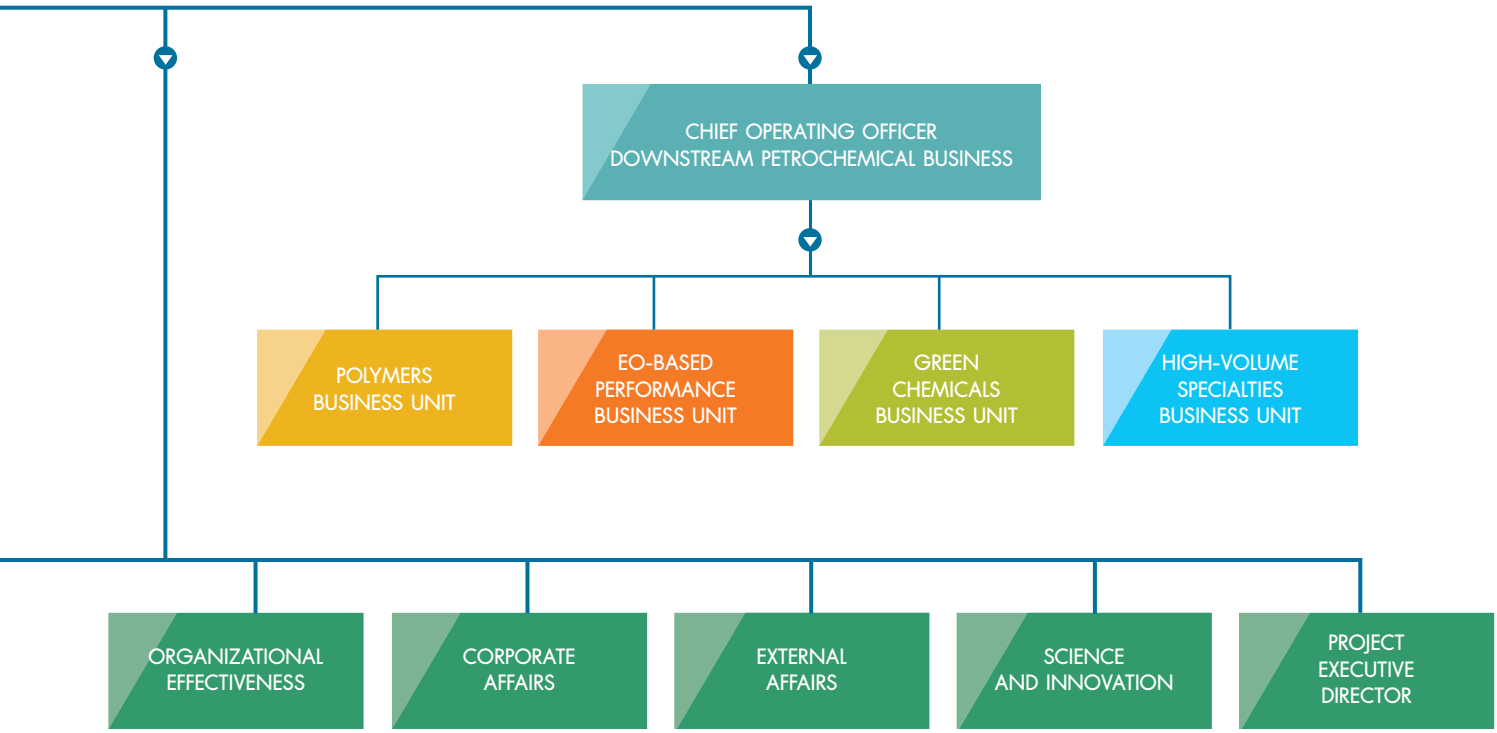



BOARD OF DIRECTORS
AUDIT COMMITTEE
NOMINATION AND REMUNERATION COMMITTEE
RISK MANAGEMENT COMMITTEE
CORPORATE GOVERNANCE COMMITTEE
PRESIDENT & CEO
INTERNAL AUDIT
CHIEF OPERATING OFFICER UPSTREAM PETROCHEMICAL BUSINESS
GROUP PERFORMANCE CENTER-OLEFINS
GROUP PERFORMANCE CENTER-AROMATICS
GROUP PERFORMANCE CENTER-REFINERY AND SHARED FACILITIES
ENGINEERING AND MAINTENANCE
QUALITY, SAFETY, OCCUPATIONAL HEALTH AND ENVIRONMENT
MARKETING, COMMERCIAL AND SUPPLY
STRATEGIC EXECUTION AND EXCELLENCE
CORPORATE STRATEGY
FINANCE AND ACCOUNTING

MANAGEMENT STRUCTURE

Organizational Structure

In order to embed PTTGC strategic goals into both management and operational levels in line with the business direction as well as to create long-term sustainability, PTTGC has implemented a series of adjustments to the organizational structure of its management. This structure has been effective from January 1st, 2014 onwards.



The Board of Directors

The Board of Directors as of December 31st, 2013 is as follows:

Name	Position	Appointed Date
1. Mr. Prasert Bunsumpun	Chairman	October 19th, 2011
2. Mr. Suthep Liumsirijarern	Director Chairman of the Risk Management Committee	April 4th, 2013
3. Mr. Somchai Kuvijitsuwan	Independent Director Chairman of the Audit Committee	April 2nd, 2012
4. Mr. Vasin Teeravechyan	Independent Director Chairman of the Nomination and Remuneration Committee	April 2nd, 2012
5. Police General Sombat Amornvivat	Chairman of the Independent Directors Chairman of the Corporate Governance Committee	April 2nd, 2012
6. Mr. Prajya Phinyawat	Independent Director Director to the Corporate Governance Committee	November 11th, 2011
7. Mr. Pailin Chuchottaworn	Director	October 18th, 2013
8. Mrs. Raweporn Kuhirun	Independent Director Director to the Audit Committee	April 4th, 2013
9. Mr. Sarun Rungkasiri	Director Director to the Risk Management Committee	October 18th, 2013
10. Mr. Atikom Terbsiri	Director	October 18th, 2013
11. Air Chief Marshal Somchai Thean-anant	Independent Director Director to the Nomination and Remuneration Committee	April 2nd, 2012
12. Mr. Amnuay Preemonwong	Independent Director Director to the Audit Committee	October 19th, 2011
13. Police Lieutenant General Prawut Thavornsiri	Independent Director Director to the Corporate Governance Committee	April 4th, 2013
14. Mr. Areepong Bhoocha-oom	Independent Director Director to the Nomination and Remuneration Committee Director to the Risk Management Committee	October 25th, 2013
15. Mr. Bowon Vongsinudom	Director and Secretary to the Board of Directors Director to the Risk Management Committee	October 19th, 2011

Directors resigning in 2013 are shown below:

Name	Position	Resigned Date
1. Police General Sereepisut Tameeyaves	Independent Director Chairman of the Corporate Governance	January 11th, 2013
2. Mr. Sukrit Surabotsopon	Director Chairman of the Risk Management Committee	September 30th, 2013
3. Mr. Nuttachat Charuchinda	Director Director to the Nomination and Remuneration Committee	October 9th, 2013
4. Mr. Anon Sirisaengtaksin	Director and Secretary to the Board of Directors	October 9th, 2013
5. Mr. Kriengkrai Thiennukul	Independent Director Director to the Corporate Governance Committee Director to the Risk Management Committee	October 10th, 2013

Authorized Directors

According to the Company's Articles of Association and its Certification of Incorporation from the Department of Business Development of the Ministry of Commerce, on November 8th, 2013, the following Directors will be enabled to sign their names on behalf of PTTGC. "(1) Mr. Bowon Vongsinudom - Chief Executive Officer can sign on behalf of PTTGC, (2), Two of these thirteen Directors can sign together and attach PTTGC seal on behalf of PTTGC: Mr. Somchai Kuvijitsuwan, Mr. Suthep Liumsirijarern, Police General Sombat Amornvivat, Mrs. Raweporn Kuhirun, Air Chief Marshal Somchai Thean-anant, Mr. Vasin Teeravechyan, Mr. Amnuay Preemonwong, Mr. Prajya Phinyawat, Police Lieutenant General Prawut Thavornsiri, Mr. Pailin Chuchottaworn, Mr. Sarun Rungkasiri, Mr. Atikom Terbsiri, Mr. Areepong Bhoocha-oom".

Composition of the Board of Directors

The Company's Articles of Association mandate that the Board of Directors must be composed of no less than 5 but no more than 15 Directors. Each Director will be on a three-year term. At least one third (1/3) and not less than three Directors of the entire Board must be an Independent Director. More than half (1/2) of the Board of Directors must reside in the kingdom of Thailand, and each of them must be fully qualified by law. Additionally, they must not be older than 70 years. Each Director is allowed to be a Director of not more than 5 listed companies on The Stock Exchange of Thailand, and not more than three entities which are state enterprises or juristic persons whose company shares are held by state enterprises.

The composition and qualifications of the Board of Directors complies with the Articles of Association as well as regulations as stipulated by law. The Board of Directors is composed of individuals with diverse fields of both knowledge and expertise, and have experience beneficial to PTTGC. The Board of Directors comprises a total of 15 Directors, which is the number appropriate for its business size and type. These Directors are divided into the following:

(1) Non-Executive Directors: 14

(2) Executive Director: 1 (President and Chief Executive Officer)

(3) Independent Directors: 9 (This is more than half of the Board as per the criteria set forth by the Securities and Exchange Commission.)

Authorities and Responsibilities of the Board of Directors

The Board of Directors has duties and responsibilities to oversee PTTGC's operations and ensure their strict compliance with applicable laws, objectives, regulations and shareholder resolutions. The Board has strictly followed the principles of both Good Corporate Governance and Best Practices for Directors of Listed Companies, as set forth by The Stock Exchange of Thailand. Each Director also possesses suitable knowledge, capabilities and the understanding of their roles while performing tasks for the benefits of PTTGC and shareholders. Important authorities and responsibilities of the Board are summarized as follows:

(1) To dedicate its time and attention to the vision, mission and strategic direction of PTTGC. Directors of the Board should freely express their opinions and actively seek out information that could be useful to PTTGC's interests and benefits.

(2) To review and approve strategies and important policies, as well as financial goals and PTTGC plans. The Board will continuously supervise and monitor management to ensure their adherence to PTTGC's strategic plans, making sure that management is able to implement the strategies, direction and vision within its working processes in an efficient manner.

(3) To set Corporate Governance Policy as well as the Business Code of Conduct, defining principles and guidelines for the Board of Directors, members of both management and employees. These documents are to increase the awareness of responsibilities and duties. It is also intended to build understanding of and encourage strict adherence to policies. They are to work hand in hand with PTTGC rules and regulations, and ensure fairness is provided to all stakeholders.

(4) To ensure that systems for accounting, financial reporting, and auditing are reliable. This includes ensuring internal control measurement systems, and making certain that internal audits are performed in an efficient and effective manner.

(5) To consider all relevant risk factors and create a most comprehensive management approach to mitigate against them. This is to ensure the systematic management of efficient processes involved in risk management, as well as explore all possible business opportunities that might arise from such risk factors. Additionally, the Board is to provide sufficient and efficient internal controls.

(6) To monitor and manage all conflicts of interest that arise, as well as linked transactions. The Board will place great importance on key transactions while maximizing shareholder and stakeholder value.

(7) To provide appropriate channels to communicate with shareholders and make disclosures. The Board is to ensure that information is conveyed in an accurate, transparent and reliable manner and meet the highest standards.

(8) To regularly perform assessments and reviews of themselves, and of the Chief Executive Officer.

(9) To provide a system and various mechanisms to determine an appropriate level of remuneration for the Company's senior management, relative to the profitability of the Company business operations. Financial incentives should be provided for performance both in the short and in the long term.

(10) To act as leader and role model in practicing business code of conduct regarding the Company's Corporate Governance Policies.

(11) To assess adherence to corporate governance policies and business code of conduct no less than once per year.

(12) To determine assessment criteria for the filling of important management appointments. Also, the recruitment process should be made fair and transparent.

(13) Reports must be made to PTTGC of any conflicts of interest the Directors may have, including relationships and conflicts that they may have with other members of management as well as with subsidiaries.

(14) Each Director must attend each meeting of the Board as well as each shareholders meeting. If under any circumstances attendance will not be able to be made, notification must be sent to the Chairman of the Board.

(15) Importance is placed on the business operation with responsibility toward society and the environment, as well as promoting the well-being and sustainability of Thai society. This includes the raising of the living standards of community members living in the areas around PTTGC plants, creating an environment PTTGC and those who live around its operations can co-exist.

Additionally, the Board of Directors must receive permission during shareholders meetings before acting for or against the following issues:

- Entering into any related transactions, in regard to the acquisition or sale of important PTTGC's assets. The specifics of this point are outlined by law as well as by the Capital Market Supervisory Board.
- Conduct a sale or transfer of PTTGC's enterprises or important parts of them to other entities.
- Conduct the purchase or acquisition of enterprises on behalf of PTTGC.
- Initiate, modify or terminate lease contracts, either whole or in part that are of relevance to Company business. Assignments of lease contracts to other individuals are included in this, as well as to enter into partnerships with other entities.
- Make addendums or changes to Company's Memorandum or Articles of Association.
- Make an increase or decrease of the registered capital.
- Make issuances of debt to the public.
- Conduct dissolution of PTTGC or undertake a merger with another company.
- Announce annual dividends.
- Other various activities as mandated by law or requiring prior approval of shareholders as per the Company's Articles of Association.

Appointment to and Termination from the Board of Directors

The Articles of Association provisions as they relate to the appointments to and terminations from the Board of Directors are summarized as follows:

Appointment

- Shareholders will cast their votes in Board of Director elections according to the following guidelines.
  (1) Shareholders will have one vote for each share they own.

  (2) In the event that the number of nominees do not exceeds the number of vacant positions being voted on during Board elections, shareholders will vote on those eligible nominees. Shareholders must allocate their votes to one nominee as per (1), without dividing them across more than one nominee.

(3) In the event that the number of nominees exceeds the number of vacant positions, shareholders will still have to allocate all of their votes to one nominee as per (1) without dividing them across more than one nominee. Nominees receiving the most votes will receive appointments to the Board, until there are no vacancies left. If there are any ties in the voting, the Chairman of the Board will cast the deciding vote.

- The Board of Directors will nominate one Director to serve as Chairman. Decisions made during Board meetings will be carried on a majority basis, with the Chairman voting only when a deciding vote is needed.
- In the event that the Director's seat is vacated for any reason than end of rotation, the Board will hold a new election to decide on a new Director who is fully qualified and meets all related laws and regulations. However, if the remaining term is less than two (2) months, the new Director will only serve the remaining term of the previous Director. This decision must be made with the agreement of three quarters (3/4) of the remaining Directors.
- In the event that vacancies cause the number of Directors to fall below the necessary quorum, the only authority the Directors have remaining is to call for a shareholders meeting to elect new Directors to fill the vacancies. This must be done within one (1) month from the date the quorum is unable to be made. New Directors will serve the remaining terms of those Directors they are replacing.

Termination

- In each Annual General Meeting, one in every three serving Directors should step down from their positions. If this ratio of one to three cannot be equally met, the number of Directors stepping down should do so in a way to reach the closest ratio of 1:3 as possible. First and second year Directors will be randomly selected to step down. However, for later years the Director with the longest tenure will be the one having to step down. Directors who step down are able to be re-elected to the Board.
- In addition to tenure expiration, the causes for Directorship termination include demise, resignation, or disqualification due to lack of ability or prohibition by law. Additionally, Directors can be terminated by shareholder vote or by court order.
- Directors can advise of their resignation by submitting it to PTTGC. A resignation is effective the day it is received by PTTGC. Also, Directors may also submit their resignation through the Registrar.
- Votes may be held at the shareholders meeting to force termination of a Director's position before term expiration. Attending shareholders must vote to approve of such a measure by a 3/4 majority. Additionally, at least 1/2 of outstanding shares must be represented in this vote.

Independent Directors

PTTGC's Articles of Association mandate that the Board of Directors must be comprised of no less than one third (1/3) of Independent Directors, with a total minimum of three (3). These Independent Directors must be experienced and fully qualified as per the Capital Market Supervisory Board. Additionally, they must not hold larger than a 0.5% shares in PTTGC (a stricter regulation than the SEC's limit of 1%). Qualifications of Independent Directors are defined in the Good Corporate Governance Handbook and the website of PTTGC.

At the Board of Directors meeting No. 1/2014 held on January 17th, 2014, an addendum was made to the policy on the tenure of Independent Directors that was in line with the principles of good corporate governance. From the 2014 fiscal year onwards, each Independent Director will hold office for a term of not more than 9 years or 3 consecutive terms, by not taking into account their previous term in the position.

Independent Directors must be able to attend meetings regularly and freely express their opinions during these meetings. They must be able to adequately speak to matters of finance and other matters central to PTTGC in a way that is independent. They will protect stakeholder interests and make sure to prevent conflicts of interest from arising between PTTGC, members of management, the Board of Directors, major shareholders, and other companies that involve the same groups of people.

PTTGC comprises a total of nine Independent Directors, which is more than one third of the entire Board and beyond the criteria as required by law. In addition, the "Charter of Independent Directors" is formulated to ensure their clear and tangible performance. Duties and responsibilities of Independent Directors toward the Board of Directors according to the Charter are as follows:

- To provide suggestions and opinions to the Board of Directors concerning important issues related to the operations or interests of PTTGC and its shareholders.
- To request for outside consultations if needed, with PTTGC providing the budget for expenses.
- To ensure that PTTGC operates according to all rules and regulations concerning Independent Directors that apply to listed companies. The definition applying to Independent Directors will also be reviewed to ensure that it is appropriate and complete according to the legal requirements.
- To review and make adjustments to the Charter of Independent Directors in an effort to make it more appropriate and up to date.
- To perform other duties as assigned by the Board of Directors, as long as they do not interfere with the independent nature required of Independent Directors.

Sub-Committees

The Board of Directors, during its Meeting No. 1/2011 held on October 19th, 2011, agreed to establish four different Sub-Committees. The Committees comprise the Audit Committee, the Nomination and Remuneration Committee, the Corporate Governance Committee as well as the Risk Management Committee. Each Sub-Committee was set up to place special focus on their specific task with a sense of diligence and efficiency. The goal of these Sub-Committees was to help PTTGC better adhere to the principles of Good Corporate Governance. Their findings will be presented to the Board of Directors. The list of names and the roles of each Sub-Committee member as of December 31st, 2013 is as follows:

Audit Committee

Name	Position
Mr. Somchai Kuvijitsuwan	Chairman of the Audit Committee (Independent Director)
Mrs. Raweporn Kuhirun	Director to the Audit Committee (Independent Director)
Mr. Amnuay Preemonwong	Director to the Audit Committee (Independent Director)

Mr. Adisorn Vichaikatka: Vice President - Internal Audit, serves as Secretary to the Audit Committee.

According to the Company's Articles of Association, the Audit Committee must be comprised of at least three Independent Directors. Terms for the Audit Committee are three years, or shorter if a Director resigns or is forced to leave the position. Directors whose terms have expired are eligible to be re-appointed by the Board of Directors. Each Director of the Committee has thorough qualifications as well as duties and responsibilities in line with standards set forth by The Securities and Exchange Commission. The scope of its work is defined by the Capital Market Commission and at least one Director must have expertise in accounting and finance.

Additionally, the Board of Directors gave an approval for the Charter of the Audit Committee, which identifies the composition, qualification, term and the scope of duties according to Good Corporate Governance principles. Details of the Charter are disclosed in PTTGC's Good Corporate Governance Handbook and its website.

All Directors of the Audit Committee are Independent Directors who have knowledge and experience related to auditing. This Sub-Committee is responsible for making certain that financial and audit reporting is done in an open and fully honest manner following accounting and other related standards as well as applicable laws. In addition, it is to ensure that internal controls and risk management is being conducted appropriately and efficiently, and that internal processes concerning whistleblowing and receiving complaints are reviewed efficiently. Aside from electing independent auditors, the Audit Committee will ensure that the Company's internal auditing system is appropriate and efficient, and that internal auditing bodies conduct all their responsibilities according to internal auditing standards. Also, the Committee is to consider reports of vested interests or conflicts of interest in a manner that is lawful and subscribes to SET regulations. These will be disclosed in a reasonable and thorough manner. These reports must be conducted in such a way that creates the greatest benefit to PTTGC.

In 2013, the Audit Committee held a total of nine meetings and another meeting, which was attended by PTTGC's auditors without the attendance of the management. All members of this Sub-Committee attended every meeting. This was to ensure their strict performance within the scope of their duties and responsibilities as stated in its Charter, including tasks as assigned them by the Board of Directors. In addition, the Audit Committee will report their monitoring results to the Board on a quarterly basis before further submitting a summary to shareholders in the Annual Report.

Nomination and Remuneration Committee

Name	Position
Mr. Vasin Teeravechyan	Chairman of the Nomination and Remuneration Committee (Independent Director)
Air Chief Marshal Somchai Thean-anant	Director to the Nomination and Remuneration Committee (Independent Director)
Mr. Areepong Bhoocha-oom(1)	Director to the Nomination and Remuneration Committee (Independent Director)

(1) Appointed as Director to the Nomination and Remuneration Committee, replacing Mr. Nuttachat Charuchinda as of October 25th, 2013.

As mandated by Company's Articles of Association, this Sub-Committee is comprised of at least three Directors, with at least one being an Independent Director. The Chairman of the Nomination and Remuneration Committee should also be an Independent Director. Directors of the Nomination and Remuneration Committee will hold office for a term of three years or until a time in which they are no longer able to serve as a Director. Other reasons for termination of duty include resignation or dismissal. Responsibilities include nominating appropriate individuals to be considered for Chief Executive Officer (CEO) or for Directorship. The nomination and remuneration processes should follow set guidelines and be transparent, both for the CEO and Directors. These processes should also be fair and reasonable. Furthermore, they must be approved at the shareholders meeting.

The Board of Directors expressed an approval to the Charter of the Nomination and Remuneration Committee. The Charter identifies the composition, qualification, term and scope of duties that conform to the principles of Good Corporate Governance. The Charter detail is disclosed in the Good Corporate Governance Handbook and PTTGC website. At the Board of Directors Meeting No. 13/2013 held on December 16th, 2013, the Nomination and Remuneration Committee was additionally assigned to consider the suitable candidates for Sub-Committee Directors. The list will then be submitted to the Board of Directors for appointment. Since October 2013, both the Chairman and all Directors of the Nomination and Remuneration Committee are in practice Independent Directors. The Committee held a total of four meetings in 2013 to perform their duties as stated in its Charter as well as those assigned by the Board of Directors. The Committee reported their performances to the Board before further submitting a summary to shareholders in the Annual Report.

Corporate Governance Committee

Name	Position
Police General Sombat Amornvivat(1)	Chairman of the Corporate Governance Committee (Independent Director)
Mr. Prajya Phinyawat(2)	Director to the Corporate Governance Committee (Independent Director)
Police Lieutenant General Prawut Thavornsiri(3)	Director to the Corporate Governance Committee (Independent Director)

(1) Appointed as Chairman of the Corporate Governance Committee, replacing Police General Sereepisut Tameeyaves as of February 15th, 2013. (He was Director to the Corporate Governance Committee since October 19th, 2011).

(2) and (3) were appointed, replacing Mr. Kriengkrai Thiennukul and Mr. Bowon Vongsinudom - respectively.

Mrs. Thasnalak Santikul, Executive Vice President - Corporate Affairs, serves as Secretary to the Corporate Governance Committee.

Company's Articles of Association specifies that the Corporate Governance Committee is comprised of at least three Directors, with at least one being an Independent Director. The Chairman of the Corporate Governance Committee should also be an Independent Director. Each Director of the Committee will hold office for a term of three years, or until a time in which they are no longer able to serve as a Director. Other reasons for termination of duty include resignation or dismissal. Responsibilities include determining the methods and policies related to the Corporate Governance Policies and Business Code of Conduct. These methods and policies are presented to the Board of Directors so that they may be approved and implemented in an effort to meet the same standard across the organization. The Charter of the Corporate Governance Committee was approved by the Board of Directors, which determines the composition, qualification, term and scope of duties in accordance with the principles of Good Corporate Governance. Such information is shown in the Good Corporate Governance Handbook and PTTGC website. Since October 2013, both the Chairman and all Directors of the Corporate Governance Committee are in practice Independent Directors.

In 2013, the Corporate Governance Committee held a total of six meetings, to ensure that the Committee had performed within the scope of authorities and responsibilities as outlined in its Charter as well as following the Board of Directors' assignments. Also, monitoring reports were submitted concerning the compliance with the Corporate Governance Policies. These reports are submitted to the Board on a quarterly basis and a summary of the reports were then submitted to shareholders in the Annual Report.

Risk Management Committee

Name	Position
Mr. Suthep Liumsirijarern(1)	Chairman of the Risk Management Committee
Mr. Sarun Rungkasiri(2)	Director to the Risk Management Committee
Mr. Areepong Bhoocha-oom(3)	Director to the Risk Management Committee (Independent Director)
Mr. Bowon Vongsinudom	Director to the Risk Management Committee

(1) Appointed as Chairman of the Risk Management as of November 15th, 2013 (He was Director to the Risk Management Committee since October 19th, 2011).
(2) Appointed as Director to the Risk Management Committee, replacing Mr. Sukrit Surabotsopon as of October 18th, 2013
(3) Replacing Mr. Kriengkrai Thiennukul as of November 15th, 2013

Mrs. Chatsuda Kanjanarat, Acting Vice President - Corporate Risk Management and Internal Control, serves as Secretary to the Risk Management Committee.

Company's Articles of Association mandates that the Risk Management Committee must be composed of at least three Directors, with at least one being an Independent Director. Each Director holds office for a term of three years, or until a time in which they are no longer able to serve as a Director. Other reasons for termination of duty include resignation or dismissal. Those whose terms have expired are eligible to be re-appointed at the request of the Board of Directors. Responsibilities include setting appropriate and effective risk management policies that are relevant to PTTGC operations. They also include maintaining risk management plans, systems and processes in an effort to reduce the exposure PTTGC business to various risks. Monitoring and assessments of the compliance with the risk management framework will be conducted throughout the organization to ensure that PTTGC has an appropriate level of risk management at all times.

Additionally, the Board of Directors approved of the Committee's Charter, which comprises the Committee's composition, qualification as well as the term and scope of performance in line with the principles of Good Corporate Governance. The detail is disclosed in the Good Corporate Governance Handbook and PTTGC website.

In 2013, the Risk Management Committee held a total of five meetings, to ensure that the Committee had performed within the scope of authorities and responsibilities as outlined in its Charter as well as following the Board of Directors' assignments. Also, monitoring reports which concerned the compliance with the Corporate Governance Policies were submitted to the Board on a quarterly basis. A summary of these reports were then submitted to shareholders in the Annual Report.

Board Meetings

In 2013, the Board of Directors, Sub-Committees and Independent Directors, held meetings as detailed below. All the meetings were pre-scheduled. Directors who could not attend due to some urgent matter had notified the Chairman in writing, with the reasons for their absence being clearly stated. The Chairman then informed attendees of such a matter prior to the commencement of each meeting.

Name of Director	Position	Meetings in 2013					
		Board of Directors Met 15 Times*	Independent Directors Met 2 Times	Audit Committee Met 9 Times	Nomination and Remuneration Committee Met 4 Times	Corporate Governance Committee Met 6 Times	Risk Management Committee Met 5 Times
1. Mr. Prasert Bunsumpun	Chairman	15/15					
2. Mr. Suthep Liumsirijarern [1]	Director Chairman of the Risk Management Committee	13/15	1/2				5/5
3. Mr. Somchai Kuvijitsuwan	Independent Director Chairman of the Audit Committee	15/15	1/2	9/9			
4. Mr. Vasin Teeravechyan	Independent Director Chairman of the Nomination and Remuneration Committee	14/15	2/2		4/4		
5. Police General Sombat Amornvivat	Chairman of the Independent Directors Chairman of the Corporate Governance Committee	14/15	2/2			6/6	
6. Mr. Prajya Phinyawat [2]	Independent Director Director to the Corporate Governance Committee	14/15				1/2	
7. Mr. Pailin Chuchottaworn [3]	Director	3/3					
8. Mrs. Raweporn Kuhirun	Independent Director Director to the Audit Committee	15/15	2/2	9/9			
9. Mr. Sarun Rungkasiri [3]	Director Director to the Risk Management Committee	3/3					1/1
10. Mr. Atikom Terbsiri [3]	Director	3/3					
11. Air Chief Marshal Somchai Thean-anant	Independent Director Director to the Nomination and Remuneration Committee	15/15	2/2		4/4		
12. Mr. Amnuay Preemonwong	Independent Director Director to the Audit Committee	13/15	2/2	9/9			
13. Police Lieutenant General Prawut Thavornsiri [4]	Independent Director Director to the Corporate Governance Committee	12/12				2/2	

Name of Director	Position	Meetings in 2013					
		Board of Directors Met 15 Times*	Independent Directors Met 2 Times	Audit Committee Met 9 Times	Nomination and Remuneration Committee Met 4 Times	Corporate Governance Committee Met 6 Times	Risk Management Committee Met 5 Times
14. Mr. Areepong Bhoocha-oom (3)	Independent Director Director to the Nomination and Remuneration Committee Director to the Risk Management Committee	2/3			1/1		
15. Mr. Bowon Vongsinudom (5)	Director and Secretary to the Board of Directors Director to the Risk Management Committee	14/15				4/4	5/5
Directors resigning during the year 2013							
1. Mr. Sukrit Surabotsopon	Director Chairman of the Risk Management Committee	11/11					4/4
2. Mr. Nuttachat Charuchinda	Director Director to the Nomination and Remuneration Committee	9/11			2/3		
3. Mr. Anon Sirisaengtaksin	Director and Secretary to the Board of Directors	11/11					
4. Mr. Kriengkrai Thiennukul	Independent Director Director to the Corporate Governance Committee Director to the Risk Management Committee	11/11	2/2			4/4	3/3

* Total 13 regular meetings (pre-scheduled meetings) and two special meetings

Remarks:

(1) Mr. Suthep Liumsirijarern was appointed as Chairman of the Risk management Committee in replacement of Mr. Sukrit Surabotsopon, who resigned from the Board effective November 15th, 2013.

(2) Mr. Prajya Phinyawat was fully qualified as independent since October 1st, 2013. This was due to his two-year completion in the position of an executive at PTT Public Company Limited - PTTGC's major shareholder. He was appointed as Director to the Corporate Governance Committee, replacing Mr. Bowon Vongsinudom, a former Director who was appointed as President and Chief Executive Officer.

(3) At the Board of Directors Meeting No. 10/2013 held on October 18th, 2013, the new Directors, who were appointed through resolution in replacement of those resigned, are as follows:

- Mr. Pailin Chuchottaworn was appointed as Director in replacement of Mr. Anon Sirisaengtaksin.
- Mr. Sarun Rungkasiri was appointed as Director in replacement of Mr. Nuttachat Charuchinda and also Director to the Risk Management Committee in replacement of Mr. Sukrit Surabotsopon.
- Mr. Atikom Terbsiri was appointed as Director in replacement of Mr. Sukrit Surabotsopon.
- Mr. Areepong Bhoocha-oom was appointed as both Independent Director and Director to the Risk Management Committee in replacement of Mr. Kriengkrai Thiennukul as well as Director to the Nomination and Remuneration Committee in replacement of Mr. Nuttachat Charuchinda.

(4) Police Lieutenant General Prawut Thavornsiri was appointed as Independent Director in replacement of Police General Sereepisut Tameeyaves - an Independent Director and Chairman of the Corporate Governance Committee who resigned before his term terminated. The appointment of Independent Director was made through resolution at the 2013 Annual General Meeting effective April 4th, 2013, while that of Director of the Corporate Governance was effective October 18th, 2013.

(5) Mr. Bowon Vongsinudom, Director and President, was appointed as President and Chief Executive Officer and Secretary to the Board of Directors in replacement of Mr. Anon Sirisaengtaksin, who reached his retirement. Such appointment was made through resolution at the Board Meeting No. 9/2013 held on September 20th, 2013, which was effective October 1st, 2013.

List of PTTGC Executives according to the Organization Structure as of January 1st, 2014

No.	Name	Position
1	Mr. Bowon Vongsinudom	President & Chief Executive Officer
2	Mr. Kun Patumraj	Chief Operating Officer - Upstream Petrochemical Business and Acting Executive Vice President - Engineering and Maintenance
3	Mr. Athavudhi Hirunburana	Chief Operating Officer - Downstream Petrochemical Business
4	Mr. Dhanes Charoensupaya	Executive Vice President, Strategic Execution and Excellence
5	Mrs. Puntip Oungpasuk	Executive Vice President, Corporate Strategy and Acting Head - Science and Innovation
6	Mr. Patiparn Sukorndhaman	Executive Vice President, Finance and Accounting
7	Mr. Varit Namwong	Executive Vice President, Organization Effectiveness
8	Mrs. Thasnalak Santikul	Executive Vice President, Corporate Affairs
9	Mrs. Sriwan Eamrungroj	Executive Vice President, Marketing, Commercial and Supply
10	Mr. Suvit Tinnachote	Executive Vice President, Group Performance Center - Olefins
11	Mr. Narong Bunditkamol	Executive Vice President, Group Performance Center - Aromatics
12	Mr. Sermsak Sriyaphai	Executive Vice President, EO-Based Performance Business Unit and Project Executive Director
13	Mr. Vanchai Tadadoltip	Executive Vice President, Green Chemicals Business Unit
14	Mr. Kongkrapan Intarajang	Executive Vice President
15	Mr. Athavuth Vikitsreth	Executive Vice President, External Affairs
16	Mr. Booncherd Suwantip	Senior Vice President, Quality, Safety, Occupational Health and Environment
17	Mr. Toasaporn Boonyapipat	Senior Vice President, High-Volume Specialties Business Unit
18	Mr. Anutin Chuaypen	Senior Vice President, Group Performance Center - Refinery and Shared Facilities
19	Mr. Pairote Utaisup	Senior Vice President, Polymers Business Unit

Remark: Numbers 1-15 are 'Executives' as defined by the SEC.

The Executives

To ensure the efficiency of organizational management, the Board of Directors established an Executive team, which is composed of Executives and includes the President and Chief Executive Officer. As the highest level of Executive as well as of all PTTGC's employees, Executive has the authority to manage PTTGC's business in compliance with the policies as well as plans and budgets approved by the Board. The Executive Vice President and Senior Vice President are responsible for setting up strategies while offering advice concerning PTTGC's policies and direction. They will also ensure the strict adherence of the management to the policies of the Board of the Directors.

The Executives from the levels of Executive Vice President to the CEO will be appointed through the Board of Directors' majority vote. Both Mr. Bowon Vongsinudom and Mrs. Sriwan Eamrungroj were two Executives joining the PTTGC management as assigned by PTT Public Company Limited

Changes in Management in 2013

1) Mr. Bowon Vongsinudom was appointed as President and Chief Executive Officer in replacement of Mr. Anon Sirisaengtaksin who reached his retirement. As per a proposal by the Nomination and Remuneration Committee, this appointment was made through resolution at the Board Meeting No. 9/2013 held on September 20th, 2013 effective as of October 1st, 2013 onwards. Mr. Bowon Vongsinudom was considered as a suitable appointee who has knowledge, competence and wide experience in operating the energy, petroleum, petrochemical and refinery industries. In addition, he has leadership qualities together with experience as an organizational leader.
2) Mr. Kun Patumraj was appointed as Chef Operating Officer, effective November 1st, 2013 onwards.
3) Mr. Athavudhi Hirunburana was appointed as Chef Operating Officer, effective November 1st, 2013 onwards.
4) Mr. Athavuth Vikitsreth was appointed as Executive Vice President, External Affairs, effective October 1st, 2013 onwards.
5) Mr. Porntep Butniphant resigned from the position of Executive Vice President, Group Performance Center - Refinery and Shared Facilities, effective January 1st, 2014 onwards.

Company Secretary

In compliance with the Securities and Exchange Commission Act (No. 4) 2008 Section 89/15 and 89/16, the Board of Directors had passed a resolution at the Board Meeting No. 1/2011 held on October 19th, 2011 to appoint Mrs. Walaiporn Puspavesa as Company Secretary. Mrs. Walaiporn retired on December 31st, 2013. At the Meeting No.1/2014 held on January 17th, 2014, the Board granted an approval for the appointment of Mrs. Warawan Tippawanich, Vice President of the Corporate Secretary, as the new Company Secretary. By law, the responsibilities of this position include the preparation and storage of important Company information as well as documents. This includes the roster of Directors, meeting notices, Board and Shareholders' meeting minutes, the Company's annual reports, and reports of connected transactions of Directors and Executives. Additionally, this person is tasked with the preparation of meetings of the Board or its shareholders. The Company Secretary also has a responsibility to give counsel related to various laws and regulations that the Board of Directors should be aware of so that the Board of Directors and Executives are able to perform their duties in a way that creates the greatest benefit for the Company. The Company Secretary should also organize both training and orientation, and also provide any necessary information to new Directors of the Board of Directors that might help them perform their duties better. She should also supervise and encourage cooperation within the Company to closely comply with

all related laws, restrictions, and resolutions in a full and accurate fashion.

As assigned by PTTGC, Mrs. Warawan Tippawanich will also serve as PTTGC's Head of Corporate Compliance. This position is to promote and ensure that PTTGC business operations and the performance of Executives and employees of both PTTGC and its subsidiaries comply with all of the laws, rules and regulations of any businesses or companies that PTTGC has invested in.

The Board of Directors and Executives Remuneration

Board Remuneration

The Board of Directors set up a policy on the determination of the Director remuneration in a fair and reasonable manner with adherence to the principles of Good Corporate Governance. The Nomination and Remuneration Committee has a duty to conduct reviews on suitability and relevance in terms of PTTGC's financial status. This will be conducted in comparison with criteria used in other listed companies on the Stock Exchange of Thailand that share similarity in both business type and size. Also taken into account are the duties of the Directors and responsibilities as assigned. Any Director being assigned as a Director of a Sub-Committee will also be entitled to an additional remuneration depending on the added responsibility.

Remuneration for the Directors must be approved at the shareholders meeting. At the PTTGC's 2013 Annual General Meeting of Shareholders, held on April 4th, 2013, approval was given in regard to the remuneration for Directors of the Board of Directors and Sub-Committees in 2013 as well as bonuses of the Board for their performance in 2012. Details of the remuneration are as follows:

(1) Remuneration for the Board of Directors and Sub-Committees as of April 4th, 2013 can be viewed below.

Type of Remuneration	Rate
1. Directors' Remuneration	Monthly Remuneration • Chairman 60,000 THB/Month • Director 50,000 THB/Month/Director Remuneration for Meeting Attendance • None
2. Sub-Committee Directors' Remuneration • Audit Committee • Nomination and Remuneration Committee • Corporate Governance Committee • Risk Management Committee	Remuneration for Meeting Attendance • Chairman 50,000 THB/Meeting • Director 40,000 THB/Meeting/Director

(2) Directors bonuses were considered and given based on PTTGC's business operating results in 2012. The Board of Directors received bonuses because the dividend was paid to shareholders within the same year. The maximum amount of Directors bonuses was 0.30% of PTTGC's net profit achieved within that year, and the amount did not exceed 50 million THB as specified in PTTGC regulations. It was calculated according to the time served in 2012, and it was determined that the Chairman should receive a bonus of 25% higher than other Directors.

Directors Remuneration in 2013

Name	Monthly Remuneration for PTTGC Directors (THB)	Remuneration for Meeting Attendance of Sub-Committees (THB)					
		Audit Committee	Nomination and Remuneration Committee	Corporate Governance Committee	Risk Management Committee	2013 Bonuses* (THB)	Total (THB)
1. Mr. Prasert Bunsumpun	720,000.00	-	-	-	-	4,098,360.72	4,818,360.72
2. Mr. Suthep Liumsirijarern	600,000.00	-	-	-	210,000.00	3,278,688.52	4,088,688.52
3. Mr. Somchai Kuvijitsuwan	600,000.00	500,000.00	-	-	-	3,278,688.52	4,378,688.52
4. Mr. Vasin Teeravechyan	600,000.00	-	250,000.00	-	-	3,278,688.52	4,128,688.52
5. Police General Sombat	600,000.00	-	-	290,000.00	-	3,278,688.52	4,168,688.52
6. Mr. Prajya Phinyawat	600,000.00	-	-	-	-	3,278,688.52	3,878,688.52
7. Mr. Pailin Chuchottaworn***	122,580.65	-	-	-	-		122,580.65
8. Mrs. Raweporn Kuhirun	600,000.00	400,000.00	-	-	-	3,278,688.52	4,278,688.52
9. Mr. Sarun Rungkasiri ***	122,580.65	-	-	-	40,000.00	-	162,580.65
10. Mr. Atikom Terbsiri ***	122,580.65	-	-	-	-	-	122,580.65
11. Air Chief Marshal Somchai	600,000.00	-	200,000.00	-	-	3,278,688.52	4,078,688.52
12. Mr. Amnuay Preemonwong	600,000.00	400,000.00	-	-	-	3,278,688.52	4,278,688.52
13. Police Lieutenant General Prawut Thavornsiri ***	440,500.00	-	-	40,000.00	-	-	480,500.00
14. Mr. Areepong Bhoocha-oom***	111,290.32	-	40,000.00	-	-	-	151,290.32
15. Mr. Bowon Vongsinudom**	600,000.00	-	-	200,000.00	200,000.00	3,278,688.52	4,278,688.52
Directors who Resigned and Received Remuneration in 2013							
1. Police General Sereepisut Tameeyaves ****	16,129.03	-	-	50,000.00	-	3,278,688.52	3,344,817.55
2. Mr. Sukrit Surabotsopon ****	450,000.00	-	-	-	200,000.00	3,278,688.52	3,928,688.52
3. Mr. Nuttachat Charuchinda ****	462,903.23	-	120,000.00	-	-	3,278,688.52	3,861,591.75
4. Mr. Anon Sirisaengtaksin **/****	462,903.23	-	-	-	-	2,185,792.35	2,648,695.58
5. Mr. Kriengkrai Thiennukul ****	464,516.13	-	-	200,000.00	80,000.00	3,278,688.52	4,023,204.65
Total	**8,895,983.89**	**1,300,000.00**	**610,000.00**	**780,000.00**	**730,000.00**	**48,907,103.83**	**61,223,087.72**

Remarks:
* 2012 Bonuses that were paid in 2013 according to the Directors' time served in 2012
** Shows the remuneration for Directors, not as members of management
*** Police Lieutenant General Prawut Thavornsiri assumed his position of Independent Director effective April 4th, 2013.
Mr. Pailin Chuchottaworn, Mr. Sarun Rungkasiri and Mr. Atikom Terbsiri assumed their positions of Directors effective October 18th, 2013.
Mr. Areepong Bhoocha-oom assumed his position of Independent Director effective October 25th, 2013.
**** Mr. Kriengkrai Thiennukul resigned from his position effective October 10th, 2013.
Mr. Nuttachat Charuchinda resigned from his position effective October 9th, 2013.
Mr. Sukrit Surabotsopon resigned from his position effective September 30th, 2013.
Mr. Anon Sirisaengtaksin resigned from his position effective October 9th, 2013.
Police General Sereepisut Tameeyaves resigned from his position effective January 11th, 2013.

Remuneration of Directors in Major Subsidiaries in 2013

Directorships in PTTGC subsidiaries are held so that they better supervise the business interests of PTTGC and its subsidiaries, ensuring that they operate according to the PTTGC Group's policies.

Name	Position	Total Remuneration (THB)
PTT Polyethylene Company Limited (PTTPE) (A Wholly-Owned Subsidiary of PTTGC) / Dissolution: August 30th, 2013		
1. Mr. Anon Sirisaengtaksin	Chairman	159,354.84 THB
2. Mr. Bowon Vongsinudom	Director and Secretary to the Board of Directors	119,516.13 THB
Bangkok Polyethylene Public Company Limited (BPE) (A Wholly-Owned Subsidiary of PTTGC) / Dissolution: August 30th, 2013		
1. Mr. Prajya Phinyawat	Vice Chairman	318,709.68 THB
NPC Safety and Environmental Service Company Limited (NPC S&E) (A Wholly-Owned Subsidiary of PTTGC)		
1. Mr. Bowon Vongsinudom	Chairman	160,000 * THB (January - August 2013)
PTT Chemical International Private Limited (CH Inter) (A Wholly-Owned Subsidiary of PTTGC)		
1. Mr. Anon Sirisaengtaksin	Chairman	30,000 Singapore Dollars
2. Mr. Bowon Vongsinudom	Director	20,000 Singapore Dollars
PTT Phenol Company Limited (PPCL) (A Wholly-Owned Subsidiary of PTTGC)		
1. Mr. Anon Sirisaengtaksin	Chairman	270,000 THB
2. Mr. Bowon Vongsinudom	Director	90,000 THB
PTT Maintenance and Engineering Company Limited (PTTME) (60% owned by PTTGC)		
1. Mr. Bowon Vongsinudom	Chairman	240,000 THB
Thai Tank Terminal Limited (TTT) (51% owned by PTTGC)		
1. Mr. Bowon Vongsinudom	Director	240,000 THB
Emery Oleochemical (M) Sdn Bhd (Emery) (50% owned by a Subsidiary of PTTGC)		
1. Mr. Anon Sirisaengtaksin	Chairman	120,000 Malaysian Ringgit

Remuneration for Executives

PTTGC has implemented a Key Performance Indicator (KPI) as the evaluation criteria for the performance of Executives. Factors used in these criteria include PTTGC's financial status, the compliance with long-term strategic objectives as well as its operating results and business profits, with practice guidelines of other listed companies of similar business size within the industry being considered as well. Such evaluation must also be conducted in regard with the burden of each member, duties and responsibilities as well as management development and the economic situation as a whole.

Compensation for President and Chief Executive Officer is determined in an appropriate manner using transparent, fair and reasonable criteria. The position's duties and responsibilities will also be taken into account in conjunction with the person's performance of the year. The Nomination and Remuneration Committee gives consideration as well as reviews, and these are further submitted to the Board of Directors. It should be noted that, at the highest level of the Company's management, the President & CEO will be awarded compensation and other benefits in addition to that received as a Director of the Board of Directors.

A total of 17 members of Executive as defined by the SEC, were awarded a total remuneration in 2013 as follows:

Remuneration 2013	Number of Executives	Total (THB)
Total Monthly Salary	17	77,029,384.00
Special Awards	17	40,686,103.50
Provident Fund Contributions	17	9,839,884.67
Total	**17**	**127,555,372.17**

Board of Directors Appointed as Directors of Subsidiaries / Affiliates / Joint / Associated and Related Companies

No.	Name	PTTGC	Subsidiaries						Affiliates / Associated and Related Companies					
			PPCL	CH Inter	AP ROH	NPC S&E	PTTME	TTT	PTT	PTTEP	PTTAC	IRPC	GPSC	VNT
1	Mr. Prasert Bunsumpun	▲							●					
2	Mr. Suthep Liumsirijarern	●							●					
3	Mr. Somchai Kuvijitsuwan	●												
4	Mr. Vasin Teeravechyan	●												
5	POL. GEN. Sombat Amornvivat	●												
6	Mr. Prajya Phinyawat	●								●	▲			
7	Mr. Pailin Chuchottaworn	●							● ■	●				
8	Mrs. Raweporn Kuhirun	●												
9	Mr. Sarun Rungkasiri	●							■			●		
10	Mr. Atikom Terbsiri	●							■					
11	ACM Somchai Thean-anant	●												
12	Mr. Amnuay Preemonwong	●												
13	POL. LT. GEN. Prawut Thavornsiri	●												
14	Mr. Areepong Bhoocha-oom	●												
15	Mr. Bowon Vongsinudom	● ■	▲	●	●	▲	▲	●	■				●	●

Remarks : ● = Director ■ = Executive ▲ = Chairman

Executives Appointed as Directors of Subsidiaries / Affiliates / Joint / Associated and Related Companies

No.	Name	Subsidiaries																		Affiliates / Associated and Related Companies									
		PTTGC	TSCL	TOCGC	TOL	TFA	Bio Creation	NPC S&E	CH Inter	PTTGC (USA)	PTTGC (Netherlands)	AP ROH	PPCL	PTTME	TTT	TEX	EMERY	VENCOREX	NatureWorks	Myriant	PTT	HMC	GPSC	PTTICT	PTTPM	VNT	EFT	PTTES	API	MHPC
1	Mr. Bowon Vongsinudom	● ■						▲	●			●	▲	▲	●						■		●			●				
2	Mr. Kun Patumraj	■						●						●														▲		
3	Mr. Athavudhi Hirunburana	■	▲							● ■									●						●				●	●
4	Mr. Dhanes Charoensupaya	■					▲		●			●	●		●					●							●				
5	Mrs. Puntip Oungpasuk	■		●			●		●		●	●	●				●	●								●				
6	Mr. Patiparn Sukorndhaman	■		●	●	●	●		●			●	●											●						
7	Mr. Varit Namwong	■	●						●			●												●			●			
8	Mrs. Thasnalak Santikul	■			●	●		●	●			●																		
9	Mrs. Sriwan Eamrungroj	■	●						●			●			●						■		●		●					
10	Mr. Suvit Tinnachote	■		●																										
11	Mr. Narong Bunditkamol	■						●					●									●	●							
12	Mr. Sermsak Sriyaphai	■		▲												●														
13	Mr. Vanchai Tadadoltip	■			▲	▲				●	●						●	●	●											
14	Mr. Kongkrapan Intarajang	■							●			●					● ■													
15	Mr. Athavuth Vikitsreth	■																												

Remarks : ● = Director ■ = Executive ▲ = Chairman

Subsidiaries

TSCL	=	Thai Styrenics Company Limited
TOCGC	=	TOC Glycol Company Limited
TOL	=	Thai Oleochemicals Company Limited
TFA	=	Thai Fatty Alcohol Company Limited
Bio Creation	=	Bio Creation Company Limited
NPC S&E	=	NPC Safety and Environmental Service Company Limited
CH Inter	=	PTT Chemical International Private Limited
PTTGC (Netherlands)	=	PTTGC International (Netherlands) B.V.
PTTGC (USA)	=	PTTGC International (USA) Inc.
AP ROH	=	PTT Chemical International (Asia Pacific ROH) Limited
PPCL	=	PTT Phenol Company Limited
PTTME	=	PTT Maintenance and Engineering Company Limited
TTT	=	Thai Tank Terminal Limited
TEX	=	Thai Ethoxylate Company Limited
EMERY	=	Emery Oleochemicals (M) Sdn Bhd
Vencorex	=	Vencorex Holding
Nature Works	=	Nature Works LLC
MYRIANT	=	Myriant Corporation

Affiliates

PTTICT	=	PTT ICT Solutions Company Limited
PTTPM	=	PTT Polymer Marketing Company Limited
VNT	=	Vinythai Public Company Limited
EFT	=	Eastern Fluid Transport Company Limited
PTTES	=	PTT Energy Solutions Company Limited
GPSC	=	Global Power Synergy Company Limited

Others

API	=	Alliance Petrochemical Investment (Singapore) Private Limited
MHPC	=	Mehr Petrochemical Company Limited

Associated and Related Companies

PTT	=	PTT Public Company Limited
PTTEP	=	PTT Exploration and Production Public Company Limited
IRPC	=	IRPC Public Company Limited
PTTAC	=	PTT Asahi Chemical Company Limited
HMC	=	HMC Polymers Company Limited

Board of Directors of PTTGC's Subsidiaries (Wholly-Owned by PTTGC)

No.	Name	PTTGC	Subsidiaries / Number of Directors											
			TOCGC	PPCL	TOL	TFA	CH Inter	TSCL	Bio Creation	Bio Spectrum	NPC S&E	PTTGC (Netherlands)	PTTGC (USA)	AP ROH
			5	7	4	4	10	4	4	3	4	4	3	9
1	Mr. Bowon Vongsinudom	■		▲			●				▲			●
2	Mr. Kun Patumraj	■									●			
3	Mr. Athavudhi Hirunburana	■						▲					● ■	
4	Mr. Dhanes Charoensupaya	■		●			●		▲					●
5	Mrs. Puntip Oungpasuk	■	●	●			●		●			●		●
6	Mr. Patiparn Sukorndhaman	■	●	●	●	●	●		●					●
7	Mr. Varit Namwong	■					●	●						●
8	Mrs. Thasnalak Santikul	■			●	●	●				●			●
9	Mrs. Sriwan Eamrungroj	■					●	●						●
10	Mr. Suvit Tinnachote	■	●											
11	Mr. Narong Bunditkamol	■		●							●			
12	Mr. Sermsak Sriyaphai	■	▲											
13	Mr. Vanchai Tadadoltip	■			▲	▲						●	●	
14	Mr. Kongkrapan Intarajang	■					●							●
15	Mr. Anon Sirisaengtaksin						▲					●		▲
16	Mr. Toasaporn Boonyapipat	■		●										
17	Mr. Pramin Phantawesak			● ■										
18	Ms. Siriwan Chierapong												●	
19	Mr. Pipat Suvanajata						●							
20	Mr. Narongsak Jivakanun	■							●	▲		●		
21	Mr. Pana Naksuk	■	● ■					●						
22	Mr. Thitipong Jurapornsiridee	■								●				
23	Mr. Jirawat Nooritanon	■			● ■	● ■								
24	Mr. Anucha Somjitchob	■								● ■				

Remarks : ● = Director ■ = Executive ▲ = Chairman

Subsidiaries

TSCL	=	Thai Styrenics Company Limited	NPC S&E	=	NPC Safety and Environmental Service Company Limited	AP ROH	= PTT Chemical International (Asia Pacific ROH) Limited
TOCGC	=	TOC Glycol Company Limited					
TOL	=	Thai Oleochemicals Company Limited	CH Inter	=	PTT Chemical International Private Limited	PPCL	= PTT Phenol Company Limited
TFA	=	Thai Fatty Alcohol Company Limited	PTTGC (Netherlands)	=	PTTGC International (Netherlands) B.V.		
Bio Creation	=	Bio Creation Company Limited	PTTGC (USA)	=	PTTGC International (USA) Inc.		
Bio Spectrum	=	Bio Spectrum Company Limited					

WE CAN MAKE IT

SUSTAINABLE DEVELOPMENT

ON THE GLOBAL STAGE – EXEMPLARY ORGANIZATION IN SUSTAINABLE DEVELOPMENT

Since the completion of the amalgamation in 2011, collaboration has been made to place special emphasis on societal and environmental impacts resulting from business operations. A management framework and set of guidelines have been drawn up and applied to focus on sustainable development for the PTT Group. They focus on three main areas: economic, social and environmental development. They fall under our corporate governance initiatives of organizational learning, adapting and consistent development.

The Company's constant dedication to progress has marked it as one of the world's exemplary companies in terms of sustainable development. The Company was ranked one of nine Industry Group Leaders 2013 in the Chemicals Sector, as determined by the Dow Jones Sustainability Indices (DJSI). This ranking focused on Sustainable Best Practices for the world's leading companies. The Company was not only the first, but also the only organization among Asia's chemical industry to be recognized as a leader in sustainable development on the global stage.

Building trust and confidence for each of our stakeholders has been a key component of our business operations. The Company's world-class standards and guidelines have not only resulted in recognition, but have also put the organization in pace with other leading organizations throughout the world. (1) They include an applied framework that governs the reporting of sustainable development efforts following world standards. PTTGC Sustainability Report 2013 was prepared according to the GRI G4 Guidelines at in accordance core level and passed the Materiality Matters Check by Global Reporting Initiative. (2) Operations have been conducted in compliance with the United Nations Charter, and the Company has been highly recognized as the first and only company in Thailand to reach the United Nations Global Compact Advanced Level. This is a distinction held since the Company's inception. (3) Furthermore, recognition on the domestic level has been enjoyed as well. An award was given for Corporate Social Responsibility from the Department of Industrial Works, Ministry of Industry.

Sustainable Development Business Operations

Environmental Performance

Strategies have been drawn up for the care as well as management and development of environmental sustainability. The concepts used for these strategies were borrowed from the World Business Council for Sustainable Development (WBCSD), serving to act as a model for the industry in terms of Eco-efficiency. They are comprehensive in the sense that they cover a variety of different areas in terms of the environment: air quality, waste, energy, water resources, and other issues.

A review of efforts made by the Company is listed below:

- Focused on environmentally-friendly business practices according to the 3Rs Principles, emphasizing the efficient use of resources. The Company received two separate awards for this. The first was the Prime Minister's Industry Award, given annually for excellence in safety management, energy management, and quality management. The second was from Thailand Energy Awards, recognizing the Company's factory facilities, staff members and stakeholders who participated in promoting and encouraging energy conservation and alternative energy development. This set a good example for other organizations to follow. Furthermore, the Company received the Asian Energy Award 2013 for its production of Ethylene Oxide / Ethylene Glycol.

- Invested in the development of products and processes that are environmentally friendly, such as Bio-chemicals and Bio-plastics.

- Requested carbon certification for efforts made to reduce greenhouse gas emissions. Carbon footprint labels were given for a total of 102 different product grades from the Thailand Greenhouse Gas Management Organization (Public Organization).

- Invested in and improved existing systems to reduce their environmental impact. This included two major clean technology projects in Rayong: an eco-city; as well as an Enclosed Ground Flare and a Vapor Recovery Unit.

It was one of our organization's goals to work on remaining an ideal organization in regard to environmental development and management. An award was received recognizing outstanding management in the face of severe climate change from the Carbon Disclosure Project (CDP), an institute recognized globally for its assessment of environmental management.

Economic Performance

The Company's approach to sustainable economic management has been designed to meet challenges set by the Company.

- Operational Excellence in Sustainable Development, recognizing excellence as the 18th ranked company among 100 other leading petrochemical companies. Awarded by the Independent Chemical Information Services (ICIS).

- Forbes Global ranked the Company 607th among 2,000 different listed companies internationally. The four factors used in making this consideration included sales, profits, assets and market value.

- Dow Jones Sustainability Indices (DJSI) Responsible Investing in domestic and foreign markets in a socially and environmentally responsible fashion, following international standards.

- Green process & Green products & Product stewardship

- Management has performed in a fair manner, based on the foundation of corporate governance, earning the trust of its stakeholders. This was recognized by a 5-Star award of "Excellence" from the Corporate Governance Report of Thai Listed Companies (CGR). This report was released by the National Committee on Corporate Governance, made up of representatives of the Stock Exchange of Thailand (SET), the Securities and Exchange Commission (SEC) and the Thailand Institute of Directors (IOD). Furthermore, the Company was honored as the Board of the Year for Distinctive Practices by the Thailand Institute of Directors, the Stock Exchange of Thailand, the Board of Trade of Thailand, the Federation of Thai Industries, the Thai Bankers' Association, the Thai Listed Companies Association and the Federation of Thai Capital Market Organizations.

Social Performance

Staff Members

- Health and safety standards have been appropriately set. A culture of safety has been fostered throughout the workplace (B-Cares).

Surrounding Communities

- The Company supported and encouraged employees to participate in various activities and projects to help improve conditions in surrounding communities and society in a continuous manner.

Consumers

- Operated with safe and environmentally-friendly manufacturing processes to protect consumers, using the Responsible Care Management criteria set out by the Thailand Chemical Industry Club.

Other Stakeholders

- Development of Strong and Sustainable Communities
  - » The Luffala Career Development Project, through use of local expertise.
- Development of Youth Education
  - » Project for the Foundation of the Rayong Institute of Science and Technology Project, in collaboration with PTT Group.
  - » University Entrance Assistance Project
  - » The Chemical Engineering Technician V-ChEPC Development Program
- Other Various Public Projects
  - » Biodegradable Nursery Bag Project, in collaboration with the Royal Project.
  - » The Empowerment against Breast Cancer Project, supported by providing plastic pellets for use in artificial breast implants.
  - » The InnoPlus Water Tank Project, to be used in the Royal Initiative Projects of the Chaipattana Foundation.
  - » The For Hopeful Children Project, helping underprivileged youth.
  - » The Blanket Donation project as a tribute to the King, in collaboration with EO industry business customers.
- Environmental Preservation and Conservation Projects
  - » Bio-diversity Development Project: 'Forest Restoration, Water Conservation', in the Huai Mahat Mountain Area.
  - » Nature Restoration Project through the release of sea turtles and fish.
  - » Plastic Flapped Sack Project to help prevent future landslides.

PTT Global Chemical's sustainable development policies are continually evolving, in an endless effort to raise the standard of living of the people they affect. This will help to ensure the long term success of the Company, synonymous with creating a balanced, creative and sustainable creative coexistence with society at large.

Note: Sustainable Development Management for PTTGC, as well as its reporting and disclosure processes, have been performed according to GRI A+ International Standards for years 2011-2012, as well as GRI G4 at in accordance core level for 2013. Details can be viewed at the following link: http://www.pttgcgroup.com/sustainability reporting_center/reports_approach2011

Guidelines to Prevent Involvement in Corruption

The Company's Board of Directors has established a Corporate Governance Policy, as well as prepared a guide to promote ethical behavior among business partners. These guidelines cover Directors, members of the Management, Joint-Ventures, employees and suppliers. They provide a system for auditing, monitoring, evaluating and reviewing working practices, ensuring that they adhere to all policies of good corporate governance in a thorough manner.

The Company has set a Corporate Compliance Policy to serve as a clear and formal recognition of our commitment to conducting business operations according to all rules and regulations. Covering both domestic and foreign operations, our Anti-Corruption and Anti-Bribery Policy is one of the main aspects of our overall policy. It places large emphasis on eliminating unethical business practices and corruption within the Company. The collection and payment of bribes to government officials and others in the private sector is strictly forbidden, and this applies to every party in which the Company has business dealings with.

This policy extends further than just the Company. Its principles and guidelines are distributed to business partners, joint ventures, entities in which the Company holds shares of less than 51%, as well as, other business associates. Its contents covers 5 major areas: giving and taking bribes, offering direct and indirect support to political parties, the disclosure of political contributions, and the disclosure of donations. The details of this policy are available on the website at http://www.pttgcgroup.com/sustainability/policy/compliance_policy. This policy undergoes constant review.

Furthermore, the Company maintains transparent audit and internal control processes that are governed by the Corporate Governance Policy. These and other anti-corruption processes have been detailed below:

- The Company will prepare and execute best practices in dealings with business partners and other business associates. The details of these can be found in four different languages on the website at http://www.pttgcgroup.com/governance/cg_handbook. These practices represent the Company's focus on operating in an upright manner and avoiding the abuse of power for direct or indirect personal benefit. They work to both eliminate and protect against dishonest practices. Furthermore, a pledge is signed annually with our business partners to speak out against dishonest practices and corruption.

- A policy has been set to prohibit the acceptance of gifts that might be given to affect the outcome of business decisions. Company staff members must complete and submit forms on all gift-related activities to their supervisors. Furthermore, a memorandum of cooperation has been entered with business partners to prevent gift-giving around New Year’s holiday so that staff members do not inadvertently violate the Company's policies.

- Training is provided for Company Directors, management and employees at all levels within the organization. A course study given to all new staff members extensively covers the organization's Corporate Governance Policy, as well as the Anti-Corruption Policy. A pledge to follow these policies must be signed and a commitment must be given to follow the Company's Corporate Governance and Business Code of Conduct Handbook. The pledge must be renewed during each annual review of the policy.

- To avoid conflicts of interest, the Company mandates that all Directors, executives and staff members at all levels in the organization to report annually on any potential conflicts of interest they may have with the Company.

- Our Whistleblower Policy provides a channel for complaints and for offenders to be reported, empowering each and every one of our staff members to be able to help uphold the principles laid out in the Corporate Governance and Business Code of Conduct Policy. Reports are to be made in an upright manner and are to be kept confidential. Whistleblowers will be protected from intimidation and bullying both throughout and after their respective investigations.

- It is required that the Company disclose any Corporate Governance and Anti-Corruption violations it finds during the auditing process. These disclosures must indicate a detailed account of each violation as well as the number of violations. Such information will be reported in the Company's Annual Sustainability Report.
- The Company has a policy to remain neutral in political matters. The provision of funding or support, both direct and indirect, to political parties is expressly forbidden (details can be found in the Corporate Governance and Business Code of Conduct Handbook on page 56).
- Detailed accounts of donations and support provided must be reported in the Company's Annual Sustainability Report.

Furthermore, the Company announced its intentions to join the private organization Collective Anti-Corruption: CAC on July 18th, 2012. A Working Group was formed comprising of representatives from related internal departments to perform a self-assessment of anti-corruption measures that have been enacted. On December 31st, 2013, the Company finished its assessment and is currently in the process of summarizing its findings. This report will include evidence of the Company's practices to assess the completeness and adequacy of the monitoring process. The report is expected to receive certification in the second quarter of 2014.

SAFETY, OCCUPATIONAL HEALTH AND ENVIRONMENTAL MANAGEMENT

PTTGC has operated its business by following policies on quality, security, safety, occupational health and environmental issues. Such policies are in compliance with international standards and are also based on the principles of good corporate governance. In addition to this, other environmental standards, as well as applicable laws, rules and regulations, have also been strictly adhered to. Such business practice has contributed not only to the business success of PTTGC but also to winning a number of prestigious awards and accolades which embody the determination of PTTGC to drive the business to excellence, now and into the future.

Quality, Security, Safety, Occupational Health, Environment, and Business Continuity Policy

PTTGC has strived to become a leading operator within the chemical industry as well as an organization of innovation. Great importance has been placed on the Company's responsibilities to society and the community. PTTGC is committed to continuously developing the operational efficiencies of quality, security, safety, and occupational health as well as environmental preservation and the continuity of the business. To achieve this goal, the following policies have been determined.

1. To abide by the laws on security, safety, occupational health, the environment, as well as business continuity and other applicable standards and regulations.

2. To administer overall organizational quality through proven administrative tools, knowledge management and productivity enhancement, in order to deliver customer satisfaction and to develop environmentally-friendly innovations.

3. To manage risks to prevent work-induced dangers and illnesses, accidental losses, injuries, and damages to property. At the same time, the B-CAREs safety culture and Process Safety Management will be initiated to provide care and safety for everyone involved.

4. To realize security threats to protect life, as well as the Company assets and its information and to maintain business continuity.

5. To ensure good occupational health with a healthy working environment, while promoting the wellbeing of all staff members.

6. To assess and reduce environmental impact by focusing on improvement and prevention at the source including efficient use of resources. The environmental culture of PTTGC will also be promoted. This will be carried out by supporting and encouraging staff members and stakeholders to realize and participate in related activities.

Executives at all levels of PTTGC have established the lead by example culture with the responsibility of developing and maintaining the management system of quality, safety, occupational health, environment and business continuity. This is achieved by providing adequate resources, ensuring that all employees have adopted this policy and by informing all parties involved thoroughly of the performance.

Operating results as regards safety, occupational health and environmental management in 2013 can be summarized as follows:

1. Safety Management

PTTGC has placed emphasis on the safety of both employees and contractors. This is managed by instilling in them an awareness of their own safety as well as that of their colleagues under the "B-CAREs safety culture - safe behavior, care for others, and stop when unsafe". Aiming to become an organization that is free from work accidents and injuries, PTTGC has conducted its business along with the implementation of safety rules, occupational health and environmental management measures, as well as an efficient Process Safety Management together with contractors' safety management.

CEO and management met with contractor to express their concern regarding safety of contractor as per B-CAREs safety culture.

The PTTGC's 2013 statistics in regard to safety at work were considered excellent when compared to those in 2012. PTTGC achieved above the mean rate of the Top 25% (first quartile) of global chemical and oil refinery industries at an international level. Recordable incident rates of these industries did not exceed 2 cases per 1 million working hours while the Company's rate in 2012 was only 1.2 cases per 1 million working hours (from 18 million working hours in total). In 2013, PTTGC completed a total of 28 million working hours - 10 million hours more than the total in 2012. Nevertheless, the 2013 recordable incident rate was only 0.6 cases per 1 million working hours, reducing by half from the previous year. As a consequence, plants operated by PTTGC received an Outstanding Establishment Award in safety, occupational health and work environment at the national level for the 16th consecutive year (1998-2013). In addition, PTTGC was the only company in Thailand to be granted the recognition of Excellence in Industry Award 2013 for Safety Management (Prime Minister's Award) presented by the Ministry of Industry. Two of PTTGC plants were awarded, comprising the Aromatics 2 plant and petrochemical plants including Olefins Cracker 3, LDPE and LLDPE. These awards are a sound guarantee of the Company's safety management efficiency at the national level.

Top executives have also placed great importance on creating awareness of safety, occupational health and the environment. An event to promote the awareness of such aspects or "SHE Day" has thus been organized every year in this regard. Activities featured in the event include a talk on the significance of safety, occupational health and the environment given by the top executives. Additionally, an award ceremony was held to honor outstanding employees whose performances exemplified how to work safely and in an environmentally-conscious manner. Also, an exhibition contest was staged by various departments to widely exchange knowledge, as well as promote their participation in the Company's success regarding safety, occupational health and the environment.

CEO and management participated in Management Safety & Reliability walk to support the Process Safety Management (PSM) Program.

Process Safety Management also plays an important role in this regard. Each item engaged in a process is designed and passed through the Process Hazard Analysis even prior to the construction phase for the safety assurance of surrounding communities. PTTGC has introduced and operated a Contractor Safety Management system selecting highly-skilled and safety-conscious contractors. In addition, competency record such as skill testing and training sessions concerning safety have been organized for both employees and contractors on a regular basis. If any modification is due to occur in a process, a Hazard and Operability Study (HAZOP) and Management of Change will be conducted prior to the modification or construction or machine operation. Then, all equipment in the process will undergo the Pre Start-up and Safety Review carried out by an engineering expert for permission to start the operation. Furthermore, anyone performing their work within the production area must be granted a Permit to Work and conduct communications in compliance with the safety measures prior to commencement of any work function.

PTTGC is a founding member of the Emergency Mutual Aid Group (EMAG), which took part in drawing up emergency plans of Rayong province and the Map Ta Phut Industrial Estate. PTTGC also joined a group of industrial plants in Map Ta Phut Industrial Estate in undergoing provincial-level emergency and evacuation drills of the surrounding communities. In addition, competent employees who have experience and expertise in responding and suppressing any state of emergency have been assigned in helping nearby communities set up and undergo emergency drills as a preparation to handle any possible accidents which could occur and affect them. Such efforts were carried out in cooperation with the Governor of Rayong province, Voluntary Civil Emergency Relief Center Rayong, Map Ta Phut municipality, and a group of plants in Map Ta Phut.

As PTTGC engages in the marine transport of crude oil and petrochemicals, our capability to clean up oil spills at sea is therefore of crucial importance. Apart from the availability of required resources, such an activity as Rayong Oil Spill Emergency Response was practiced in collaboration with the Oil Industry Environmental Safety Group Association (IESG) and other relevant government agencies, such as the Industrial Estate Authority of Thailand (IEAT), the Marine Department and the Royal Thai Navy. This was conducted to test the efficacy of an emergency response plan as well as an oil spill clean-up operation and the system to communicate to nearby communities the plans of both the Company and the Sub-committee to Prevent and Solve Oil Spill Problems in the Rayong Area.

Despite PTTGC's utmost attention being paid to continuous development of the capability to clean up oil spills at sea, a regrettable incident occurred on July 27th, 2013. Such occurrence was the result of a flexible marine hose leakage, leading to the leak of about 54,000 liters of crude oil into the sea. At the time this incident took place, PTTGC cooperated with relevant agencies to tackle it promptly in a totally comprehensive manner. Oil transfer was immediately suspended to prevent further spill. The emergency situation was under control within 20 seconds. Investigation found that Visual inspection found helical wire of the flexible marine hose had defected.

PTTGC gathered all internal and external resources available, both in Rayong and from nearby provinces, and made its best efforts to clean up the oil spill. However, strong winds and forceful waves deterred dispersants from fully covering the spill. The effectiveness of oil-spill dispersants was then reduced and the strong wind moved some of those slicks ashore at Ao Phrao on Ko Samet.

2. Occupational Health Management

PTTGC highly values good health of employees, particularly those operating in the production processes. Therefore, checkup programs for current employees have been regularly conducted with a focus on those whose duties involved exposure to hazardous substances, as a proactive approach to employees' health watch. In addition, regulatory industrial hygiene measures have been implemented at all operational areas, covering heat, light, sound and chemicals. The acquired data was used in developing safe working conditions. The data was also applied to the Health Risk Assessment so as to review the measures to prevent any work-induced illnesses. To assist in promoting employee healthcare, two Pan Nam Jai Clinics (Shared Heart Clinics) have been established, located at the Aromatics 2 and Nong Fap near Olefins 3. Both clinics provide free medical doctors treatment to those people living in nearby communities with an annual operational budget of approximately 4 Million Baht. Additionally, in collaboration with the Community Partnership Association (CPA), a mobile clinic unit was initiated to provide basic checkups and healthcare to residents in 34 communities surrounding Map Ta Phut Industrial Estate. Also our admirable public-minded staff members volunteered to help in this activity even on public holidays.

In response to flu epidemics which have occurred in Thailand on a yearly basis, PTTGC has provided free Influenza Vaccination to all employees and directly hired contractors. PTTGC's concerns also reached out to their family members, who could receive the vaccination at a budget price.

In regard to the oil spill at Ao Phrao, PTTGC has taken full responsibility in cleaning up the spill both in the sea and on the beach area of Ao Phrao. The quality of seawater at Ao Phrao was monitored on a continuing basis. In addition, oil slicks were collected from the sea with the contaminated beach sand being thoroughly cleaned. PTTGC has completely cleaned up, and the quality of seawater of Ao Phrao and its nearby areas were back to normal.

Volunteers being supported by the public sector, PTTGC performed in cooperation with a number of government agencies, such as the Rayong Provincial Public Health and Chulabhorn Research Institute (CRI). Health watch was attentively conducted to all volunteers who were fully exposed to the crude oil at Ao Phrao, included oil collectors, participating employees and contractors, as well as naval officers, army officers and civil defense volunteers. As far as checkup results are concerned, no one has been diagnosed with negative symptoms resulting from this operation.

3. Environmental Management

PTTGC has strictly followed all environmental standards, laws and regulations. The environmental administration and the management system conforming to the high international standard ISO 14001, has been used as a fundamental standard in operations. Other international standards and good practices are also applied, such as World Bank Group Environmental, Health, and Safety Guidelines by the International Finance Corporation (IFC). In addition to this, Proactive Environmental Management has been implemented along with the Company's long-term business operations.

The prevention of environmental impact is also given great importance. A stringent set of prevention and control measures was established in this regard. This covers everything from the pre-startup designing phase to the conduct of a thorough study on possible environmental impact of each project. This study was based on the Environmental Impact Assessment (EIA) which covers various aspects. Also, it covers measures to prevent and mitigate the impact as well as those to monitor the quality of the environment and these are to be strictly followed consistently. The measures must be submitted to the responsible government agency to seek approval / permission prior to the commencement

of work. The results of such compliance will then be reported to the supervisory authorities involved on a regular basis.

PTTGC Group has been certified with ISO 14064-1:2006 regarding greenhouse gas (GHG) emission quantification and these reporting compile the data of the Company's greenhouse gas emission. Such adherence to the set international standard enables PTTGC to employ efficient greenhouse gas management along with setting up guidelines and policies that positively contribute to climate change situations now and into the future. PTTGC Group takes pride in proclaiming the target to voluntarily reduce greenhouse gas emitted from general operations by 10% within 2022 in comparison with the base year 2012. Determined efforts have been made in operating company business with effective energy and resources use while ensuring environmental impact control and minimization. Such endeavors led PTTGC to be awarded the Best New Responding Company from the Carbon Disclosure Project (CDP). This is a very prominent award given to a company of outstanding climate change management. PTTGC achieved the highest score for CDP Climate Disclosure among those new companies entering the assessment.

PTTGC initiated a Synergy Project by bringing Off-gas from Refinery and Aromatics plants to use as a raw material at Olefins plants. This is a significant project which reflects our management efficiency in regard to the optimal use of natural resources. In addition, the Eco-Efficiency Indicators were applied to environmental activities systematically and continuously. These activities included Water Use, Energy Use, Wastewater Generation, Global Warming Contribution, and the efficient emission of Ozone Depleting Substances. This is aimed to improve the effective use of resources while minimizing environmental impact from all plant manufacturing activities and processes. All in all, PTTGC can ensure that its businesses are environmentally-friendly and do positively contribute to both the country's economy as well as environmental management as a whole, both now and into the future.

PTTGC Group has determinedly operated its businesses toward sustainable development with serious attention being devoted to the environment. In addition to environmental management, which has been conducted strictly in line with applicable laws and covered the plants' processes and activities, the Zero Waste to Landfills goal was set to be complete in 2015. In order to achieve this goal, the 3Rs principle guidelines have been implemented in conjunction with the use of suitable innovation technologies. They include **R**educing waste at the source, **R**eusing waste and **R**ecycling waste, both inside and outside the plants' processes. PTTGC also supports the conduct of research and development to seek ways to increase waste value, which is part of established Eco-Industry. Furthermore, PTTGC has voluntarily stipulated and implemented other measures in addition to the requirement by law. These included the establishment of stringent criteria for selecting industrial waste management companies. In other words, these selected companies must employ a proper method of waste disposal which is practical and effective, as well as, install a Global Positioning System (GPS) on all trucks that transport hazardous waste from the plants. This is in order to avoid illegal dumping, and make the optimal use of waste which can no longer be reused in the plants. Furthermore, PTTGC has provided staff with knowledge and training concerning the environment with environmental management being communicated to new staff during the induction phase. Also, a knowledge review through staff training is organized every two years, and environmental knowledge has been included into meetings as well as on occasions such as the meeting of the Committee on Safety, Occupational Health and Environment, the meeting of the Welfare Committee, the SHE-Day activity and the 'Forest Restoration, Water Conservation' in the Huai Mahat Mountain Area. As for special activities such as a maintenance event,

additional training sessions to provide the knowledge about environmental management have been held to educate all contractors involved in the operation before they commence their work. Here, all contractors are required to take a safety introduction course, which also contains environmental issues, as a reminder to all of both safety and environmental precautions in their daily work.

PTTGC highly values the significance of the communities surrounding the plants and has realized some potential problems. Construction of an Enclosed Ground Flare at Olefins 3 plant was invested in accordingly to mitigate any possible impact. Through this enclosed ground flare, the combustion of hydrocarbons is complete and smokeless. Aside from eliminating the light from the flaring process, it incorporates an absorbent material which prevents both heat radiation and noise from being emitted into the atmosphere.

Enclosed Ground Flare at Olefins 3

In addition, PTTGC installed Vapor Recovery Units (VRU) to recover hydrocarbon vapors emitted from the raw material and product tanks before returning them to the manufacturing process. Such a recovery method helps in reducing emissions of the vapors into the atmosphere and also ensures the optimal use of resources. The VRU system employed by PTTGC is regarded as the largest in Thailand.

Vapor Recovery Unit

PTTGC began its construction of groundwater monitoring wells in 1992. To date, a total of 87 wells have been completed with additional construction set to launch this year which are ahead of the promulgation of a law on soil and groundwater contamination control within the production area.

In response to Green market demand, all products of PTTGC Group have been accredited the Carbon Footprint of Products by the Thailand Greenhouse Gas Management Organization (Public Organization), the Ministry of Natural Resources and Environment. This achievement was indeed beyond our general operational framework and the requirement by law. Also, such accreditation exemplifies the success of our socially and environmentally-conscious operations and reflects well on our existence as an organization with responsibility in regard to our operations.

In 2012, every production plants in the PTTGC Group obtained the ISO 50001:2011 standard concerning energy management. Such an accomplishment signifies our energy efficiency management as well as our continuous improvement and strict compliance

with applicable conditions and legal regulations. These practices stemmed from our awareness of and concern about energy conservation, which plays a crucial role in all of our operations.

PTTGC has implemented a set of pollution prevention measures as follows:

- To keep a record of Volatile Organic Compounds (VOCs) emissions and maintain release-control equipment to ensure the minimum emission of the substance into the air. These tasks are performed in addition to the installation of the hydrocarbon vapor recovery system on land transportation.

- To install the hydrocarbon vapor return lines to carry those vapors which can possibly be emitted into the air back into the product tanks for proper air management.

- To study the way to enhance competence for the production of low-sulfur diesel in line with the Euro IV standard for Clean Fuels Project. Achieving this competence will enable PTTGC to provide environmentally-friendly fuel oils, which ultimately will contribute to the reduction of air pollution in Thailand.

- To apply clean fuel use measures to lower the emission of sulfur dioxide (SO_2), and improve the ignition of the gas-turbine power generator to lower the emission of nitrogen oxide (NO_x).

- To employ a Continuous Emission Motoring System (CEMS) by installing equipment at the top of the stacks in our plants, and constantly send round-the-clock data to the Environmental & Monitoring Control Center (EMC^2) located at the Map Ta Phut Industrial Estate Office.

- To install an effective system to make optimal use of water in the production process, while minimizing release of wastewater by recycling treated water in other activities of the plant. A water treatment system is employed so as to monitor and ensure that prior to its release, the quality of wastewater conforms with the criteria as specified by law.

As a chemical industry leader as well as an organization of innovation, PTTGC Group is fully determined to operate its businesses with a strong commitment to both society and the community. In the longer term, such endeavors will lead us to becoming a Leading Chemical Company for Better Living.

WE CAN MAKE IT

CORPORATE GOVERNANCE

CORPORATE GOVERNANCE

Corporate Governance Policy

The Board of Directors places importance on Good Corporate Governance. Their vision is to have the organization function efficiently in terms of business operations, maintaining excellence in management, as well as conducting itself in a responsible, fair and auditable manner. Special emphasis is placed on stakeholders and on maximizing value for shareholders through sustainable growth. The Board put into writing a Good Corporate Governance Policy, signed by the Chairman of the Board. Furthermore, a Corporate Governance and Business Code of Conduct Handbook outlines various working practices and criteria to follow that are in accordance with international standards, and with the intent of guiding the behavior and operations of all staff members who have signed it as evidence of their acknowledgement and willingness to comply.

The communication of the content of the Corporate Governance Policy and ethics begin when staff members first join PTTGC during orientation. From there, it is continuously reinforced through various channels and activities which are held regularly to remind staff members of the Policy. Executives are expected to act as role models for their staff, with Directors, Executives and staff members each maintaining a stake in upholding the Policy. Connected transactions and conflicts of interest must be disclosed when he/she appointed to his/her position, as soon as an incident arises, and at the end of each year. Staff members are evaluated annually. In terms of parties outside the organization, a PTTGC's Supplier Code of Conduct has been published and distributed to all business partners. Furthermore, a Business Code of Conduct Handbook is handed out in 4 different languages (Thai, English, French and Chinese) so that all PTTGC business dealings both foreign and domestic companies are handled in an ethical and proper manner.

The Board has tasked the Corporate Governance Committee with the responsibility of ensuring that PTTGC operations are conducted according to the Good Corporate Governance Policy. It is also held responsible for performing annual reviews to ensure that the policy addresses the organization's needs as well as its evolving strategic vision and direction. This review is also done to make sure that the Corporate Governance Policy is in line with both international standards as well as the standards held by other listed companies. A quarterly report is made to the Board of Directors on the performance of the Corporate Governance Policy, using the principles of Good Corporate Governance as set out by the Stock Exchange of Thailand and the ASEAN Corporate Governance Scorecard (ASEAN CG Scorecard) and published in the Annual Report. This is a listing of key performance indicators that relate to "Good Corporate Governance for Companies Registered in the ASEAN Region" and is aimed at continuously raising standards in the region.

Due to PTTGC's efforts in this regard, PTTGC was presented with the award for the Board of the Year 2013, issued by the Thai Institute of Directors (IOD) as well as the Stock Exchange of Thailand. This recognition demonstrates the level of commitment given by the Board of Directors to practicing Good Corporate Governance. The Company's adherence to good principles of Corporate Governance was assessed as "Board of the Year - Excellent". Furthermore, PTTGC was recognized by various organizations, both domestic and international as shown in the "Awards and Recognition".

Furthermore, a set of guidelines has been drawn up to govern compliance related to various laws, rules and regulations found both in domestic and international markets. This acts as an extension of PTTGC's Good Corporate Governance Policy, and serves to reduce the

risk of operating against related rules and regulations. The Board has formally set up this Corporate Compliance Policy, together with a Compliance Division to facilitate in the communication of this policy throughout the Organization. The details of 2013's Corporate Compliance Program have been listed below:

- Delivered copies of the Corporate Compliance Policy to all Directors, Executives and staff members of PTTGC as well as other companies wholly owned by PTTGC.

- Communicated and disseminated the information related to the Corporate Compliance Policy through the Intranet system as well as PTTGC's website. Training was provided to increase awareness of related laws, rules, and regulations. In 2013, a variety of courses and seminars were held as follows:

    1. Organized a number of different courses covering topics related to various regulatory policies. This included entry-level training for Competition and Trade Law, Anti-Corruption Law, Money Laundering Law and Intellectual Property Law. A total of 11 courses were provided covering 7 different policy areas. Guest speakers were invited to provide their expertise from the law firms Baker & McKenzie Ltd. and Allen & Overy (Thailand) Co., Ltd.
    2. Held Knowledge Sharing (KM) sessions to facilitate the exchange of information related to general Corporate Compliance processes and the Corporate Compliance Policy. Staff were invited to attend, both inside and outside of PTTGC. One of the sessions provided was "How to Comply with Anti-Trust Law", held for PTTGC management and staff as well as other subsidiaries in the PTTGC Group.
    3. Hosted the "Overview of International Securities Offering Under US Securities Law" workshop for staff in the Finance Department, as well as the "PTTGC Merger Control and Bid Rigging" workshop for staff in the Strategy and Planning Department. Guest speakers were invited to participate from the law firms of Baker & McKenzie Ltd. and Allen & Overy (Thailand) Co., Ltd.
    4. Provided "PTTGC Group Corporate Compliance Awareness" training for new staff members.
    5. Used Corporate Compliance News as a channel to inform and increase awareness of Executives and staff members of various laws, rules and regulations. Furthermore, different case studies of note were presented to members of Executives and staff so that they were able to develop a greater understanding of the importance of Corporate Compliance.

- Presented a Corporate Compliance Roadshow to various departments to help improve efficiency of the implementation of PTTGC's Corporate Compliance Policy and Corporate Compliance Program. A Corporate Compliance Overview was provided to reinforce the most important aspects of PTTGC's Corporate Compliance Policy so that the Executives and staff members could develop a greater and clearer understanding of details of PTTGC's Corporate Compliance Program.

- Drew up an Antitrust Manual to provide guidelines for staff members responsible for trade activities to follow. It outlines the steps needed to be followed when fielding complaints, as well as the complaint forms to be filled out when there is a failure to follow fair trade laws. The Antitrust Manual will be ready for use during the first quarter of 2014.

Compliance with Good Corporate Governance According to International Standards

PTTGC complies with principles and guidelines set forth by the Stock Exchange of Thailand and has raised its standards to meet the international standards of the ASEAN CG Scorecard. The following is a list of key activities that took place in 2013.

Rights of Shareholders

PTTGC fully respects the rights of the shareholders provided to them by law. Their right to the access of information gives shareholders the right to important, up-to-date information to be used in the decision to sell/purchase or transfer their shares. They also have the right to attend shareholders meetings to vote on matters as assigned by the Board of Directors, or to assign their votes by proxy. These matters include the appointment or dismissal of Directors, nomination of auditors, amendment of the Company's Articles of Association or Memorandum of Association, the reduction or increase of capital, the approval of special motions, connected transactions, the approval of the acquisition or the sale of particular large assets which have legal restrictions placed upon them, as well as any other important matter that might have an important bearing on the operations of PTTGC. Furthermore, shareholders have the right to share in PTTGC's disbursement of profits as well as the right to receive information related to PTTGC in a sufficient and timely manner.

Additionally, PTTGC gives to shareholders additional rights that are not required by law. This is an effort to increase shareholder confidence in PTTGC operations. These rights have been summarized below:

The 2013 Annual General Meeting of Shareholders

1. Preparation of Meeting Invitation Notices PTTGC included the following information and rights that would be given to shareholders:

(1) PTTGC must make an announcement through the Stock Exchange of Thailand to ensure that shareholders are made aware of the date the Annual General Meeting of Shareholders will be held. This announcement must be made immediately after the resolution setting the date is made. Furthermore, this announcement must also include other information such as the Record date, the registry book closing date to suspend share transfers, and the dividend and its payment dates.

(2) PTTGC held the Annual General Meeting of Shareholders on April 4th, 2013 on the 5th floor of the Bangkok Convention Center at Central Lat Phrao in Bangkok. Meeting invitation notices were sent out along with all meeting information, and both a map and directions to help shareholders reach the meeting venue more conveniently. Furthermore, a telephone number was provided to assist those shareholders who needed to make any inquiries related to their attendance of the Meeting.

(3) PTTGC published the invitation to the Annual General Meeting of Shareholders on its website 31 days before the Meeting was held. Physical meeting invitations were then sent out on March 14th, 2013, 21 days before the Meeting was held. Each shareholder received their invitation, which also included the meeting agenda and information that described the scope of each item as well as opinions of the Board of Directors concerning their contents. Furthermore, shareholder rights were explained in detail to let shareholders know more about their rights to registration and details

regarding attending the meeting or having a proxy attend and vote in the shareholders' stead. Other details included a list of Independent Directors who could be assign as their proxy, voting rights that concern resolutions to be made, and application forms to receive copies of the various annual reports and sustainability reports. These reports were to be distributed in the form of a hard copy as well as a CD-ROM, available in 2 languages for shareholders who would like to receive more information about PTTGC.

(4) Meeting invitations were prepared both in Thai and in English, as they were sent out to individual and institutional investors. Shareholders were able to attend in person or assign a proxy to attend instead. A representative was made available to answer any inquiries raised by various institutional funds, both domestic funds and fund nominees. For added convenience, PTTGC also announces the details of its Annual General Meeting of Shareholders in the Kao Hoon publication (Thai) and in the Bangkok Post (English). This is done 3 days before the Meeting is held as another reminder for Shareholders to attend.

(5) In the event that shareholders are unable to attend themselves, PTTGC provides them with the opportunity to select a proxy. This may either be one of the Independent Directors or another individual of their choosing. Paperwork necessary for the assignment of a shareholder's proxy is included in the meeting invitation. This paperwork also allows for the shareholder to select how they would like to vote, as mandated by the Ministry of Commerce. Furthermore, shareholders can download this form from PTTGC's website. Postage stamps were also made available for shareholders to use on the day of the meeting.

2. The Organization of the 2013 Annual General Meeting of Shareholders

Before the Meeting: PTTGC selected a venue that is large enough to accommodate the number of attending shareholders and proxies. The venue must be able to facilitate all attendees and provide ample room for the registration process to take place completely in the 2 hours before the Meeting. The system to manage the Meeting has been described below:

(1) Document Verification. Shareholders had to bring all necessary documentation to the Meeting. Staff members from PTTGC's Legal Department, along with representatives from the law firm Baker & Mackenzie verified all documents and accepted proxy forms on the behalf of others.

(2) Shareholder Registration PTTGC employed the use of a barcode scanner to verify the registration numbers of each shareholder. This increased the speed and ease of shareholder registration, as well as in recording votes. After shareholder registration had been completed, they were provided with snacks and beverages for their enjoyment. This year, there were a total of 5,470 shareholders in attendance representing 72.15% of outstanding shares.

(3) Other Services PTTGC also ensured that there were adequate facilities to accommodate attending shareholders. This included various exhibition boards used to display Company information for shareholders, proxy statements, and investor relations officers from PTTGC. Food and beverages were provided along with other services to ensure that such a large amount of shareholders could be accommodated appropriately.

During the Meeting: The Meeting was attended by 14 Directors (1 Director had resigned in January 2013 before the end of his term). They were joined by the Chairman of the Board of Directors, the Chairmen of each of the 4 Sub-Committees, various Executives, Auditors and Legal Representatives. Before the Meeting commenced, the Chairman described the method to the shareholders in which votes would be counted.

The Chairman then opened the floor for shareholders to freely ask questions and offer opinions. Directors gave their opinions on items they were concerned with, as well as answered any related questions. Agenda items were addressed in the order they appeared on the meeting invitation. No deviations from the meeting agenda were made. Shareholders were given their rights to participate in the voting of Directors. Whenever a Director had a conflict of interest with the item being discussed, they would be asked to leave the meeting room, only to return after the item had been resolved. Furthermore, during the tabulation of votes, votes that were marked no or marked to abstain were deducted from the total of eligible votes cast.

In addition, PTTGC arranged for interpreters to be present in case that a foreign shareholder had questions that needed to be answered.

After the Meeting: All Company resolutions made were announced by PTTGC on the following day, April 5th 2013, to the Stock Exchange of Thailand. A summary was made available on PTTGC's website as well. Fourteen (14) days after the Meeting, PTTGC provided a report of the Annual General Meeting of Shareholders to the Stock Exchange of Thailand, with a full accounting of all details. This was done according to principles of Good Corporate Governance. A report was also made of all stakes held by Directors on those issues they gave consideration on. Focus was given to aspects that might have affected the ability for Directors to weigh in on these matters in an independent fashion. Those who did have conflicts of interests refrained from weighing in on those matters. Furthermore, shareholders are able to view Meeting minutes at the Stock Exchange of Thailand (SET) as well as view them on PTTGC's website at www.pttgcgroup.com

Through continuous development and improvement of the Annual General Meeting of Shareholders, in 2013, AGM Assessment evaluated the meeting's quality as "Excellent" for the 2nd consecutive year since the amalgamation, receiving a perfect 100% score. The AGM Assessment is performed by the Thai Investors Association.

The Equitable Treatment of Shareholders

PTTGC is determined to treat all shareholders equally regardless of their nationality, the size of their shareholdings, or their investor type. A description of these efforts is listed below:

1. PTTGC provides minority shareholders the opportunity to raise items for inclusion on the Meeting agenda, as well as nominate qualified candidates to be considered for Director positions. A single minority shareholder or a group of shareholders can come together for these purposes, as long as they control a total of no less than 0.5% of shares with eligible voting rights. Through an announcement to the Stock Exchange of Thailand, and a posting on PTTGC's website (www.pttgcgroup.com), the criteria and steps for the nomination of Directors, along with a channel to make inquiries into the Meeting's agenda was able to be accessed between October 1st, 2012 to December 31st, 2012. This information could be found under the heading of "Corporate Governance / Shareholder Information / General Annual Meeting of Shareholders 2013". In the event that a shareholder raises an item to be included on the agenda, the Corporate Governance Committee will give consideration to the motion and present its

findings to the meeting of the Board of Directors for a final decision to be made. In 2013, there were no agenda items brought up for consideration by any shareholder, nor did any make nominations for a Director position. The Chairman of the Board released this findings to the shareholders at the Annual General Meeting of Shareholders, along with including them in the Meeting Minutes, without creating any barriers at all to allowing shareholders to communicate with each other about the proceedings.

2. Minority shareholders have the right to offer suggestions or voice their concerns directly to the Chairman of the Corporate Governance Committee (Independent Director), as well as to the Company Secretary. This can be done by emailing to cg@pttgcgroup.com. Corporate Governance Directors will give specialized attention to each issue raised. Institutional investors can make requests for information or offer up their suggestions simply by emailing to ir@pttgcgroup.com, which is the contact for Investor Relations Department.
3. Aside from holding the Annual General Meeting of Shareholders in 2013, PTTGC made additional efforts to strengthen shareholder relations. Such efforts included activities of benefit to society and the environment. All shareholders were granted equal opportunities to participate. Those activities are detailed below:

- The "Company Visit 2013" was conducted to allow shareholders to make a site visit to tour our Rayong operations. It was held from November 20th-21st, 2013. Interested shareholders could apply to take part in the visit, and they were included in a lottery to determine who was able to fill one of the limited spots. Those selected were able to make a site visit in person, welcome by our staff members, receiving information directly from PTTGC Executives and visiting PTTGC plants. During the site visit, shareholders were invited to participate in environmental and socially-minded activities such as releasing fish into the sea and providing support to local businesses.
- Shareholder meetings were provided at "Money Expo 2013" in May at Muang Thong Thani, as well as at "Set in the City 2013" in November at Siam Paragon in Bangkok. PTTGC has staged various exhibitions and answered shareholder questions, as well as advised shareholders to know about the progress of Company operations.

Role of Stakeholders

PTTGC has established both policies and working practices about PTTGC and its responsibilities towards each of its stakeholder groups. They are outlined in the Corporate Governance and Business Code of Conduct Handbook of PTTGC. Furthermore, emphasis is put on quality, safety and occupational health. Also, the Corporate Governance Committee has tasked management with reporting on its relations with each stakeholder group. These reports were assembled quarterly between 2012-2013. They indicated an improvement of stakeholder relations due to systematic adherence to the principles of Good Corporate Governance. PTTGC strives to make sure that all stakeholder rights are preserved. In the case of any infringement of these rights, PTTGC has created a system to make sure that fair compensation is made. This has been summarized below:

1. Shareholders PTTGC provides its shareholders with a fundamental set of rights, according to law as well as Company's Articles of Association. This includes the right to attend and vote at the Annual General Meeting of Shareholders, the right to voice opinions freely at the Meeting, as well as the right to receive a fair return on their investment. PTTGC also grants shareholders the right to make any inquiries and suggestions related to PTTGC operations, and this helps to ensure both operation stability and sustainability while adding maximum value to shareholders.

2. Customers PTTGC aims to provide the greatest benefit possible to its customers and those who use its products, encompassing aspects ranging from quality to fair pricing. Maintaining sustainable relationships is the key to this. A working unit has also been established to be responsible for providing constructive suggestions on the improvement of product and service quality. Their work ranges from providing input on improving production processes, to finding solutions to problems, and to fielding complaints from customers. This helps PTTGC to better satisfy its customers while addressing their needs. Efforts such as these are conducted according to the principles of Good Corporate Governance and Business Code of Conduct. PTTGC places special emphasis on providing solutions to customers whose products are still under warranty or time-sensitive conditions. A system is in place to receive complaints regarding PTTGC products and services to meet customer needs in an expedient and fair manner. Complaints are fielded through a number of different channels including PTTGC's Website, email and telephone. There is also a Customer Relations Management (CRM) system operated by a team dedicated to these efforts. Not only does this team work to ensure a solution is found for each complaint raised, it also ensures that the source of these complaints is eliminated and prevented from happening again. Complaint monitoring and assessments are a regular part of PTTGC operations. In addition to what has already been laid out in the Corporate Governance Handbook, additional principles apply to these efforts such as Marketing Excellence and maintaining a Customer Centric approach. Customer satisfaction surveys are held on a constant basis. PTTGC representatives regularly make site visits to customers to see its products in use, while also taking notes of any customer concerns and opinions on the challenges each customer has recently been through.

3. Business Partners PTTGC operates within the framework of maintaining a competitive environment under Business Code of Conduct. Trade contracts are honored, and trust is maintained with PTTGC's customers. When dealing with trade partners, PTTGC operates in a transparent, uniform, and fair manner. PTTGC aims to conduct itself according to all contracts and agreements in an ethical manner, strictly following all policies and guidelines related to Business Code of Conduct.

PTTGC emphasizes the importance of our Supplier Relationship Management (SRM) and so arranges a series of activities to help support Company partnerships. Activities were held to communicate PTTGC's aims to compete on a more international level, particularly with concepts such as Green Procurement. Green Procurement will help PTTGC work in a more sustainable manner. The cooperation of PTTGC's partners has been asked so that we can all move together in the spirit of maintaining a Green network. Furthermore, similar efforts are being made with anti-graft concepts, with a push being made to operate in a fair and transparent manner. This includes the prohibition of the payment or receipt of goods or services that might be considered dishonest in business dealings. PTTGC policies are clear on the stance taken against corrupt practices. The acceptance or payment of bribes is expressly forbidden both within PTTGC as well as within its business partners. Business partners are required to sign a pledge to condemn any corrupt business practices. Furthermore, business partners are made aware of PTTGC's policy of prohibiting

inappropriate gifting, including allowing its staff members to receive special benefits or incentives. Our business partners are required to share the same vision in terms of safety, health, and environmental compliance. This mentality is to be extended as well to all laws and regulations regarding human rights and labor laws, to help improve the quality of life in communities and society, as well as the quality of the environment.

4. Business Competitors PTTGC has a policy to operate in an upright and transparent manner in dealings with its business competitors. The framework of this policy has been shaped by related laws and regulations, as well as concepts related to Business Code of Conduct. The collection of a business competitor's inside information is expressly prohibited. The policy further prohibits the infringement of intellectual property rights and trade secrets. Furthermore, it includes provisions that prohibit the slandering of business competitors.

5. Creditors PTTGC makes sure to strictly comply with all terms of any loan agreement it enters into in a responsible and transparent manner. PTTGC will not conceal any information or hide any facts that might possibly result in the realization of losses for its creditors. In the event that PTTGC is unable to meet any of the criteria it agreed to, it will make immediate notification to that particular creditor to allow for a course of action to be taken to rectify the situation. There will be full disclosure of this type of information to all stakeholders, in particular bondholders and other creditors. The issuing of any debentures will be made strictly according to law and any notices made by the Securities and Exchange Commission, as well as the policies and resolutions agreed upon at the Shareholders Meeting. Furthermore, measures are in place in case any stakeholder might realize losses from the actions of PTTGC's failure to act totally in compliance with the agreed-upon provisions.

6. Public Sector PTTGC places importance on its relationship with the public sector. As one of PTTGC's stakeholder groups, guidelines on contact with the public sector, both foreign and domestic, have been laid out in the Good Corporate Governance Handbook. These guidelines assist PTTGC to avoid acting unethically in its dealings with the public sector. Constant cooperation and information-sharing exists between PTTGC and the public sector in an appropriate and transparent manner. Staff members adhere to all related laws and regulations, helping to build up a strong long-term relationship with various government agencies, including other members of the public sector such as the academic community.

7. Employees PTTGC places importance on its relationship with all employees and values them as important assets of PTTGC. It is committed to ensuring that employees feel pride and have confidence in their relationship with the organization. Professional development is provided for all employees, helping to continuously and sustainably increase their productivity.

   - PTTGC adheres to all principles laid out by the United Nations Global Compact (UNGC) in terms of respecting labor and human rights. A Quality Security, Safety, Occupational Health and Environment Policy has been designed to protect employees safety and security, as well as their property at the workplace. Health and safety training is provided to each employees. They also receive various health care benefits available

onsite in an effort to improve staff member health and wellbeing.

- PTTGC has set clear policies related to providing appropriate levels of compensation and benefits to its employees. These levels are determined based on an annual survey of compensation offered by companies within the PTT Group as well as companies in similar fields. A Performance Management System has been implemented to assist in the distribution of employee's compensation. Policies have been drawn up to provide employees and their families with a set of benefits, with the aim of improving the quality of work-life balance. PTTGC Welfare Committee from both management and staff jointly monitor and offer suggestions about benefits, making sure that they are provided sufficiently and appropriately. This policy extends to outside contractors that work onsite, ensuring that this practice does not violate related labor laws. All of this has been detailed in the Good Corporate Governance and Business Code of Conduct Handbook, as well as the Corporate Compliance Policy. These policies are communicated to employees through regular training.
- PTTGC has provided for employees to directly communicate with the management through a variety of different channels, including a "Management Site Visit" where staff members directly meet management to discuss various issues and problems as well as to receive good advice and encouragement concerning their work.
- Activities were held to encourage relationship building between management and staff members, in an effort to strengthen understanding and familiarity between them in an efficient manner. These activities allow for staff members to relax after work and enjoy an environment where all employees are treated equally. PTTGC's Compliance Policy states PTTGC's intentions to enforce its Human Rights Policy, guaranteeing the right to freedom and quality.
- A communication channel has been provided for Whistleblowers to make complaints under the "Bring the Best" project administered by the Internal Audit Department. All complaints raised and backed by sufficient evidence will be given fair and transparent consideration to all parties involved. Whistleblower identity will be protected to prevent any level of harassment both during and after the investigation.

8. Community, Society and the Environment

PTTGC conducts its business in an ethical manner in its dealings with members of the community, society-at-large and the environment. Careful attention is given to ensuring that they are not adversely affected by PTTGC operations. Information concerning these operations is shared fully and accurately with surrounding communities. Suggestions and options from these communities are welcomed to help create a sustainable relationship. Furthermore, efforts are made to help with the development of communities and society. PTTGC has set its Core Values as "GC-SPIRIT" with the letter "R" representing "Responsibility for Society". PTTGC's operations plan outlines a strategic vision for PTTGC to focus on social development and investment in communities so that they are impacted only minimally from PTTGC operations. Sustainable development concepts have been implemented according to various international standards such as DJSI, UNGC, GRI, as well as ISO26000 as detailed in Sustainable Development.

- PTTGC operates according to the principles of sustainable development and reports on these principles, as well as implements those social responsibility concepts that meet international standards. Reports describing these efforts are made separately from the Annual Report, and they are made available to shareholders and stakeholders that wish to learn more about and gain increased confidence in PTTGC business operations. They detail various societal and environmental factors related to sustainable development. The year 2013 was the 3rd year in which the reports had been produced, and it also marked the year such reports had been recognized for their accuracy, completeness, and clarity of guidelines by the Global Reporting Initiatives (GRI) for two consecutive years. In 2013, PTTGC was also granted several recognitions of its success in sustainable development by various institutions including UNGC / Advanced Level, Responsible Care, World Business Council for Sustainable Development and Global Reporting Initiatives GRI G4 Guidelines at Core level. Moreover, PTTGC was ranged one of nine world's leading petrochemical companies highly regarded by worldwide investors from Dow Jones Sustainability Indices (DJSI).

Disclosure and Transparency

PTTGC places importance on the full disclosure of information as it is necessary to allow various stakeholder groups make decisions appropriate to their situation. Disclosure is performed according to various standards and controls that govern how different types of information, such as financial and non-financial, is processed. The essence of these standards is that these disclosures should be done in a reliable, complete, accurate, and timely fashion, both in Thai and in English.

- Information disclosed through the SET Community Portal
- Information disclosed through PTTGC's Website at www.pttgcgroup.com. Such information includes regular updates and provides links to enable contact Directors and various departments.
- Information disclosed to all stakeholders through various channels such as the Better Living publication, newspaper announcements, press releases, emails, exhibits and other communication activities.

The Board of Directors strictly adheres to PTTGC's Disclosure Policy, which is based on relevant laws, rules and regulations from the Securities and Exchange Commission, the Stock Exchange of Thailand, and other government organizations. Constant revisions of this policy are made to ensure the accurate representation of related laws, rules and regulations. This assists in providing security for shareholders, investors, and the public, as well as other stakeholders. The disclosure of information allows PTTGC to operate in a full transparent, accurate, and straightforward manner, acting to prevent danger from any losses that may otherwise occur.

1. Disclosure is made regarding the details concerning PTTGC's operating structure, including various companies in the PTTGC Group, as well as subsidiaries, joint ventures, and partner companies. Such disclosure extends to information related to major shareholders and the size of their holdings, as well as the holdings of different institutional investors.

2. Disclosure of financial and non-financial information is made in accordance with Generally Accepted Accounting Principles, and is also subject to scrutiny from an independent, accurate, and complete audit.

3. A policy exists that mandates the disclosure of connected transaction of positions held in PTTGC by its Directors and Executives, as well as other connected individuals. This applies not only to the management of PTTGC, but also that of its subsidiaries. Below is a list of criteria and procedures for reporting:
   - Report upon acceptance of any new Director or Executive position.
   - Report upon any changes in information.
   - Annual report at the end of the year.

4. To prevent conflicts of interests, Directors or Executives are prohibited from being involved in transactions or agenda items they have potential vested interests in. If their presence at the meeting is required to provide necessary information, they will abstain from voting or giving any opinion on such matters. The Company Secretary or the Secretary of the Sub-Committee involved will take note of any involvement of a Director or Executive and include such information in the meeting minutes.Guidelines for managing connected transaction and conflicts of interest have been included in the Corporate Governance and Business Code of Conduct Handbook. All Directors, Executives, and staff members are required to follow these guidelines. Personnel at all levels are required to report any possible act or doubt in regard to conflicts of interest via the Conflict of Interest Disclosure Form. This form must be filled out at least three times - firstly when they are appointed to their position; secondly, every year end; and thirdly, as soon as an incident arises that may lead to a possible conflict of interest.
   In 2013, PTTGC has continued to improve an online system to provide a channel for all staff members of PTTGC Group to report conflicts of interest. This was done in an effort to reduce paper waste, as well as to facilitate the tracking, storage and retrieval of information. This system also enables supervisors in PTTGC to be better informed about any possible act their subordinates could be engaged in which might lead to a potential conflict of interest.

5. The Board will prepare a report regarding financial accountability to be submitted along with an audit report in each of the Annual Reports.

6. PTTGC made full disclosure of the process it used to nominate and appoint Directors, as well as the processes it used in evaluating working processes and the results of the Board of Directors during 2013.

7. Disclosures are made of policies related to Director and Executive remuneration, including the exact nature of the remuneration made as well as the amount paid out to each set of Directors serving on different Sub-Committees. These disclosures include a full history of the accomplishments of the Sub-Committees as well as attendance records for each of their Directors. Furthermore, information related to individual remuneration for each Director is disclosed as well.

8. Disclosures are made of major investment activity and any issues that might have considerable effect on current investments. These disclosures are made through a variety of channels to provide shareholders, investors, members of the media and other related parties informed with accurate information and on a transparent basis.

PTTGC maintains an Investor Relations Department to be responsible for handling communications with shareholders and institutional investors, as well as various analysts and regulatory agencies. This

ensures that communication with PTTGC is made in a convenient manner with a focus on accuracy, completeness, speed, and fairness. Our Investor Relations Department can be contacted directly through our website www.pttgcgroup.com or by email at ir@pttgcgroup.com, as well as by phone. This year, PTTGC established "Investor Relations Code of Conduct" to define the role and guidelines of investor relations officers of all types. It has been included on PTTGC's website.

In 2013, PTTGC hosted a number of events where the President and Chief Executive Officer along with Executives were made available to be met by shareholders, institutional investors and analysts. A summary of what was discussed in terms of operations, budgeting, and financial positions were explained in the Management Discussion & Analysis. Also, future trends that outline Good Corporate Governance were included in the Annual Report as well as on PTTGC's Website.

Additionally, PTTGC maintains an email address that is convenient for use as a direct line to PTTGC. It is listed on PTTGC's Website under the section "Good Corporate Governance". This means that anyone, be they from shareholders, investors or the public, can use it to directly contact the Chairman of the Corporate Governance Committee, or contact the Company Secretary. The email address is cg@pttgcgroup.com

Control of the Use of Inside Information

The Board of Directors has placed great importance on disclosure and transparency. Policies related to this can be found in the Corporate Governance and Business Code of Conduct Handbook, as well as on PTTGC's website. They are available not only for shareholders to read, but also as Directors, Executives and staff members of their responsibilities. The details have been summarized:

(1) Directors and Executive-according to the definition of SEC, are to conduct their work according to SEC regulations. They have signed an agreement to report any changes to their shareholdings in PTTGC within 3 days of any transaction. This responsibility is assumed upon their appointment to their position. The Company Secretary will make an organized list of these transactions to be included as an agenda item at each meeting of the Board of Directors.

(2) Notifications are issued to both the Directors and Executives to remind them of the policy prohibiting the purchase or sale of stock 45 days before the disclosure of quarterly/annual financial reports, as well as before any major decisions are disclosed that may have an effect on the price of PTTGC's stock. Furthermore, they are also prohibited from purchasing or selling stock until after 24 hours has passed since any such event has been published to the public.

(3) A Confidentiality of Information Policy has been set. This policy applies to all Executives and staff members. They have responsibility to ensure that confidential information remains secret at all times. They are also required to prevent others from accessing such information concerning PTTGC, its customers or business partners, or any other personal information. They need to also comply with those measures safeguarding confidential and non-public information for the benefit of business operation and compliance with all of the legal requirements regarding the standard of information confidentiality both in Thailand and overseas.

Board Responsibility

The Board of Directors operates as the core of Good Corporate Governance. The Board performs important responsibilities such as determining and reviewing the organization's vision, mission, strategy, operations

plans and budget. These duties must be performed in a cautious and upright manner, in accordance with all related laws and regulations. Principles of Good Corporate Governance and Business Code of Conduct have been set to help guide Directors, Executives and all staff members. Furthermore, the Board of Directors pays close attention to reports of PTTGC operations. PTTGC holds Board meetings each month.

Each of the Directors must be highly qualified, knowledgeable and experienced in fields such as petroleum, petrochemicals, energy, management, accounting and finance, law, security, or auditing. The combination of these skills and qualities is aimed to bring the greatest benefit possible to PTTGC. The devotion of their time and effort is essential to their duties. The Board of Directors must provide PTTGC with strong leadership, vision and independence in decision making processes so as to maximize shareholder value. It must understand its responsibilities in upholding the law and adhering to all regulations and rules, as well as principles of Good Corporate Governance. It must avoid any actions which would be against the best interests of PTTGC and avoid conflicts of interest with PTTGC that would decrease efficiencies. The number of Board Directors must always be kept at an appropriate level as determined by the size of the organization as well as the approval given at the Shareholders Meeting.

Chairman of the Board. The Chairman must not be the same person as the President and Chief Executive Officer, nor one of their family members. The Chairman does not participate in the normal management of PTTGC, nor can the Chairman participate as a member of one of the various Sub-Committees which are responsible for policy writing, operations assessment, and the daily management of PTTGC.
The Chairman is responsible for providing oversight as well as safeguarding the efficiency of Directors. The Chairman must always act as an independent arbiter between different areas of management. The Chairman must set agenda items together with the President and CEO to be discuss in the meeting of the Board of Directors. The Chairman must preside in an efficient manner over meetings with the Board as well as with shareholders, ensuring that Directors follow the principles of Good Corporate Governance and Business Code of Conduct, as well as act independently according to the policies set forth by the Board. This is all done to produce the greatest benefit for PTTGC, its shareholders, and the Thai nation.

Principles of Good Corporate Governance require that the Chairman should act as an Independent Director, although this is not the case presently. However, the Chairman is a highly knowledgeable and experienced individual who is recognized both domestically and internationally for his ability to perform his duties independently, and this will help PTTGC to be more secure and progress in an efficient way.

Nomination and Appointment of Directors, Independent Directors and Chief Executive Officer

In an effort to conduct the nomination and appointment of Directors in a principled and transparent fashion, concepts of Good Corporate Governance are strictly abided by. The Board of Directors nominated 3 Directors to serve on the Nomination and Remuneration Committee. These Directors are Independent Directors, responsible for determining the nomination criteria, as well as performing the nomination of Company Directors. Nominations are to be made to find individuals that are appropriately qualified according to Company's Articles of Association, have a high level of expertise, and are experienced in various related fields. These findings are presented to the Board of Directors for their consideration. Furthermore, the Nomination and Remuneration Committee is also responsible for allowing minor shareholders to nominate qualified individuals for consideration to fill these Directorships. Consideration

will be given only to candidates that give consent to their nomination and are able to verify their credentials.

To help ensure that only the most qualified individuals are considered for Directorships and Executive positions, the Nomination and Remuneration Committee have set forth the following criteria:

Directors

- Nomination of New Directors: Various factors are considered including: history of compliance with related laws and regulations, as well as expertise in areas required by the Board, such as in the fields of petroleum, petrochemicals, energy, management, accounting and finance, law, security, and auditing. Furthermore, conflicts of interest and connected transactions that may affect PTTGC are also considered.
- Nomination of Directors Presently Serving: Consideration is given to past performance as a Director of the Board, including their time devoted, participation, and their relationships with other Directors as well as Executives. Furthermore, a Skill Matrix used to evaluate the performance of Directors is also used during consideration.

Independent Directors

The nomination and appointment of Independent Directors begins by determining the number of Independent Directors that are necessary to meet criteria set forth by the Securities and Exchange Commission. As of December 31st, 2013, of the 15 Directors, 9 of them are Independent Directors, exceeding the requirement mandated by the Securities and Exchange Commission. Aside from meeting all of the above requirements, additional consideration is given to the ability of candidates to remain independent in their duties as stated in Company's Articles of Association. The qualifications of Independent Directors are clearly detailed in the Corporate Governance and Business Code of Conduct Handbook and on PTTGC's Website. These criteria are based on the criteria set by the Securities and Exchange Commission. Independent Directors must not hold more than a 0.5% share (SEC regulations prohibit shareholdings of more than 1%). Furthermore, the candidate's prior and present experience and positions will be taken into account as well. Their current relationship with PTTGC will be evaluated to see if it will have any effect on their ability to function independently and uniformly.

According to SEC regulations, Independent Directors must not have any prior business dealings with and must not provide services to the Companies they represent upon assuming Directorship. All changes to the status of any of these conditions must be reported annually.

Chief Executive Officer

When making the nomination and appointment of Chief Executive Officer, the Nomination and Remuneration Committee makes sure to propose the most qualified individual by evaluating their qualifications, skills, experience, management and leadership skills, as well as their performance at the posts held previously. Furthermore, consideration is given to other important aspects such as the time and effort they have available to devote to their position, ensuring that PTTGC receives the highest amount of benefit from any individual who assumes this position.

Corporate Governance Policy for PTTGC and its Subsidiaries

The Board of Directors has approved PTTGC's Corporate Governance Policy for companies it holds ownership stakes in. This policy is meant to ensure that the same standards (PTTGC Business Principles) apply to the management and operations of those entities, helping to increase their efficiency. The Board of Directors has tasked the Chief Executive Officer with the duty of establishing the policy, its

criteria, and its mechanisms of enforcement. In terms of the responsibilities of individuals nominated to serve as Directors for PTTGC's subsidiary companies, this policy states that those individuals have the duty and responsibility to act in the best interest of the company they serve as a Director. Furthermore, the Board of Directors has determined that important policies set by its subsidiaries must adhere to all restrictions and regulations set forth by the Securities and Exchange Commission.

Additionally, the Board of Directors provides supervision for various policies of its subsidiaries including Management Policies, Corporate Governance Policies, Corporate Compliance Policies, Accounting and Finance Policies, Health Safety and Environment Policies, Social Responsibility Policies, Personnel Management Policies, as well as other various important policies. Such supervision is provided to make sure that they are in compliance with the requirements of the Securities and Exchange Commission as well as of other related rules and regulations.

» Board of Director Meetings

The Board of Directors will determine the dates of its meetings over a year in advance, as well as set a clear agenda to be discussed each month. On the 2nd Friday of each month, special meetings (urgent) will be held if the need arises. During 2013, there were a total of 13 meetings held, with additional 2 special meetings conducted. The Board of Directors received copies of their invitations, meeting drafts, and information pertaining to agenda items at least five days before each meeting was held.

The Chairman of the Board and the President and Chief Executive Officer are normally responsible for setting the Meeting Agenda. However, Directors are entitled to make suggestions as well. In an effort to better conform to practices of Good Corporate Governance, PTTGC has established that Board Meetings must be attended by at least two in three Directors before a quorum can be attained. High-level Executives and members of management are invited to attend the meetings and provide useful information directly to the Board. Exceptions to this are when agenda items concern specific issues related to special committees which need to be given independent consideration.

The Chairman is responsible for and presides over meetings, providing every Director an opportunity to openly voice his/her own opinions. Meeting resolutions are then decided by a majority vote. Each Director is entitled to one vote except for anyone who has conflicts of interest with the agenda item being discussed. In the event that the final vote ends in a tie, the Chairman will cast the deciding vote. Through the Chairman's encouragement, Director attendance was at a level of 95% during meetings held in 2013.

Furthermore, importance is given to the reduction of conflicts of interest. Efforts are made to operate in a careful, fair and transparent manner. Full disclosure is made of any conflicts of interest. In the event a Director might have a conflict with an agenda item being discussed, that Director must abstain from engaging in consideration of the matter.

After the conclusion of the meeting, the Company Secretary is responsible for preparing the meeting minutes and presenting them at the following meeting for approval as the meeting's first agenda item. The minutes are to be signed off by the Chairman, verifying their accuracy. Minutes are stored in a systematic fashion with all necessary confidential information protected. PTTGC’s electronic storage system allows for ease in reference or searching.

In 2013, the Independent Directors meeting was assembled twice, inviting expert speakers from outside the organization to share their information which related to "Business Overview (Refreshment)". These meetings

allowed Independent Directors to exchange opinions and suggestions how best to maintain their independence as an Independent Director. No members of management were in attendance.

» Director Development

PTTGC places importance on continuing development of the Directors. Policies have been to encourage Directors to undergo development and increase areas of expertise related to their roles and the responsibilities of their directorship. The Company Secretary is also instrumental in overseeing a variety of training courses that assist in continuously improving operations.

Orientation for New Directors

PTTGC's New Director Orientation is detailed below:

(1) A briefing is given about the nature of PTTGC's business, information about PTTGC, as well as various guidelines and business practices. It includes information about related regulations, Good Corporate Governance and Business Code of Conduct. The orientation is performed by high-level Executives and also includes information that will be useful for Directors during their tenure.

(2) Manuals and various documents are distributed to new Directors. They include information about strategic company plans, the Company's Articles of Association, rules and regulations, and the Good Corporate Governance and Business Code of Conduct Handbook. This literature is constantly kept up-to-date and is intended to help Directors perform their duties.

Director Training

PTTGC Directors are knowledgeable, skilled, and are constantly seeking more information about developments in the Company's industry. PTTGC is supportive in providing extra training to Directors to help them better perform their duties. Almost all of the Directors have completed training programs organized by the Thai Institute of Directors (IOD).

Additionally, Directors attend various events on the national and regional levels to promote and raise standards of Good Corporate Governance, as well as to exchange thoughts and experiences. One event was the National Director Conference 2013, organized by the IOD. A Conference in 2012 for Nomination and Remuneration Directors was also attended. It focused on remuneration of Directors. Plant visits were organized for Directors to inspect company operations at both domestic plants and at overseas joint-ventures. Directors were able to get hands-on experience so that they may be able to better contribute to improvements in PTTGC operations.

Assessments of the Board of Directors

PTTGC requires the annual performance evaluation of the Board of Directors. These reviews are made to assess the working operations, problems and obstacles that had been dealt with over the year. Three types of assessment are performed: assessments on the Board as a whole, as well as individual self-assessments, and cross-assessments. Criteria of appropriate standards are used. Results of assessments are then examined during Director remuneration consideration. The assessments were presented to the Board of Directors at Meeting No.13/2013, held on December 16th, 2013. They were used accordingly to draw up a set of guidelines that would improve the future performance of the Board in an efficient and concrete fashion.

» Assessment of the Board as a Whole

focused on six main areas: 1. Board Policy, 2. Board Performance, 3. Board Structure, 4. Board Style, 5. Board Meetings, and 6. Board Development.

Overall Board assessment results concluded that performance was at excellent level with an average score of 95.9%

» Individual Self-Assessment of Directors

focused on three main areas: 1. Business Code of Conduct and Ethics Compliance, 2. Duties and Responsibilities, and 3. Self-Development and Teamwork

Overall entire individual self-assessment results concluded that the performance was at an excellent level with an average score of 96.2%

» Cross-Assessment of Individual Directors

focused on three main areas: 1. Independence, 2. Time Devoted and Meeting Attendance, and 3. Knowledge and Specialized Expertise

Overall cross-assessment of individual Directors results concluded that their performance was excellent with an average score of 97.9%.

▸ Assessment of Sub-Committees

Audit Committee Through an analysis of results of assigned tasks and responsibilities, the Audit Committee has been assessed as operating in full compliance.

Nomination and Remuneration Committee Through an analysis of results of assigned tasks and responsibilities, the Nomination and Remuneration Committee has scored at the level of excellence.

Corporate Governance Committee Through an analysis of results of assigned tasks and responsibilities, the Corporate Governance Committee has scored in the level of excellence.

Risk Management Committee Through an analysis of results of assigned tasks and responsibilities, the Risk Management Committee has scored as very good.

» Anti-Corruption

PTTGC participated in the Collective Active Coalition, a private-sector movement hosted by the Thailand Institute of Directors (IOD) to combat graft and corruption. Other participants were the Thai Chamber of Commerce, the Thai Bankers Association, the International Chamber of Commerce, and the Thai Listed Companies Association. The aim of the coalition was to establish common standards of business ethics to present a united front against corruption and dishonest practices.

In 2013, PTTGC assigned staff members from related departments to an IOD Seminar to learn more about Self-Evaluation Tools. Staff were also sent to take an "Anti-Corruption: The Practical Guide" course. PTTGC is currently in the process of assessing and reviewing its anti-corruption measures and will look to endorse its findings soon.

» Internal Control and Audit Systems

1. Internal Control

The Board of Directors has been given sufficient power to establish efficient and appropriate internal control systems, reducing risk and environmental risk to an acceptable level. The following is a list of internal control measures in place:

- Policies are set to put internal control efforts into writing, describing various internal control processes in the Good Corporate Governance and Business Code of Conduct Handbook.
- Set policies and provide oversight over internal control systems, including appropriate risk management measures. Risk will be reduced to an acceptable level without affecting the operations of PTTGC.
- The Board of Directors assigned an Audit Committee with the responsibility of performing audits and enforcing internal control measures as mandated in the Charter of the Audit Committee. Furthermore, the Audit Committee is responsible for reporting to shareholders in the Annual Report.
- Upper-level management followed policies laid out by the Board of Directors by implementing Internal Control systems and instilling a culture of discipline and a positive attitude about internal control.

- Middle-level management has organized internal control systems for work they were responsible for. Systematic assessment has been given to these systems resulting in systematic improvements being made.
- All staff members followed the laws, rules, regulations, mandates, standards, and internal control systems.

2. Internal Audit

PTTGC's structure ensures that its internal audit mechanism is working independently and report directly to the Audit Committee. It is the responsibility of the Audit Committee to make it possible for such internal audit mechanisms to function independently, impartially and ethically as specified in the Charter of the Internal Audit and in accordance with professionally accepted standards. Such internal audit is necessary to assess the sufficiency and the efficiency of internal control measures, in order to ensure that all departments are working in the same direction to achieve its goals, and that adequate risk management is implemented to handle the ever-changing business situations.

The internal audit mechanisms cover both long-term and short-term internal audit, and are in line with the business strategies and risks. Internal audit aims to recommend measures to mitigate possible risks, as well as, to improve existing procedures in an effort to add value to PTTGC. A report on compliance with recommendations of the Audit Committee is also prepared every quarter, and the Audit Committee is required to report the adequacy of the internal audit to the Board of Directors at least once a year.

The Internal Audit Department emphasize on the development of the internal audit system to be in line with the international standard. The development strategy to improve the work of internal audit including risk management and plan to reduce such risk are:

- Knowledge development
- Improvement in internal audit system to be in line with international standards
- Develop internal audit officers to perform their duties according to the standards and as expected by the Executives and the Audit Committee.
- Assist the Audit Committee in performing its statutory and fiduciary duties according to the Audit Committee code of conduct published by SEC.

» Risk Management

The Board of Directors has overseeing the policies and processes related to risk management as outlined in the Good Corporate Governance and Business Code of Conduct Handbook. Furthermore, the Board has defined the roles and responsibilities of the Risk Management Committee as having to consider all potential risk factors that might actualize and has designated a comprehensive system to mitigate these risks. Oversight will be provided to make sure that management follows systematic processes to limit risk in an efficient way, as well as seek out business opportunities that may arise from the presence of risk. The Risk Management Committee must also set policy to efficiently limit risks in the operations. The constant monitoring and assessment of risk management practices will be made to ensure confidence in the sufficiency and adequacy of existing risk management mechanisms. Summaries of this assessment will be reported on a quarterly basis. Whenever risks are determined to affect PTTGC operations, it will be brought to the attention of the Board of Directors and report in the Annual Report.

» Head of Internal Audit

At Audit Committee Meeting No. 4/2013, held on July 5th, 2013, Mr. Adisorn Vichaikatka received approval to be appointed as the Head of the Internal Audit Department affective as of August 1st, 2013. His appointment was made due to his extensive knowledge and experience with PTTGC's internal audit systems. He has been working with the Internal Audit Department since 2005. He was provided with

an extensive course of training related to internal audit systems. The Audit Committee is the body responsible for the appointment, removal, and transfer of managers of the Company's Internal Audit Department, as specified by the Charter of the Audit Committee. (The qualification of the Head of the Internal Audit Department page 111.)

» Head of Corporate Compliance

PTTGC has appointed Mrs. Warawan Tippawanich to be the Head of the Company's Corporate Compliance. Her roles and responsibilities include promoting and supporting compliance activities among Executives and staff members of PTTGC and its subsidiaries so that operations are conducted according to all related laws, rules, and regulations. (The qualification of the Head of the Company's Corporate Compliance page 111.)

» Channel for Whistleblowers

PTTGC has designed a Whistleblower Policy, along with a channel for whistleblowers from both inside and outside the organization, to support and promote the PTTGC's ethical values. This Policy is detailed below:

Internal: A channel has been provided for staff members to make any complaints concerning unethical business practices. This policy was advertised on PTTGC's Bring the Best, Intranet. Processes are in place to classify and store complaints and to prepare documents. The Internal Audit Department will compile a report on the issue and submit it to the Chairman of the Board, the Audit Committee, and the Board of Directors for their consideration.

External: A channel has been provided to allow various stakeholders and people in general to make contact or give suggestions. This channel can be located on PTTGC Website in the "Contact Us" section. Various different subject headings can be used, as detailed below: Public Relations, Good Corporate Governance, Products and Services, Investor Relations, Social Responsibility

- This channel has been provided to collect opinions, suggestions, and feedback. It can also be used to submit information related to unethical practices on the PTTGC's Website on the "Good Corporate Governance" page under the heading of Contact the Chairman of the Corporate Governance Committee and Company Secretary.

The Board of Directors has set up various mechanisms to increase stakeholder participation in PTTGC's Operations. Information is disclosed in a transparent manner and stakeholder concerns can be addressed through meetings with management or the compliance department as well. Different channels are used to disseminate information in an effort to increase a sustainable level of confidence in the PTTGC's operations. Furthermore, channels exist to facilitate the lodging of complaints about illegal practices, unethical practices, financial irregularities, as well as internal control deficiencies. Mechanisms have also been incorporated to safeguard whistleblowers, including processes to govern investigations into complaints. These efforts aim to increase stakeholder involvement in PTTGC in a most efficient manner.

» Succession Plan

PTTGC has designed its succession plan to work in a systematic manner that is able to evaluate management performance. Consideration is given to competency, personal attitude, organizational knowledge, experience and also to leadership. Candidates must have vision and be able to execute growth plans that have been laid out by the Board of Directors. They must be able to support business expansion and the changing nature of the Company's organizational structure. As members of senior management retire, this succession plan helps to ensure continuity in management. It also helps to prepare candidates for succession to help PTTGC meet its strategic goals in the future in an efficient manner.

PEOPLE MANAGEMENT AND DEVELOPMENT POLICY

PTT Global Chemical has placed great importance on the continuity of business management, which has been in line with its direction and strategic plan. PTTGC aims to boost the competitive capabilities of existing businesses, as well as to expand to cover a complete range of products, from upstream to downstream businesses. Such expansion will also extend to enlarging the production base and reaching international markets. Therefore, a focus has been placed on Organization and People Management as a means of strengthening PTTGC as well as driving its businesses toward sustainability. PTTGC has put substantial effort into restructuring the organization to reflect the context of different operations. This includes establishing a supervision unit for mega project investments, streamlining working processes as well as decentralizing operations to be more controllable and more efficient with less redundancy, and also reinforcing human resources management.

In terms of human resources readiness, PTTGC has placed emphasis on efficient utilization of existing human resources through long-term workforce planning. This will be employed as a framework for recruitment on particular groups of employees, especially those who play an important role in driving the Company forward, such as R&D, Engineers and the Marketing & Supply Chain. To acquire high-potential candidate from both internal and external sources in a timely manner, PTTGC has developed recruitment procedures and added new recruitment channels. These include both local and international activities, such as the arrangement of a Campus Visit and a Recruitment Day, and participation in a Job Fair.

Additionally, the Company over time has consistently improved necessary human resources management systems, such as the Performance Management System, and the Appointment and Level Advancement System. Highlighted in both of these systems are impartiality and transparency, along with the contribution of supervisors to ensure that all employees are determined, motivated and encouraged to perform efficiently at all times.

PTTGC has implemented the Progression Scheme for operation staff in the plants, as well as with maintenance technicians, analysts, lab technicians and chemical engineers.

The Career Management System has been developed to constantly ensure that it is clear and extensively covers other groups of employees. Under the system, the Job Family is determined with many opportunities for the progression of employees being presented for each career path. Further implementation of this system will continue through 2014. Additionally, a Succession Plan was established and applied to management executives at Executive Vice President and Vice President levels. This plan allows for management skills to be developed, making staff ready for any incoming significant tasks.

In regard to People Management, supervisors and employees are encouraged to develop their own Individual Development Plan, or IDP, taking into account the skills required to be sharpened for both their own current and potential positions. PTTGC has a policy to promote the use of English by employees in support of Company growth overseas. A wide range

of English classes encompassing various topics are being taught by local and international teachers. They have been selected to suit different groups of employees. The English Mobile Learning system is an alternative channel.

PTTGC makes ongoing efforts in fostering good cultural and organizational values according to the GC-SPIRIT guideline. Such efforts include encouraging PTTGC's Executives to act as a Leadership Role Model, which is in line with the 4B1L principle (Build One Team, Build Trust, Be a coach, Be Open, Lead Change). PTTGC has been promoting understanding of the GC-SPIRIT concept among employees by providing a variety of communications and activities. Among them is establishing the PTTGC The Idol system, which is a platform for praising employees whose conduct is in compliance with our organizational values. Other activities include the Functional Away Day/ Happy Together Project aiming to bolster relationships among employees, and the GC-SPIRIT Singing Contest. In addition, good organizational values are being instilled through various means of human resources management. These include the Performance Management System, the Employees and Executives Development program, as well as, Appointment and Level advancement System. All efforts made are to ensure that the GC-SPIRIT will be fostered and so become the important foundation in support of the Company's sustainable growth.

International human resources management, which also supports business growth abroad, has had a Staff Mobility Policy prepared. Those remuneration regulations applied to staff working overseas were revised to cover more cities, which are the target destinations for our business expansion. PTTGC has established a network involving top universities in a variety of countries through the international internship program. Consequently, students from leading universities in the United States, Singapore and Indonesia have come to work as interns at the Company's different units. This promotes opportunities for our employees to use English day to day and work in an international environment. In addition, PTTGC has cooperated with the human resources executives of its subsidiaries overseas in establishing HR management guidelines. Such guidelines have been mutually adopted and implemented for the maximum benefit of the businesses and employees of both parties.

People is regarded as a most highly valuable resource, and PTTGC is committed to streamlining together with strengthening Organization and People Management on an ongoing basis. This is to ensure that our staff members are attracted, retained and equipped with suitable knowledge and expertise in order to grow together with PTTGC well into future.

REPORT OF THE CORPORATE GOVERNANCE COMMITTEE

Dear Shareholders,

The Corporate Governance Committee has placed high value on ensuring that the Company has operated in full compliance with the policies of good corporate governance and the business code of conduct. The Committee is determined to develop and maintain its corporate governance practices to be on par with international standards in an ongoing manner. The current Committee is chaired by Police General Sombat Amornvivat and two Directors, Mr. Prajya Phinyawat and Police Lieutenant General Prawut Thavornsiri who was appointed on October 18th, 2013 to substitute the resigned Director Mr. Kriengkrai Thiennukul, and Mr. Bowon Vongsinudom who was appointed as President and Chief Executive Officer.

In the year 2013, the Corporate Governance Committee held six meetings in total. The Committee exercised its duties within its scope of authority and responsibilities set forth by the Company's Board of Directors, which can be summarized as follows:

The Committee performed its tasks in full compliance with applicable regulations, laws and good practice guidelines.

- An organization plan for the 2013 Annual General Shareholders' Meeting (AGM) was issued. Suggestions were also made to ensure that meeting was carried out in an orderly, transparent and effective manner in compliance with corporate governance in all AGM Checklist as recommended by the Stock Exchange of Thailand. In the assessment made by the Thai Investors Association, the Company's 2013 Annual General Shareholders' Meeting was awarded full marks of 100 for distinction.

- The Committee set up principles and a timeframe for the proposal of the meeting agenda by minority shareholders along with the list of candidates for the Board of Directors election. To promote shareholders' rights and equality, a period of more than three months was allowed (September 25th - December 31st, 2013) prior to the holding of the 2014 Annual General Shareholders' Meeting for agenda and candidate submission.

- The Committee provided continuous supervision of operations with responsibility toward various stakeholders, namely shareholders, employees, customers, business partners, creditors, communities, society and the environment. Such operations were carried out in a way that sufficiency and suitability were assessed for future improvements and development. In 2013, the responsible divisions submitted summary reports on operations in comparison with international standards, such as the Corporate Governance Report by the Thai Institute of Directors and the ASEAN CG Scorecard which is an assessment criteria at the ASEAN level. As a result, all operations of the Company achieved full compliance with the mentioned criteria.

- A 4-language version of the Business Code of Conduct Handbook was published, which comprised Thai, English, French and Chinese, in addition to the previous bi-lingual (Thai and English) version. This new version was made to ensure communication efficiency of the subsidiaries that have made investment in other countries. This was also to ensure the acknowledgement and adherence of business partners to the Company's policies on ethical business operations. Such production complied with the Dow Jones Sustainability Indices (DJSI).

Operations in compliance with the policy on good corporate governance were promoted.

- An annual corporate governance plan was considered and approved. In addition, all related operations were reviewed consistently in order to reach international standards.

- The report on good corporate governance in the 2013 Annual Report was studied to ensure that the information divulged was complete and corresponded with the corporate governance guidelines and assessments of both local and international standards.

- Recommendations were made to arrange a 2013 company visit for shareholders to the subsidiaries' businesses in Rayong province.

- Suggestions and views were provided to prepare the Company for the participation in assessment projects held by external parties, such as the ASEAN CG Scorecard and the Collective Action Coalition project (CAC).

The Committee's duty performance, assessment and development

- Pre-designated annual meeting plans for the Corporate Governance Committee were issued. This enabled the Committee to acknowledge and deliberate on various matters including future plans in order to make recommendations to the management.

- Lectures were arranged on issues in regard to the duty performance of Independent Directors and the Company's Board of Directors by internal and external speakers. Such issues included business overview (Refreshment), Directors' duties and responsibilities, overseas investment laws, and operations in accordance with corporate compliance policies. These efforts were made to boost knowledge and understanding on related businesses and laws of the Directors for their enhanced performance efficiency.

- The performance of the Corporate Governance Committee in 2013 was assessed and reported to the Board of Directors. The overall operational achievement was 98%.

The Board of Directors as well as Executives and all employees of the Company highly value good governance principles and perform their tasks in strict compliance. They mutually agreed that Corporate Governance is pivotal to effective and sustainable business operations. Such compliance will lead the Company to achieve stakeholders' trust and gain international recognition. The Corporate Governance Committee determinedly dedicates themselves to developing the Company's Corporate Governance as well as in taking the Company standard to the highest standard.

On behalf of the Corporate Governance Committee

(Police General Sombat Amornvivat)

Chairman of the Corporate Governance Committee

REPORT OF THE NOMINATION AND REMUNERATION COMMITTEE

Dear Shareholders,

The Board of Directors of PTT Global Chemical Public Company Limited appointed the Nomination and Remuneration Committee featuring all requirements as stated in the Company's Articles of Association. The Committee has performed its duties as assigned by the Board in accordance with the principles of good corporate governance. The current Committee is chaired by Mr. Vasin Teeravechyan, and two Directors, Air Chief Marshal Somchai Thean-anant and Mr. Areepong Bhoocha-oom who was appointed on October 25th, 2013 to substitute the resigned Director Mr. Nuttachat Charuchinda.

In the year 2013, the Nomination and Remuneration Committee held four meetings in total. The Committee exercised its duties within its scope of authority and responsibilities set forth by the Company's Board of Directors, which can be summarized as follows:

Nominations of members of the Board of Directors and Chief Executive Officer (CEO)

- The Committee conducted the nomination of candidates for vacant positions being left by Directors completing their tenures at the 2013 Annual General Shareholders' Meeting (AGM). Minority shareholders were allowed to submit names of candidates for the vacant positions. However, there were no nominees being submitted within the scheduled period. The Committee therefore considered suitable candidates with the required experience and expertise for the maximum benefit of the Company. The nominations were proposed to the meeting of the Board of Directors for consideration and further submitted to the 2013 AGM of shareholders. Such proposal was approved by the shareholders.

- Other nominations were also made of well-qualified candidates in replacement of the Directors who resigned before their completion of tenure during the year 2013. Such nominations were proposed to the Company's Board of Directors. The Board thereby considered and approved the appointment of the following Directors. (1) Mr. Pailin Chuchottaworn (replacing Mr. Anon Sirisaengtaksin) (2) Mr. Sarun Rungkasiri (replacing Mr. Nuttachat Charuchinda) (3) Mr. Atikom Terbsiri (replacing Mr. Sukrit Surabotsopon) and (4) Mr. Areepong Bhoocha-oom (replacing Mr. Kriengkrai Thiennukul)

- The Committee considered suitable candidates to fill the vacant position of the Chief Executive Officer. The Committee proposed a fully qualified and suitable candidate Mr. Bowon Vongsinudom in replacement of Mr. Anon Sirisaengtaksin who had reached his retirement on October 1st, 2013. The proposal was endorsed by the Board and Mr. Bowon Vongsinudom has been appointed as President and Chief Executive Officer.

Remuneration of Directors and Chief Executive Officer.

- The Committee determined and proposed to the Board of Directors the compensation for the Board and Sub-Committee Directors for the year 2013, as well as, Directors' bonuses for the year 2012. The proposal was further submitted by the Board to the 2013 AGM of shareholders and consequently was approved.

- The Committee assessed the performance of the Chief Executive Officer and determined his compensation for the year 2013. Such matter was further proposed to the Board of Directors for approval. The Committee conducted the determination of remuneration in a principled, fair and sensible manner.

Consideration of the performance assessment forms of the Board of Directors for the year 2013

- The Committee reviewed all three types of the annual assessment form: entire Board assessment, individual self-assessment and cross-assessment. This was conducted by comparing them with the good practice guidelines provided by the Thai Institute of Directors (IOD) and the Stock Exchange of Thailand (SET). Aside from developing the Directors' performance, the assessment results will be taken into consideration for determining the annual remuneration of the Directors in addition to the operating results of the Company.

Evaluation of performance of the Nomination and Remuneration Committee for the year 2013

- For the previous year's performance review, the Committee conducted a self-performance assessment and provided such assessment report to the Board of Directors. The Committee achieved 98% for its overall performance.

Revision of the Charter for the Nomination and Remuneration Committee

- The Committee Charter was revised by extending the Committee's scope of duty concerning the nomination of Directors for the posts of Sub-Committee Directors. A list of well-qualified Directors will be submitted to the Board of Directors for consideration and appointment. Such practice was carried out in accordance with a resolution of the Board of Directors Meeting No. 11/2013, which was held on November 15th, 2013.

The Nomination and Remuneration Committee is committed to performing its duties in a transparent manner with strict adherence to the principles of good corporate governance. This is to ensure confidence among the shareholders and stakeholders in the Committee's nomination and remuneration processes, leading to the increased stature of the Company in the long term.

On behalf of the Nomination and Remuneration Committee

(Mr. Vasin Teeravechyan)
Chairman of the Nomination and Remuneration Committee

REPORT OF THE RISK MANAGEMENT COMMITTEE

Dear Shareholders,

The Risk Management Committee (RMC) of PTT Global Chemical Public Company Limited ("The Company") is composed of four members, including one Independent Director, who have expertise in risk management. The Committee is chaired by Mr. Suthep Liumsirijarern, with Mr. Sarun Rungkasiri and, Mr. Areepong Bhoocha-oom (Independent Director), and Mr. Bowon Vongsinudom as its members.

In 2013, the RMC performed its duties and responsibilities as mandated by the Board of Directors by arranging five meetings with perfect attendance. Members of the management were also invited to attend the meeting when appropriate. Important issues discussed during the meetings are summarized below;

1. A review and an approval of risk management practices were established. The Company was found to practice within the RMC approved risk management framework and guidelines. Risks were identified and analyzed as well as evaluated. A current control of a particular risk was identified. A mitigation plan was set up when appropriate. All the risk measures aimed to manage the identified risks which could have a negative impact on the Company's business performance in 2013, objectives or investment targets. The Company's risk management incorporated measures and/or plans to manage these aforementioned risks to be within the Company's acceptable level.

   The RMC also reviewed and approved the Company's risk assessment of the oil spill incident and means to reform assessment of a tail risk as well as operational standard uplift. All the actions aim to prevent as well as prepare for future operational crisis. The Company has been striving to bring back its stakeholders' confidence over its international risk management standard. This standard would minimize the probability of such catastrophic incident in the future and the damage, internally and externally, should the incident were to repeat in the future.

2. Throughout each quarter, the RMC closely monitored the progress of key risk management activities in the primary risk management areas: the management of risks against the Company financial performance target for the year 2013, corporate objectives, investment objectives, financial management objectives, and against the objectives of the feedstock and product price volatility management. It was found that the Company operated in accordance with the RMC's approved policy, framework, guideline, and plans.

A review was made and recommendations were given in regard to emerging risks, which could cause severe losses to the Company. The Company monitored such risks through the Early Warning System (EWS). These emerging risks are, for instance, geopolitical risk in the Middle East and North Africa (MENA), fiscal risk of the United States and political risk in Thailand. The EWS allowed the Company to maintain readiness to lessen and/or mitigate adverse effects that would arise from these risks should they were to materialize.

3. The RMC monitored the progress of the Business Continuity Management (BCM) at the Company Head Office at Energy Complex Building A (ENCO) and Branch 2 (Olefin I-1, Utility and HDPE Plants) under ISO 22301:2012 standard (Societal security - Business continuity management system - Requirements). The Company had activated its Business Continuity Plan (BCP) at its Head Office during ENCO blockage occurred near the end of November 2013. The activation of BCP at ENCO lessened a negative impact on the Company business operation significantly.

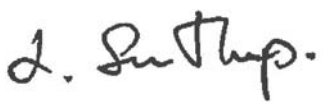
4. Prior to the Board of Directors' consideration, the RMC provided a review and an approval of risk management for major investments with high investment cost. As for the information for the RMC consideration, the Company identified and analyzed investment risks and set up mitigation plans accordingly.

5. The policies, framework, and methodologies employed in the risk management, including the Risk Management Committee Charter, were reviewed and revised. Adjustments were made to correspond with different aspects of risks experienced by the Company.

6. Performance evaluation of the RMC and of each individual member was carried out. The evaluation results were presented to the Board of Directors for acknowledgement.

Based on the consideration, the review, and the monitoring of risk management processes discussed above, the Company is believed to perform its risk management in a systematic manner with constant follow-up and improvement. Such execution plays an important role in the achievement of corporate objectives and targets, which could potentially generate increased value to the Company and its shareholders as well as its other stakeholders in a sustainable fashion.

On behalf of the Risk Management Committee



(Mr. Suthep Liumsirijarern)
Chairman of the Risk Management Committee

WE CAN MAKE IT

FINANCIAL EXCELLENCE

REPORT OF THE AUDIT COMMITTEE

Dear Shareholders,

PTT Global Chemical Public Company Limited's Audit Committee consists of three Independent Directors who are experienced in the fields of management, finance, accounting, economics and law. Mr. Somchai Kuvijitsuwan presides over the Committee as Chairman. The other two Directors are Mr. Amnuay Preemonwong and Ms. Raweporn Kuhirun. Each of them meets all requirements and criteria set forth by the Stock Exchange of Thailand.

The Audit Committee performs all duties and responsibilities laid out by PTTGC's Board of Directors and in its Charter which is consistent with all announcements from the Stock Exchange of Thailand and the Securities and Exchange Commission. In performing their duties, the Audit Committee has emphasized on the adherance to principles of Good Corporate Governance and compliance with all related laws, rules and regulations in both domestic and international operations.

In 2013, the Audit Committee held a total of 9 meetings with all members attendance. Directors acted independently in performing their duties and well cooperations were provided by members of management, internal auditors and external auditors. The following is a summary of key activities undertaken by the Audit Committee in 2013:

1. Reviewed quarterly and annual financial reports for 2013. The reviews were attended by external auditors as well as related members of management to report audit findings and actions taken by management and to clarify any questions that arose. Furthermore, the meeting between Audit Committee and the external auditors without the presence of management was held to make an independent discussion on material information, disclosure and conformity of financial report. This included the scope of audit, accounting policies, internal control systems related to financial statements, disclosure of information and connected transactions. The Audit Committee's approval was in line with the opinion of the auditors as stated in external auditor's report.

2. Evaluate, select and propose auditors to be used by PTTGC. This also included determining the remuneration of the auditors. After giving consideration to the work performance of auditors and their team from KPMG Phoomchai Auditors Ltd. in performing financial report review in 2013, the independency of auditor and proposed remuneration, the auditors were deemed appropriate and well qualified. The Audit Committee's decision was proposed to the Board of Directors for their approval in proposing Shareholder to appoint Mr. Vairoj Jindamaneepitak (Auditor #3565), Mr. Charoen Phosamritlert (Auditor #4068), Mr. Winid Silamongkol (Auditor #3378), and Mr. Niran Lilamethawat (Auditor #2316) from KPMG Phoomchai Auditors Ltd. to serve as PTTGC's external auditors in 2014.

3. A review was made of the Company's risk management. It was found that the Board of Directors, the Risk Management Committee, and Management in general has placed importance on risk management. Assessment of identified internal and external risks was made, including potential foreseeable risks that might emerge, their effects, as well as risk management processes to be used to mitigate risk to an acceptable level. The warning signs were reviewed and risk management plans were designed to limit the effects of any risks that were to actualize. Constant vigilance was given to the progress of the Company's risk management systems. The Risk Management Committee reported summaries of its activities to the Board of Directors on a regular basis. They found that PTTGC was able to sufficiently control and mitigate potential risks that could have an effect on the Company's operations. Furthermore, the Audit Committee set a policy for the Internal Audit Department to consider various risks to which the Company was exposed and incorporate to its annual audit planing process.

4. Review the adequate and effective of the Company's Internal Control system by reviewing the result of internal audit engagements, internal control assessment and performance of company’s key activities. From this review Audit Committee found that no major irregularity was discovered by internal audit engagements, minor irregularities and improvement recommended by Audit Committee, internal auditors and external auditors were corrected and implemmented by management. The Audit Committee also found that the Company has placed importance on internal control which could be resonably assured in its adequacy and effectiveness. These findings were in line with what was reported by the external auditors - that no major irregularities were found during the reviewing of Company's financial statements.

5. A review was performed to ensure the independency of the Company's Internal Audit Department, as well as the effectiveness of its systems. This was conducted by maintaining the direct reporting line form Internal Audit Department, reviewing Internal Audit Department Charter, approval of annual audit plan, tracking the internal audit activities to ensure the effectiveness and consistent with International Standards for the Professional Practice of Internal Auditing, gave recommendation to improve the effectiveness of internal auditing and give priority to development of personnel and tools for internal auditing. During assessment of the Internal Audit Department, it was found that International Standards for the Professional Practice of Internal Auditing were followed, as well as the expectations of the Audit Committee were met.

6. A review was performed to ensure that the Company was operating in accordance with the related laws and regulations set down by the Stock Exchange of Thailand, the Securities and Exchange Commission, and any other related agencies. The Audit Committee reviewed the report from the Internal Audit Department and found that no aspects of non-compliance were found. The Audit Committee is assured that the Company's internal control systems are adequate and effective in ensuring compliance to all related laws and regulations.

7. Consideration was given to connected transactions or any other transactions that may result in a conflict of interest, as required by the Stock Exchange of Thailand and the Securities and Exchange Commission. This was performed to ensure all business transactions are completed in an appropriate manner and with the intention of creating maximum value for PTTGC. The Audit Committee performed reviews of transactions between Company and it's related parties which are disclosed in 2013 quarterly and annual financial reports. In 2013, there was no connected transaction that required Shareholder's approval. Furthermore, in 2013, the Audit Committee performed a review of the acquisition of a 40% share in PTT Phenol Company Limited form PTT Public Company Limited. The Audit Committee focused most on aspects related to valuation principles and procedures, risks related to tariffs and taxes, and the impacts on the environment. It was found that this acquisition followed all rules and regulations as per the Stock Exchange of Thailand, and that it was conducted in an appropriate manner with the intention of creating the greatest possible benefit to PTTGC.

8. Reviewed the Charter of the Audit Committee. It was found that the Charter was in compliance with the various regulations and notifications issued by the Stock Exchange of Thailand and the Securities and Exchange Commission, as well as the Operations Guide of the Audit Committee.

9. Assessments were made both of the Audit Committee as a whole as well as for each individual in 2013. A report of these assessments was compiled and submitted to the Company's Board of Directors. It was concluded that the Audit Committee had performed the duties and responsibilities it had been assigned. Additionally, the Audit Committee was seen as operating in compliance with the rules and regulations designated by the Stock Exchange of Thailand and the Securities and Exchange Commission.

10. Preliminary reviews were made of information related to the oil spill, as assigned to the Audit Committee by the Company's Board of Directors. This review included an assessment of information of related individuals as well as included various suggestions, enabling different departments to continue with their review of internal control systems, evaluate different legal aspects, be accountable to consequences of the event, and make compensation to injured parties.

11. Regulary reports the Audit Committee activies and resolutions to the Board of Directors.

Based on performing Audit Committee duties as summarized above, the Company is believed to operate with Good Corporate Governance, adequate and appropriate internal controls, effective risk management, and accurate and reliable accounting and financial reporting system and operate in accrodance with related law and regulations.

Additionally, the Audit Committee's performance in 2013 was applauded by the Company's Board of Directors, management, auditors, and various departments, and we would like to take this opportunity to thank you for all the support you have so willingly given.

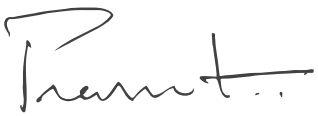
On Behalf of the Audit Committee

(Mr. Somchai Kuvijitsuwan)
Chairman of the Audit Committee

REPORT OF THE BOARD OF DIRECTORS' ACCOUNTABILITY TO FINANCIAL REPORT

The consolidated financial statements of PTT Global Chemical Public Company Limited and its subsidiaries was prepared in compliance with the Department of Business Development, issued under the Accounting Act B.E. 2543 Section 11 paragraph 3 in compliance with the Federation of Accounting Professions' accounting standards.

The Board of Directors is responsible for financial report of PTT Global Chemical Public Company Limited and its subsidiaries, to reflect actual and appropriate financial status, revenues, expenses and cash flow. The accounting data is stored sufficiently and accurately to preserve assets and prevent corruption and irregular actions. The financial report has been completed accordingly to proper accounting policy and regular practices, and in compliance to the generally accepted accounting standards. Significant data is sufficiently disclosed in notes to financial statements, where the auditor expressed opinions on the financial statements of PTT Global Chemical Public Company Limited and its subsidiaries in the auditor's report.



(Mr. Prasert Bunsumpun)
Chairman

(Mr. Bowon Vongsinudom)
President & Chief Executive Officer

EXTERNAL AUDITOR'S REPORT

To the Shareholders of PTT Global Chemical Public Company Limited

I have audited the accompanying consolidated and separate financial statements of PTT Global Chemical Public Company Limited and its subsidiaries (the "Group"), and of PTT Global Chemical Public Company Limited (the "Company"), respectively, which comprise the consolidated and separate statements of financial position as at 31 December 2013, the consolidated and separate statements of income and comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated and Separate Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated and separate financial statements in accordance with Thai Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated and separate financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

My responsibility is to express an opinion on these consolidated and separate financial statements based on my audit. I conducted my audit in accordance with Thai Standards on Auditing. Those standards require that I comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated and separate financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

Opinion

In my opinion, the consolidated and separate financial statements present fairly, in all material respects, the financial position of the Group and the Company, respectively, as at 31 December 2013 and their financial performance and cash flows for the year then ended in accordance with Thai Financial Reporting Standards.

(Vairoj Jindamaneepitak)
Certified Public Accountant
Registration No.3565
KPMG Phoomchai Audit Ltd.
Bangkok
18 February 2014

STATEMENT OF FINANCIAL POSITION

PTT Global Chemical Public Company Limited and its Subsidiaries

		Consolidated financial statements		Separate financial statements	
		31 December		31 December	
Assets	*Note*	2013	2012	2013	2012
			(in Baht)		
Current assets					
Cash and cash equivalents	*10*	18,582,200,903	31,269,311,119	10,703,289,676	19,002,725,615
Current investment	*16*	25,801,559,665	28,792,230,328	24,675,521,000	27,000,000,000
Trade accounts receivable and notes receivable	*9,11*	58,387,949,936	52,740,970,717	49,711,065,844	41,172,540,790
Other receivables	*9,12*	3,204,142,384	2,664,866,647	2,629,281,488	1,542,311,238
Inventories	*13*	50,237,931,222	41,046,887,925	39,937,558,590	26,347,790,856
Short-term loans to related parties	*9*	-	-	842,000,000	1,905,000,000
Current portion of long-term loans to related parties	*9*	-	-	37,000,000	6,545,000,000
Receivable from Oil Fuel Fund		811,183,718	663,810,601	811,183,718	663,810,601
Value-added tax receivable		1,943,315,306	2,286,555,515	1,364,182,553	1,984,197,873
Derivatives		50,976,856	30,996,018	6,042,175	7,192,148
Other current assets		1,494,171,443	1,366,430,068	1,034,601,469	732,802,257
Non-current assets held for sale		-	29,338,000	-	29,338,000
Total current assets		**160,513,431,433**	**160,891,396,938**	**131,751,726,513**	**126,932,709,378**
Non-current assets					
Investments in subsidiaries	*9,14*	-	-	42,071,912,790	68,154,724,375
Investments in jointly-controlled entity	*9,14*	-	-	210,000,000	210,000,000
Investments in associates	*9,15*	12,548,692,958	6,150,975,823	9,717,499,660	3,398,891,913
Other long-term investments	*16*	707,616,819	607,181,684	290,738,392	290,738,392
Long-term loans to related parties	*9*	-	1,219,428,000	4,853,012,537	11,665,657,276
Long-term loans to other parties		773,175,328	-	-	-
Property, plant and equipment	*17*	231,248,831,064	240,497,110,636	179,596,460,697	135,197,564,337
Goodwill	*19*	11,305,359,811	10,769,445,327	7,009,726,812	7,009,726,812
Land leasehold right	*18*	1,048,302,498	1,132,139,979	898,209,202	976,048,335
Intangible assets	*20*	9,452,409,524	10,080,431,267	5,908,268,546	4,026,437,745
Derivatives		33,526,953	137,753,019	13,050,856	137,753,019
Deferred tax assets	*21*	698,845,539	669,117,230	-	-
Other non-current assets		4,031,567,241	3,906,993,339	2,496,539,579	2,473,304,936
Total non-current assets		**271,848,327,735**	**275,170,576,304**	**253,065,419,071**	**233,540,847,140**
Total assets		**432,361,759,168**	**436,061,973,242**	**384,817,145,584**	**360,473,556,518**

The accompanying notes are an integral part of these financial statements.

STATEMENT OF FINANCIAL POSITION

PTT Global Chemical Public Company Limited and its Subsidiaries

		Consolidated financial statements		Separate financial statements	
		31 December		31 December	
Liabilities and equity	*Note*	2013	2012	2013	2012
			(in Baht)		
Current liabilities					
Bank overdraft and short-term loans from financial institutions	*22*	4,598,869,012	2,868,804,078	-	-
Trade accounts payable	*9,23*	45,654,942,312	38,485,181,772	39,635,191,981	31,747,233,494
Other payables	*9,24*	7,799,716,166	8,878,080,641	4,702,145,323	4,276,225,985
Payables to contractors	*9*	3,125,859,492	3,450,235,110	2,950,373,658	3,257,806,190
Short-term loans from related parties	*9,22*	-	-	1,237,545,524	3,935,835,990
Current portion of long-term loans from financial institutions	*22*	4,757,633,027	5,523,366,931	3,168,819,861	2,852,276,161
Current portion of long-term loans from other parties	*22*	16,870,258	12,143,646	-	-
Current portion of debentures	*22*	15,064,682,465	8,000,000,000	15,064,682,465	8,000,000,000
Income tax payable		1,282,210,879	1,277,608,441	1,201,628,777	1,247,839,792
Derivatives		208,445,704	31,961,603	122,079,742	25,578,146
Short-term provision		118,025,794	-	118,025,794	-
Other current liabilities	*25*	579,264,836	1,117,734,647	353,619,116	609,359,073
Total current liabilities		**83,206,519,945**	**69,645,116,869**	**68,554,112,241**	**55,952,154,831**
Non-current liabilities					
Long-term loans from financial institutions	*22*	40,740,927,062	54,728,936,556	32,183,186,439	34,190,531,567
Long-term loans from other parties	*22*	2,192,960,779	442,795,347	-	-
Debentures	*22*	52,878,120,050	65,280,468,674	52,878,120,050	65,280,468,674
Deferred tax liabilities	*21*	3,966,097,629	3,931,047,880	2,941,838,307	3,176,654,170
Employee benefit obligations	*26*	3,267,899,913	3,074,087,085	1,353,469,815	1,157,216,427
Derivatives		129,574,958	142,888,086	129,574,958	126,632,960
Other non-current liabilities		746,391,057	772,038,207	190,958,872	294,846,025
Total non-current liabilities		**103,921,971,448**	**128,372,261,835**	**89,677,148,441**	**104,226,349,823**
Total liabilities		**187,128,491,393**	**198,017,378,704**	**158,231,260,682**	**160,178,504,654**

STATEMENT OF FINANCIAL POSITION

PTT Global Chemical Public Company Limited and its Subsidiaries

		Consolidated financial statements		Separate financial statements	
		31 December		31 December	
Liabilities and equity	*Note*	2013	2012	2013	2012
			(in Baht)		
Equity					
Share capital	*27*				
Authorised share capital		45,088,491,170	45,129,302,690	45,088,491,170	45,129,302,690
Issued and paid-up share capital		45,088,491,170	45,088,491,170	45,088,491,170	45,088,491,170
Share premium	*28*	36,978,396,897	36,978,396,897	36,978,396,897	36,978,396,897
Surplus on business combination	*28*	11,745,983,030	12,086,007,975	13,121,061,611	13,505,861,611
Retained earnings					
Appropriated					
Legal reserve	*28*	4,512,930,269	4,512,930,269	4,512,930,269	4,512,930,269
Loan repayment reserve		807,802,564	807,802,564	807,802,564	807,802,564
Projects expansion reserve		12,446,994,126	12,446,994,126	12,446,994,126	12,446,994,126
Unappropriated		125,510,274,149	110,159,175,502	113,630,208,265	86,954,575,227
Other component of equity	*28*	1,411,870,394	352,816,862	-	-
Equity attributable to owners of the Company		**238,502,742,599**	**222,432,615,365**	**226,585,884,902**	**200,295,051,864**
Non-controlling interests		6,730,525,176	15,611,979,173	-	-
Total equity		**245,233,267,775**	**238,044,594,538**	**226,585,884,902**	**200,295,051,864**
Total liabilities and equity		**432,361,759,168**	**436,061,973,242**	**384,817,145,584**	**360,473,556,518**

The accompanying notes are an integral part of these financial statements.

STATEMENT OF INCOME

PTT Global Chemical Public Company Limited and its Subsidiaries

		Consolidated financial statements		Separate financial statements	
		For the year ended 31 December		For the year ended 31 December	
	Note	2013	2012	2013	2012
			(in Baht)		
Income					
Revenue from sale of goods	*9,36*	549,189,096,055	562,810,895,739	471,656,044,085	470,265,119,864
Revenue from rendering of services	*9,36*	3,691,883,104	2,806,153,605	340,198,169	368,565,066
Dividend income	*9,14*	12,500	27,500	23,470,470,384	10,915,794,779
Interest income	*9*	1,559,383,959	797,959,571	1,958,604,032	1,738,015,738
Net gain from disposal of investments	*8,9,14*	29,373,661	-	1,546,666,360	-
Derivative gain		2,188,788,004	2,035,153,723	2,097,282,228	1,788,393,203
Net foreign exchange gain		-	821,399,393	-	766,876,207
Gain on bargain purchase	*7*	-	943,893,319	-	-
Gain from step acquisition	*7*	196,869,478	-	-	-
Other income	*9*	1,662,748,118	1,802,076,598	1,239,905,516	1,037,863,517
Total income		**558,518,154,879**	**572,017,559,448**	**502,309,170,774**	**486,880,628,374**
Expenses					
Cost of sale of goods	*9,13*	498,042,040,789	515,391,233,742	437,996,718,048	447,352,924,211
Cost of rendering of services	*9*	2,630,911,128	1,105,530,012	165,373,286	165,332,567
Selling expenses	*30*	2,844,219,312	2,312,592,337	561,761,877	502,083,623
Administrative expenses	*31*	11,186,668,621	9,691,984,345	7,613,695,496	6,191,348,155
Loss from impairment of investments	*14*	-	-	1,040,697,483	586,386,922
Derivative loss		1,512,957,982	1,286,815,476	1,283,804,989	1,200,862,841
Net foreign exchange loss		1,322,051,191	-	1,443,275,248	-
Finance costs	*34*	6,084,079,971	6,320,475,850	5,574,333,251	5,108,808,577
Total expenses		**523,622,928,994**	**536,108,631,762**	**455,679,659,678**	**461,107,746,896**
Share of loss of associates	*15*	(77,631,097)	(43,981,981)	-	-
Profit before income tax expense		**34,817,594,788**	**35,864,945,705**	**46,629,511,096**	**25,772,881,478**
Income tax expense	*35*	1,976,230,264	1,416,072,492	1,991,878,338	1,584,520,239
Profit for the year		**32,841,364,524**	**34,448,873,213**	**44,637,632,758**	**24,188,361,239**

The accompanying notes are an integral part of these financial statements.

STATEMENT OF INCOME

PTT Global Chemical Public Company Limited and its Subsidiaries

		Consolidated financial statements		Separate financial statements	
		For the year ended 31 December		For the year ended 31 December	
	Note	2013	2012	2013	2012
			(in Baht)		
Profit (loss) attributable to:					
Owners of the Company		33,277,414,544	34,001,274,926	44,637,632,758	24,188,361,239
Non-controlling interests		(436,050,020)	447,598,287	-	-
Profit for the year		**32,841,364,524**	**34,448,873,213**	**44,637,632,758**	**24,188,361,239**
Basic earnings per share	*37*	**7.38**	**7.54**	**9.90**	**5.37**

The accompanying notes are an integral part of these financial statements.

STATEMENT OF COMPREHENSIVE INCOME

PTT Global Chemical Public Company Limited and its Subsidiaries

	Consolidated financial statements		Separate financial statements	
	For the year ended 31 December		For the year ended 31 December	
	2013	2012	2013	2012
	(in Baht)			
Profit for the year	**32,841,364,524**	**34,448,873,213**	**44,637,632,758**	**24,188,361,239**
Other comprehensive income				
Foreign currency translation differences for foreign operations	1,458,580,454	143,998,816	-	-
Effective portion of changes in fair value of cash flow hedges	47,794,681	-	-	-
Other comprehensive income for the year, net of income tax	**1,506,375,135**	**143,998,816**	**-**	**-**
Total comprehensive income for the year	**34,347,739,659**	**34,592,872,029**	**44,637,632,758**	**24,188,361,239**
Total comprehensive income attributable to:				
Owners of the Company	34,347,466,714	33,940,944,899	44,637,632,758	24,188,361,239
Non-controlling interests	272,945	651,927,130	-	-
Total comprehensive income for the year	**34,347,739,659**	**34,592,872,029**	**44,637,632,758**	**24,188,361,239**

The accompanying notes are an integral part of these financial statements.

STATEMENT OF CHANGES IN EQUITY

PTT Global Chemical Public Company Limited and its Subsidiaries

		Consolidated financial statements													
						Retained earnings				Other components of equity					
	Note	Issued and paid-up share capital	Equity from exercising warrants under the Employee Vested stock options in process of exercise	Share premium	Surplus on business combination	Legal reserve	Loans repayment reserve	Projects expansion reserve	Unappropriated	Currency translation changes	Change in investment holding	Total other components of equity	Equity attributable to owners of the Company	Non-controlling interests	Total equity
								(in Baht)							
Year ended 31 December 2012															
Balance at 1 January 2012		**45,061,129,360**	**46,730,261**	**36,839,313,917**	**12,086,007,975**	**4,512,930,269**	**807,802,564**	**12,446,994,126**	**86,290,201,235**	**402,148,251**	**10,998,638**	**413,146,889**	**198,504,256,596**	**9,949,915,157**	**208,454,171,753**
Transactions with owners, recorded directly in equity															
Contributions by and distributions to owners of the Company															
Issue of ordinary shares	*27*	27,361,810	(39,704,885)	139,082,980	-	-	-	-	-	-	-	-	126,739,905	-	126,739,905
Unexercised warrants		-	(7,025,376)	-	-	-	-	-	7,025,376	-	-	-	-	-	-
Dividends to owners of the Company	*38*	-	-	-	-	-	-	-	(10,139,326,035)	-	-	-	(10,139,326,035)	(493,932,597)	(10,633,258,632)
Total contributions by and distributions to owners of the Company		**27,361,810**	**(46,730,261)**	**139,082,980**	**-**	**-**	**-**	**-**	**(10,132,300,659)**	**-**	**-**	**-**	**(10,012,586,130)**	**(493,932,597)**	**(10,506,518,727)**
Changes in ownership interests in subsidiaries															
Recognition of non-controlling interests through business acquisition	*7*	-	-	-	-	-	-	-	-	-	-	-	-	5,504,069,483	5,504,069,483
Total changes in ownership interests in subsidiaries		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**5,504,069,483**	**5,504,069,483**
Total transactions with owners, recorded directly in equity		**27,361,810**	**(46,730,261)**	**139,082,980**	**-**	**-**	**-**	**-**	**(10,132,300,659)**	**-**	**-**	**-**	**(10,012,586,130)**	**5,010,136,886**	**(5,002,449,244)**
Comprehensive income for the year															
Profit		-	-	-	-	-	-	-	34,001,274,926	-	-	-	34,001,274,926	447,598,287	34,448,873,213
Other comprehensive income (loss)		-	-	-	-	-	-	-	-	(60,330,027)	-	(60,330,027)	(60,330,027)	204,328,843	143,998,816
Total comprehensive income for the year		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**34,001,274,926**	**(60,330,027)**	**-**	**(60,330,027)**	**33,940,944,899**	**651,927,130**	**34,592,872,029**
Balance at 31 December 2012		**45,088,491,170**	**-**	**36,978,396,897**	**12,086,007,975**	**4,512,930,269**	**807,802,564**	**12,446,994,126**	**110,159,175,502**	**341,818,224**	**10,998,638**	**352,816,862**	**222,432,615,365**	**15,611,979,173**	**238,044,594,538**

The accompanying notes are an integral part of these financial statements.

STATEMENT OF CHANGES IN EQUITY

PTT Global Chemical Public Company Limited and its Subsidiaries

		Consolidated financial statements													
					Retained earnings				Other components of equity						
	Note	Issued and paid-up share capital	Share premium	Surplus on business combination	Legal reserve	Loans repayment reserve	Projects expansion reserve	Unappropriated	Currency translation changes	Surplus on Change in investment holding	Change in fair value of cash flow hedge	Total other components of equity	Equity attributable to owners of the Company	Non-controlling interests	Total equity
								(in Baht)							
Year ended 31 December 2013															
Balance at 1 January 2013		**45,088,491,170**	**36,978,396,897**	**12,086,007,975**	**4,512,930,269**	**807,802,564**	**12,446,994,126**	**110,159,175,502**	**341,818,224**	**10,998,638**	**-**	**352,816,862**	**222,432,615,365**	**15,611,979,173**	**238,044,594,538**
Transactions with owners, recorded directly in equity															
Contributions by and distributions to owners of the Company															
Dividends to owners of the Company	*38*	-	-	-	-	-	-	(18,346,799,720)	-	-	-	-	(18,346,799,720)	(799,273,720)	(19,146,073,440)
Total contributions by and distributions to owners of the Company		-	-	-	-	-	-	**(18,346,799,720)**	-	-	-	-	**(18,346,799,720)**	**(799,273,720)**	**(19,146,073,440)**
Changes in ownership interests in subsidiaries															
Recognition of non-controlling interests though business acquisition	*7*	-	-	-	-	-	-	-	-	-	-	-	-	(3,053,614)	(3,053,614)
Recognition of non-controlling interests in investment in subsidairy		-	-	-	-	-	-	-	-	-	-	-	-	11,503,800	11,503,800
Increase in investment holding in subsidiary	*14*	-	-	-	-	-	-	80,458,878	-	(10,998,638)	-	(10,998,638)	69,460,240	(4,788,493,039)	(4,719,032,799)
Disposal of investment in subsidiary		-	-	(340,024,945)	-	-	-	340,024,945	-	-	-	-	-	(3,302,410,369)	(3,302,410,369)
Total changes in ownership interests in subsidiaries		-	-	**(340,024,945)**	-	-	-	**420,483,823**	-	**(10,998,638)**	-	**(10,998,638)**	**69,460,240**	**(8,082,453,222)**	**(8,012,992,982)**
Total transactions with owners, recorded directly in equity		-	-	**(340,024,945)**	-	-	-	**(17,926,315,897)**	-	**(10,998,638)**	-	**(10,998,638)**	**(18,277,339,480)**	**(8,881,726,942)**	**(27,159,066,422)**
Comprehensive income (loss) for the year															
Profit (loss)		-	-	-	-	-	-	33,277,414,544	-	-	-	-	33,277,414,544	(436,050,020)	32,841,364,524
Other comprehensive income		-	-	-	-	-	-	-	1,022,257,489	-	47,794,681	1,070,052,170	1,070,052,170	436,322,965	1,506,375,135
Total comprehensive income for the year		-	-	-	-	-	-	**33,277,414,544**	**1,022,257,489**	-	**47,794,681**	**1,070,052,170**	**34,347,466,714**	**272,945**	**34,347,739,659**
Balance at 31 December 2013		**45,088,491,170**	**36,978,396,897**	**11,745,983,030**	**4,512,930,269**	**807,802,564**	**12,446,994,126**	**125,510,274,149**	**1,364,075,713**	**-**	**47,794,681**	**1,411,870,394**	**238,502,742,599**	**6,730,525,176**	**245,233,267,775**

The accompanying notes are an integral part of these financial statements.

STATEMENT OF CHANGES IN EQUITY

PTT Global Chemical Public Company Limited and its Subsidiaries

		Separate financial statements								
						Retained earnings				
	Note	Issued and paid-up share capital	Equity from exercising warrants under the Employee Vested stock options in process of exercise	Share premium	Surplus on business combination	Legal reserve	Loans repayment reserve	Projects expansion reserve	Unappropriated	Total equity
						(in Baht)				
Year ended 31 December 2012										
Balance at 1 January 2012		**45,061,129,360**	**46,730,261**	**36,839,313,917**	**13,505,861,611**	**4,512,930,269**	**807,802,564**	**12,446,994,126**	**72,898,514,647**	**186,119,276,755**
Transactions with owners, recorded directly in equity										
Contributions by and distributions to owners of the Company										
Issue of ordinary shares	*27*	27,361,810	(39,704,885)	139,082,980	-	-	-	-	-	126,739,905
Unexercised warrants		-	(7,025,376)	-	-	-	-	-	7,025,376	-
Dividends to owners of the Company	*38*	-	-	-	-	-	-	-	(10,139,326,035)	(10,139,326,035)
Total contributions by and distributions to owners of the Company		**27,361,810**	**(46,730,261)**	**139,082,980**	**-**	**-**	**-**	**-**	**(10,132,300,659)**	**(10,012,586,130)**
Comprehensive income for the year										
Profit		-	-	-	-	-	-	-	24,188,361,239	24,188,361,239
Other comprehensive income		-	-	-	-	-	-	-	-	-
Total comprehensive income for the year		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**24,188,361,239**	**24,188,361,239**
Balance at 31 December 2012		**45,088,491,170**	**-**	**36,978,396,897**	**13,505,861,611**	**4,512,930,269**	**807,802,564**	**12,446,994,126**	**86,954,575,227**	**200,295,051,864**

The accompanying notes are an integral part of these financial statements.

STATEMENT OF CHANGES IN EQUITY

PTT Global Chemical Public Company Limited and its Subsidiaries

		Separate financial statements							
					Retained earnings				
	Note	Issued and paid-up share capital	Share premium	Surplus on business combination	Legal reserve	Loans repayment reserve	Projects expansion reserve	Unappropriated	Total equity
					(in Baht)				
Year ended 31 December 2013									
Balance at 1 January 2013		**45,088,491,170**	**36,978,396,897**	**13,505,861,611**	**4,512,930,269**	**807,802,564**	**12,446,994,126**	**86,954,575,227**	**200,295,051,864**
Transactions with owners, recorded directly in equity									
Contributions by and distributions to owners of the Company									
Dividends to owners of the Company	*38*	-	-	-	-	-	-	(18,346,799,720)	(18,346,799,720)
Total contributions by and distributions to owners of the Company		-	-	-	-	-	-	**(18,346,799,720)**	**(18,346,799,720)**
Change in ownership interests in subsidiary									
Disposal of investment in subsidiary		-	-	(384,800,000)	-	-	-	384,800,000	-
Total change in ownership interests in subsidiary		-	-	**(384,800,000)**	-	-	-	**384,800,000**	-
Total transactions with owners, recorded directly in equity		-	-	**(384,800,000)**	-	-	-	**(17,961,999,720)**	**(18,346,799,720)**
Comprehensive income for the year									
Profit		-	-	-	-	-	-	44,637,632,758	44,637,632,758
Other comprehensive income		-	-	-	-	-	-	-	-
Total comprehensive income for the year		-	-	-	-	-	-	**44,637,632,758**	**44,637,632,758**
Balance at 31 December 2013		**45,088,491,170**	**36,978,396,897**	**13,121,061,611**	**4,512,930,269**	**807,802,564**	**12,446,994,126**	**113,630,208,265**	**226,585,884,902**

The accompanying notes are an integral part of these financial statements.

STATEMENT OF CASH FLOWS

PTT Global Chemical Public Company Limited and its Subsidiaries

	Consolidated financial statements		Separate financial statements	
	For the year ended 31 December		For the year ended 31 December	
	2013	2012	2013	2012
		(in Baht)		
Cash flows from operating activities				
Profit for the year	32,841,364,524	34,448,873,213	44,637,632,758	24,188,361,239
Adjustments for				
Depreciation and amortisation	16,737,141,729	16,814,543,439	10,818,542,692	9,280,267,981
Dividend income	(12,500)	(27,500)	(23,470,470,384)	(10,915,794,779)
Interest income	(1,559,383,959)	(797,959,571)	(1,958,604,032)	(1,738,015,738)
Finance costs	6,084,079,971	6,320,475,850	5,574,333,251	5,108,808,577
Gain from step acquisition	(196,869,478)	-	-	-
Unrealised loss on derivative	293,386,409	79,519,862	218,131,583	209,610,158
Unrealised (gain) loss on exchange rate	2,518,495,476	(130,015,320)	2,567,779,982	(204,493,448)
Gain on bargain purchase	-	(943,893,319)	-	-
Allowance for doubtful accounts	28,942,734	8,018,782	303,239	-
Loss from written-off of assets	101,608,288	50,106,900	51,179,663	5,719,684
(Reversal) allowance for loss on decline in value of inventories	109,869,448	(76,321,242)	57,443,897	-
Net gain from disposal of investments	(29,373,661)	-	(1,546,666,360)	-
Loss from capital reduction in subsidiary	-	-	262,802,983	-
Loss from impairment of investments	-	-	1,040,697,483	586,386,922
(Reversal) allowance for impairment of assets	82,780,507	338,294,010	(46,939,271)	100,950,021
Actuarial (gain) losses	(142,903,032)	219,799,908	-	-
Loss on disposal of property, plant and equipment	123,210,892	2,630,437	25,440,621	9,276,933
Short-term provision	118,025,794	-	118,025,794	-
Provision for employee benefit	332,361,506	344,960,970	144,250,216	126,128,367
Realised deferred pipeline income and equipment and other income	(12,060,648)	(18,715,484)	(13,706,956)	(14,574,247)
Share of loss of associates, net of income tax expense	77,631,097	43,981,981	-	-
Gain from change in investment holding in associate	(39,184,838)	(275,615,278)	-	-
Income tax expense	1,976,230,264	1,416,072,492	1,991,878,338	1,584,520,239
	59,445,340,523	57,844,730,130	40,472,055,497	28,327,151,909

The accompanying notes are an integral part of these financial statements.

STATEMENT OF CASH FLOWS

PTT Global Chemical Public Company Limited and its Subsidiaries

	Consolidated financial statements		Separate financial statements	
	For the year ended 31 December		For the year ended 31 December	
	2013	2012	2013	2012
		(in Baht)		
Changes in operating assets and liabilities				
Trade accounts receivable and notes receivable	(5,953,524,998)	(7,700,720,526)	(2,977,991,993)	(7,785,995,751)
Other receivables	(366,505,512)	(1,037,430,196)	(301,060,589)	(613,445,676)
Inventories	(9,367,784,248)	(1,479,889,810)	(8,496,027,677)	(1,623,544,054)
Value-added tax receivable	123,997,692	46,125,990	398,695,290	(357,183,377)
Other current assets	(161,926,504)	(722,918,698)	(135,004,565)	(364,102,771)
Other non-current assets	(1,492,797,601)	(490,805,242)	(874,699,029)	(162,510,101)
Trade accounts payable	7,981,458,455	9,071,196,380	2,654,506,966	8,812,845,890
Other payables	(922,136,291)	592,700,302	(1,027,050,743)	(215,162,058)
Other current liabilities	(182,441,097)	604,952,925	(261,930,020)	306,412,025
Employee benefit obligations	(140,220,137)	(176,788,096)	(39,916,067)	(26,012,150)
Other non-current liabilities	(217,622,818)	(410,699,746)	(75,493,773)	7,448,864
Cash generated from operating activities	48,745,837,464	56,140,453,413	29,336,083,297	26,305,902,750
Income tax paid	(2,540,357,288)	(1,259,268,609)	(2,121,149,597)	(813,949,231)
Net cash from operating activities	**46,205,480,176**	**54,881,184,804**	**27,214,933,700**	**25,491,953,519**
Cash flows from investing activities				
Interest received	1,530,131,454	611,281,545	1,928,071,501	1,553,476,619
Dividends received	288,821,617	300,369,689	7,659,166,618	10,915,794,779
Purchase of property, plant and equipment	(17,172,950,143)	(8,851,331,155)	(10,520,877,261)	(5,636,271,291)
Sale of property, plant and equipment	90,511,797	53,089,668	35,819,631	33,334,371
(Increase) decrease in current investment	1,848,991,559	(25,159,823,873)	2,422,028,500	(25,000,000,000)
Increase in other long-term investment	(72,562,832)	-	-	-
Proceeds from short-term loans to related parties	-	-	1,013,000,000	2,426,680,433
Proceeds from long-term loans to related parties	-	-	4,186,000,000	6,545,000,000
Increase in short-term loans to related parties	-	-	(445,000,000)	(387,000,000)
Increase in long-term loans to related parties	(1,290,695,600)	(1,240,795,000)	(1,948,589,041)	(1,345,283,994)
Increase in long-term loans to other party	(18,485,768)	-	-	-
Purchase of intangible assets	(871,952,310)	(743,230,698)	(226,544,848)	(223,744,688)
Proceeds from capital distribution in subsidiaries	-	-	26,001,305,293	312,824,078
Net cash inflow from business acquisition	1,684,089	-	-	-
Cash outflow for investment in subsidiaries				
and jointly-controlled entity	(4,786,974,062)	(6,658,815,101)	(5,809,274,049)	(9,942,348,116)
Cash outflow for investment in associate	(1,818,407,748)	-	(1,818,407,748)	-
Net cash outflow from transfers of businesses	-	-	(25,965,821,570)	-
Net cash used in investing activities	**(22,271,887,947)**	**(41,689,254,925)**	**(3,489,122,974)**	**(20,747,537,809)**

The accompanying notes are an integral part of these financial statements.

STATEMENT OF CASH FLOWS

PTT Global Chemical Public Company Limited and its Subsidiaries

		Consolidated financial statements		Separate financial statements	
		For the year ended 31 December		For the year ended 31 December	
	Note	2013	2012	2013	2012
			(in Baht)		
Cash flows from financing activities					
Finance costs paid		(6,337,757,455)	(6,677,072,168)	(5,797,265,036)	(5,459,914,192)
Dividend paid		(19,104,423,304)	(10,534,018,210)	(18,346,799,720)	(10,139,326,035)
Finance lease payments		(252,122,744)	(271,288,647)	(142,922,510)	(152,421,698)
Proceeds from short-term loans from financial institutions		7,126,276,154	11,214,883,684	4,300,000,000	8,000,000,000
Proceeds from short-term loans from related parties		-	-	2,085,643,719	3,225,184,562
Proceeds from long-term loans from financial institutions		15,737,635,318	19,498,885,956	14,000,000,000	19,035,685,000
Proceeds from long-term loans from other parties		71,681,389	474,156	-	-
Repayment of short-term loans from financial institutions		(5,697,425,697)	(11,149,681,826)	(4,300,000,000)	(8,000,000,000)
Repayment of short-term loans from related parties		-	-	-	(490,117,921)
Repayment of long-term loans from financial institutions		(17,065,579,719)	(19,311,177,678)	(15,861,618,834)	(17,057,403,543)
Repayment of long-term loans from other parties		(12,282,114)	(232,160,925)	-	-
Proceeds from issue of debentures		-	30,460,645,584	-	30,460,645,584
Repayment of debentures		(8,000,000,000)	(9,623,584,145)	(8,000,000,000)	(9,623,584,145)
Repayment of subordinated loan		-	(4,823,819,000)	-	(4,823,819,000)
Proceeds from issue of share capital		-	126,739,905	-	126,739,905
Net cash from (used in) financing activities		**(33,533,998,172)**	**(1,321,173,314)**	**(32,062,962,381)**	**5,101,668,517**
Net increase (decrease) in cash and cash equivalents		**(9,600,405,943)**	**11,870,756,565**	**(8,337,151,655)**	**9,846,084,227**
Cash and cash equivalents at beginning of year		31,269,311,119	18,973,235,320	19,002,725,615	9,155,276,500
Effect of exchange rate changes on balances held in foreign currencies at end of year		52,461,826	425,319,234	37,715,716	1,364,888
Decrease in cash and cash equivalents from disposal of investment in subsidiary		(3,139,166,099)	-	-	-
Cash and cash equivalents at end of year	*10*	**18,582,200,903**	**31,269,311,119**	**10,703,289,676**	**19,002,725,615**

The accompanying notes are an integral part of these financial statements.

PTT Global Chemical Public Company Limited and its Subsidiaries
Notes to the financial statements

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PTT Global Chemical Public Company Limited and its Subsidiaries
Notes to the financial statements

These notes form an integral part of the financial statements.

The financial statements issued for Thai statutory and regulatory reporting purposes are prepared in the Thai language. These English language financial statements have been prepared from the Thai language statutory financial statements and, were approved and authorised for issue by the Board of Directors on 18 February 2014.

1 General information

PTT Global Chemical Public Company Limited, "PTTGC", arose from the amalgamation between PTT Chemical Public Company Limited, "PTTCH", and PTT Aromatics and Refining Public Company Limited, "PTTAR", which was registered on 19 October 2011 in accordance with the Public Company Limited Act, B.E. 2535 (1992).

The Board of Governors of the SET approved the listing of the Company on the day that the Registrar accepted the registration of the amalgamation on 19 October 2011.

The Company is a company in the PTT Public Company Limited ("PTT") group of companies. PTT is incorporated in Thailand and is the major shareholder of the Company, holding 48.89% of the Company's issued and paid-up share capital.

PTT Global Chemical Public Company Limited, the "Company", is incorporated in Thailand and has its registered offices as follows:

Head Office	: 555/1, Energy Complex, Building A, 14th - 18th Floor, Vibhavadi-Rangsit Road, Chatuchak, Bangkok, Thailand
Branch 1 (Rayong office Branch)	: 59, Radniyom Road, Tambon Noenphra, Amphoe Mueang Rayong, Rayong, Thailand
Branch 2 (Olefin 1 Branch)	: 14, I-1 Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 3 (Olefin 2 Branch)	: 9, I-4 Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 4 (Aromatics 1 Branch)	: 4, I-2 Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 5 (Aromatics 2 Branch)	: 98/9, Rayong 3191 Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 6 (Refining Branch)	: 8, I-8 Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 7 (Jetty and Buffer Tank Farm Branch)	: 19, Rong Pui Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand

Branch 8 (Aromatics reserve Branch)	:	11, I-4 Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 9 (Lab Service Center Branch)	:	24/9, Pakorn Songkrao-Rat Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 10 (Applications & Quality Assurance Center Branch)	:	123, Suntowers Building B, 40th Floor, Soi Chaoey Phuang, Vibhavadi-Rangsit Road, Chomphon, Chatuchak , Bangkok, Thailand
Branch 11 (Olefin 3 Branch)	:	8, Phadang Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand
Branch 12 (Polyethylene Branch)	:	8, Mab Ta Phut Industrial Estate, I-10 Road, Tambon Map Ta Phut, Amphoe Mueang Rayong, Rayong, Thailand

The principal businesses of the Company are production and distribution of ethylene, propylene polyethylene and biochemical products. By-products are mixed C4, pyrolysis gasoline, cracker bottom and tail gas and refining and provision of integrated petroleum products and production and distribution of aromatics products with plans to proceed with the production of aromatic products. Minor activities are production and distribution of electricity, water, steam and other utilities. In addition, the Company also operates production support facilities such as jetty and buffer tank farm services for liquid chemical, oil and gas. Details of the Company's subsidiaries and jointly - controlled entities as at 31 December 2013 and 2012 were as follows:

Name of the entity	**Type of business**	**Country of incorporation**	**Ownership interest (%)**	
			2013	2012
Direct subsidiaries				
Bangkok Polyethylene Plc. (in process of liquidation)	Manufacturing and distributing petrochemical products	Thailand	100	100
Bio Creation Co., Ltd.	Manufacturing and distributing petrochemical products, health and nutrition products	Thailand	100	100
Bio Spectrum Co., Ltd.	Manufacturing and distributing biochemical products	Thailand	100	75
TOC Glycol Co., Ltd.	Manufacturing and distributing petrochemical products	Thailand	100	100
Thai Ethanolamines Co., Ltd. (liquidation process completed in 2013)	Manufacturing and distributing petrochemical products	Thailand	-	100

PTT Global Chemical Public Company Limited and its Subsidiaries
Notes to the financial statements

Name of the entity	Type of business	Country of incorporation	Ownership interest (%)	
			2013	2012
Direct subsidiaries (continue)				
Thai Oleochemicals Co., Ltd.	Manufacturing and distributing biochemical products	Thailand	100	100
Thai Tank Terminal Limited	Service for the storage and handling of liquid chemicals, oil and gas	Thailand	51	51
Thai Styrenics Co., Ltd.	Manufacturing and distributing petrochemical products	Thailand	100	100 (Indirect subsidiary)
PTT Polyethylene Co., Ltd. (in process of liquidation)	Manufacturing and distributing petrochemical products	Thailand	100	100
PTT Maintenance and Engineering Co., Ltd.	Maintenance factory and services engineering	Thailand	60	60
Auria BioChemicals Co., Ltd. (54% Direct interest and 33% Indirect interest)	Research and development of bio-based chemicals	Thailand	87	-
NPC Safety and Environmental Service Co., Ltd.	Safety and environmental services	Thailand	100	100
PTT Chemical International Pte. Ltd.	Holding and operating international business	Singapore	100	100
PTT Phenol Co., Ltd.	Manufacturing and distributing petrochemical products	Thailand	100	60
PTT Utility Co., Ltd.	Manufacturing and distributing utilities	Thailand	-	60
Indirect subsidiaries				
Thai Fatty Alcohols Co., Ltd.	Manufacturing and distributing biochemical products	Thailand	100	100
PTT Chemical International (Asia Pacific ROH) Ltd.	Services rendering to the Group	Thailand	100	100
Myriant Corporation	Research and development of bio-based chemicals	United States of America	72	47 (Associate)
PTTGC International (USA) Inc.	Holding and operating international business	United States of America	100	100
PTTGC International (Netherlands) B.V.	Holding and operating international business	Netherlands	100	100
Vencorex Holding	Manufacturing and distributing chemical specialties	France	51	51

Name of the entity	Type of business	Country of incorporation	Ownership interest (%)	
			2013	2012
Jointly-controlled entity				
Thai Ethoxylate Co., Ltd.	Manufacturing and distributing petrochemical products	Thailand	50	50
Indirect jointly-controlled entities				
Emery Oleochemical (M) Sdn. Bhd.	Manufacturing and distributing biochemical products	Malaysia	50	50
Emery Specialty Chemicals Sdn. Bhd.	Manufacturing and distributing chemical specialties	Malaysia	50	-
NatureWorks LLC	Manufacturing and distributing bioplastic products	United States of America	50	50

2 Basis of preparation of the financial statements

(a) Statement of compliance

The financial statements are prepared in accordance with Thai Financial Reporting Standards (TFRS); guidelines promulgated by the Federation of Accounting Professions ("FAP"); and applicable rules and regulations of the Thai Securities and Exchange Commission.

The FAP has issued the following new and revised TFRS relevant to the Group's/Company's operations and effective for accounting periods beginning on or after 1 January 2013:

TFRS	Topic
TAS 12	Income Taxes
TAS 20	Accounting for Government Grants and Disclosures of Government Assistance
TAS 21 (revised 2009)	The Effects of Changes in Foreign Exchange Rates
TFRS 8	Operating Segments

The adoption of these new and revised TFRS has resulted in changes in the Group's/Company's accounting policies. The effects of these changes are disclosed in note 4 except for TAS 12 Income Taxes which was already early adopted by the Group/Company.

In addition to the above new and revised TFRS, the FAP has issued a number of other new and revised TFRS which are effective for financial statements beginning on or after 1 January 2014 and have not been adopted in the preparation of these interim financial statements. Those new and revised TFRS that are relevant to the Group's/Company's operations are disclosed in note 43.

(b) Basis of measurement

The financial statements have been prepared on the historical cost basis except as stated in the accounting policies.

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(c) Functional and presentation currency

The financial statements are presented in Thai Baht, which is the Company's functional currency. All financial information presented in Thai Baht has been rounded to the nearest million in notes to the financial statements unless otherwise stated.

(d) Use of estimates and judgements

The preparation of financial statements in conformity with TFRS requires management to make judgements, estimates and assumptions that affect the application of accounting policies and reported amounts of assets, liabilities, income and expenses. Actual results may differ from estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which estimates are revised and in any future periods affected.

Information about significant areas of estimation uncertainty and critical judgements in applying accounting policies that have the most significant effect on the amount recognised in the financial statements is included in the following notes:

Note 3	Impact of oil spill incident
Note 7	Acquisitions of businesses
Note 19	Goodwill
Note 21	Deferred tax
Note 26	Measurement of defined benefit obligations
Note 39	Valuation of financial instruments

3 Impact of oil spill incident

On 27 July 2013, leakage in the flexible hose was found at Single point Mooring near Map Ta Phut seaport while discharging crude oil from a vessel to the Refinery. The leakage resulted in oil spilling into the sea. Remediation efforts were carried out by the Company, government authorities and private sector to clean up the oil slick. Currently, the oil slick has been eliminated. The Company also has established several short, medium and long term rehabilitation plans to help the environment and assist the local communities affected.

The Company has recognised the related expenses in the statement of income for the year ended 31 December 2013 as follows:

	Consolidated financial statement /Separate financial statement
	(in million Baht)
Recovery and remediation expenses	241
Compensation and restoration expenses	736
Other expenses	82
Total expenses	**1,059**

The undisbursed part of the related expenses are included in the provision for the oil spill incident.

Although the provision recognised is currently the most reliable estimate of expenditures required to settle certain present obligations there might be additional future expenditures. The Company will recognise liabilities for these obligations when they meet the relevant criteria and can be reliably measured.

As at 31 December 2013, the Management and insurance company are in the process of negotiation of the reimbursement claim covered by the insurance company. This financial statement does not include the adjustment that might result from the insurance coverage.

4 Changes in accounting policies

(a) Overview

From 1 January 2013, consequent to the adoption of new and revised TFRS and FAP Announcements as set out in note 2, the Group/Company has changed its accounting policies in the following areas:

- Accounting for government grants and disclosures of government assistance
- Accounting for the effects of changes in foreign exchange rates
- Presentation of information on operating segments

Except from the above, other new and revised TFRS did not have any impact on the accounting policies, financial position or performance of the Group/Company. Details of the new accounting policies adopted by the Group/Company are included in notes 4(b) to 4(d) below.

(b) Accounting for government grants and disclosures of government assistance

TAS 20 requires government grants related to assets in the statement of financial position either by deducting the grant in arriving at the carrying amount of the asset or setting up the grant as deferred income.

The Group/Company chooses to deduct the grant in arriving at the carrying amount of the asset from the effective date of the standard. The grant is recognised in profit or loss over the life of a depreciable asset as a depreciation expense.

(c) Accounting for the effects of changes in foreign exchange rates

TAS 21 requires the entity to determine its functional currency and translate foreign currency items into its functional currency, reporting the effects of such translation in accordance with the provisions of TAS 21. Foreign currencies are defined by TAS 21 as all currencies other than the entity's functional currency.

Management has determined that the functional currency of the Company is Thai Baht and that the adoption of TAS 21 from 1 January 2013 has not had a significant impact on the Group's/Company's reported assets, liabilities or retained earnings.

(d) Presentation of information on operating segments

TFRS 8 introduces the "management approach" to segment reporting. It requires a change in the presentation and disclosure of segment information based on the internal reports regularly reviewed by the Group's/Company's Chief Operating Decision Maker in order to assess each segment's performance and to allocate resources to those segments. Previously the Group/Company presented segment information in respect of its business and geographical segments in accordance with TAS 14 Segment Reporting.

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The change in basis of presentation and disclosure of segment information in accordance with TFRS 8 has resulted in the Group/Company presenting segment information (Note 29) in respect of the following segments:

Segment 1	Refinery and shared facilities
Segment 2	Aromatics
Segment 3	Olefins and Derivatives
Segment 4	EO-Based Performance
Segment 5	Green Chemicals
Segment 6	High Volume Specialties
Segment 7	Services & Others

5 Significant accounting policies

The accounting policies set out below have been applied consistently to all periods presented in these financial statements except as explained in note 4, which addresses changes in accounting policies.

(a) Basis of consolidation

The consolidated financial statements relate to the Company and its subsidiaries and jointly-controlled entities (together referred to as the "Group") and the Group's interests in associates.

Business combinations

The Group/Company applies the acquisition method for all business combinations other than those with entities under common control.

Control is the power to govern the financial and operating policies of an entity so as to obtain benefits from its activities. In assessing control, the Group/Company takes into consideration potential voting rights that currently are exercisable. The acquisition date is the date on which control is transferred to the acquirer. Judgment is applied in determining the acquisition date and determining whether control is transferred from acquiree to acquirer.

The Group recognises goodwill at the acquisition date measured as the excess of (1) over (2) as:

(1) The aggregate of:
- the fair value of the consideration transferred;
- the recognised amount of any non-controlling interests in the acquiree; and
- if the business combination is achieved in stages, the fair value of the existing equity interest in the acquiree.

(2) The net fair value of the identifiable assets acquired and liabilities assumed.

If value of (1) is less than (2), difference is contributed to gain on bargain purchase and recognised immediately in profit or loss.

The consideration transferred is recognised at fair value at the acquisition date.

Transaction costs that the Group/Company incurs in connection with a business combination, such as legal fees, and other professional and consulting fees are expensed as incurred.

Acquisitions from entities under common control

Business combinations of entities or businesses under common control are accounted for using a method similar to the pooling of interest method and in accordance with the Guideline issued in 2009 by the FAP.

Subsidiaries

Subsidiaries are entities controlled by the Group. Control exists when the Group has the power, directly or indirectly, to govern the financial and operating policies of an entity so as to obtain benefits from its activities. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

The accounting policies of subsidiaries have been changed where necessary to align them with the policies adopted by the Group. Losses applicable to non-controlling interests in a subsidiary are allocated to non- controlling interests even if doing so causes the non- controlling interests to have a deficit balance.

Loss of control

Upon the loss of control, the Group derecognises the assets and liabilities of the subsidiary, any non-controlling interests and the other components of equity related to the subsidiary. Any surplus or deficit arising on the loss of control is recognised in profit or loss. If the Group retains any interest in the previous subsidiary, then such interest is measured at fair value at the date that control is lost. Subsequently it is accounted for as an equity-accounted investee or as an available-for-sale financial asset depending on the level of influence retained.

Jointly-controlled entities

Jointly-controlled entities are those entities over whose activities the Group has joint control, established by contractual agreement and requiring consent for strategic financial and operating decisions. The consolidated financial statements include the Group's proportionate share of the entities' assets, liabilities, revenue and expenses combined with items on a line by line basis, from the date that joint control commences until the date that joint control ceases.

Associates

Associates are those entities in which the Group has significant influence, but not control, over the financial and operating policies. Significant influence is presumed to exist when the Group holds between 20% and 50% of the voting power of another entity.

Investments in associates are accounted for in the consolidated financial statements using the equity method (equity-accounted investees) and are recognised initially at cost. The cost of the investment includes transaction costs.

The consolidated financial statements include the Group's share of profit or loss and other comprehensive income of equity accounted investees after adjustments to align the accounting policies with those of the Group, from the date that significant influence commences until the date that significant influence ceases. When the Group's share of losses exceeds its interest in an equity accounted investee, the Group's carrying amount of that interest is reduced to zero and recognition of further losses is discontinued except to the extent that the Group has an obligation or has made payments on behalf of the investee.

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Transactions eliminated on consolidation

Intra-group balances and transactions, and any unrealised income or expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. Unrealised gains arising from transactions with associates and jointly-controlled entities are eliminated against the investment to the extent of the Group's interest in the investee. Unrealised losses are eliminated in the same way as unrealised gains.

(b) Foreign currencies

Foreign currency transactions

Transactions in foreign currencies are translated to the functional currency at the dates of the transactions.

Monetary assets and liabilities denominated in foreign currencies at the reporting date are translated to the functional currency at the foreign exchange rates ruling at that date. Foreign exchange differences arising on translation are recognised in profit or loss.

Non-monetary assets and liabilities measured at cost in foreign currencies are translated to the functional currency using the foreign exchange rates ruling at the dates of the transactions.

Foreign currency differences arising on retranslation are generally recognized in profit or loss. However, foreign currency differences arising from the retranslation of qualifying cash flow hedges to the extent the hedge is effective are recognized in other comprehensive income.

Foreign operations

Foreign operation is defined as a subsidiary, associate and joint venture whose activities are based in a country or currency other than that of the reporting entity.

The assets and liabilities of foreign operations are translated to Thai Baht at the foreign exchange rates ruling at the reporting date.

Goodwill and fair value adjustments arising on the acquisition of foreign operations are stated at exchange rates ruling on the reporting date.

The revenues and expenses of foreign operations are translated to Thai Baht at rates approximating the foreign exchange rates ruling at the dates of the transactions.

Foreign exchange differences arising on translation are recognised in other comprehensive income and presented in the foreign currency translation reserve in equity until disposal of the investment.

(c) Derivative financial instruments

Derivative financial instruments are used to manage exposure to foreign exchange, interest rate arising from operating and financing activities. Derivative financial instruments are not used for trading purposes. However, derivatives that do not qualify for hedge accounting are accounted for as trading instruments.

Derivatives are recognised initially at fair value; attributable transaction costs are recognised in profit or loss when incurred. Subsequent to initial recognition, they are remeasured at fair value. The gain or loss on remeasurement is recognised immediately in profit or loss.

The fair value of interest rate swaps are based on broker quotes at the reporting date. Those quotes are tested for reasonableness by discounting estimated future cash flows based on the terms and maturity of each contract and using market interest rates for a similar instrument at the reporting date.

The fair value of forward exchange contracts is based on their listed market price as the reporting date, if available. If a listed market price is not available, then fair value is estimated by forward contract with the same nature and maturity date at the reporting date.

(d) Hedging accounting

Cash flow hedges accounting of the non-financial assets or non-financial liabilities

When a derivative is designated as the hedging instrument in a hedge of the variability in cash flows of a non-financial asset or non-financial liability, the effective portion of gain or loss from subsequent measurement of fair value of the derivative financial instrument is recognised in other comprehensive income and presented in the hedging reserve in equity. Any ineffective portion is recognised immediately in profit or loss.

When a hedge of a non-financial asset or non-financial liability occurs, the gain or loss recognised in other comprehensive income is included in the cost of the non-financial asset or non-financial liability.

Discontinuing hedge accounting

When the hedging instrument expires or is sold, terminated, or no longer qualifies for hedge accounting, the hedge accounting is discontinued prospectively. Any cumulative gain or loss on the hedging instrument existing in equity is retained in equity. When the hedge of the non-financial assets or non-financial liabilities item ultimately occurs, the gain or loss is adjusted according to cash flow hedges accounting.

When the non-financial assets or non-financial liabilities item is no longer expected to occur, the cumulative gain or loss that was reported in equity is recognised in profit or loss immediately.

(e) Cash and cash equivalents

Cash and cash equivalents comprise cash balances, call deposits and highly liquid current investments.

(f) Trade and other receivables

Trade and other receivables are stated at their invoice value less allowance for doubtful accounts.

The allowance for doubtful accounts is assessed primarily on analysis of overdue aging and future expectations of customer payments. Bad debts are written off when incurred.

(g) Inventories

Inventories are stated at the lower of cost and net realisable value.

Cost is calculated using the weighted average cost principle, and comprises all costs of purchase, costs of conversion and other costs incurred in bringing the inventories to their present location and condition. In the case of manufactured inventories and work-in-progress, cost includes an appropriate share of production overheads based on normal operating capacity.

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Net realisable value is the estimated selling price in the ordinary course of business less the estimated costs to complete and to make the sale.

(h) Non-current assets held for sale

Non-current assets that are expected to be recovered primarily through sale rather than through continuing use, are classified as held for sale. The assets are measured at the lower of their carrying value and fair value less cost to sell.

(i) Investments

Investments in associates, subsidiaries and jointly-controlled entities

Investments in associates, subsidiaries and jointly-controlled entities in the separate financial statements of the Company are accounted for using the cost method. Investments in associates in the consolidated financial statements are accounted for using the equity method.

Investments in equity securities

Equity securities which are not marketable are stated at cost less any impairment losses.

Disposal of investments

On disposal of an investment, the difference between net disposal proceeds and the carrying amount is recognised in profit or loss.

If the Group/Company disposes of part of its holding of a particular investment, the deemed cost of the part sold is determined using the weighted average method.

(j) Property, plant and equipment

Recognition and measurement

Owned assets

Property, plant and equipment are stated at cost less accumulated depreciation and impairment losses.

Cost includes expenditure that is directly attributable to the acquisition of the asset. The cost of self-constructed assets includes the cost of materials and direct labour, any other costs directly attributable to bringing the assets to a working condition for their intended use, the costs of dismantling and removing the items and restoring the site on which they are located, and capitalised borrowing costs. Cost also may include transfers from other comprehensive income of any gain or loss on qualifying cash flow hedges of foreign currency purchases of property, plant and equipment. Purchased software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment, and are recognised net within other income in profit or loss.

Leased assets

Leases in terms of which the Group/Company substantially assumes all the risk and rewards of ownership are classified as finance leases. Property, plant and equipment acquired by way of finance leases are capitalised at the lower of their fair value and the present value of the minimum lease payments at the inception of the lease, less accumulated depreciation and impairment losses. Lease payments are apportioned between the finance charges and reduction of the lease liability so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges are charged directly to the profit or loss.

Subsequent costs

The cost of replacing a part of an item of property, plant and equipment is recognised in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Group/Company, and its cost can be measured reliably. The carrying amount of the replaced part is derecognised. The costs of the day-to-day servicing of property, plant and equipment are recognised in profit or loss as incurred.

Depreciation

Depreciation is calculated based on the depreciable amount, which is the cost of an asset, or other amount substituted for cost, less its residual value.

Depreciation is charged to profit or loss on a straight-line basis over the estimated useful lives of each component of an item of property, plant and equipment. The estimated useful lives are as follows:

Leasehold improvement	3-30	years
Plant, machinery, equipment and factory tools	3-35	years
Buildings and buildings improvement	2-50	years
Furniture, fixtures and office equipment	3-30	years
Vehicles	3-25	years

No depreciation is provided on freehold land or assets under construction.

Depreciation methods, useful lives and residual values are reviewed at each financial year-end and adjusted if appropriate.

(k) Intangible assets

Goodwill

Goodwill that arises upon the acquisition of businesses is included in intangible assets. Subsequent to initial recognition, goodwill is measured at cost less accumulated impairment losses.

Goodwill in investment in associates is included in the carrying amount of the investment in associates, impairment loss on such an investment is deducted directly in investment in associates.

Other intangible assets

Other intangible assets that are acquired by the Group/Company and have finite useful lives are measured at cost less accumulated amortisation and accumulated impairment losses.

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Subsequent expenditure

Subsequent expenditure is capitalised only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure, including expenditure on internally generated goodwill and brands, are recognised in profit or loss as incurred.

Amortisation

Amortisation is based on the cost of the asset, or other amount substituted for cost, less its residual value.

Amortisation is recognised in profit or loss on a straight-line basis over the estimated useful lives of intangible assets, other than goodwill, from the date that they are available for use, since this most closely reflects the expected pattern of consumption of the future economic benefits embodied in the asset. The estimated useful lives for the current and comparative periods are as follows:

Right to use pipe rack	6-15	years
Right to use Jetty	9 and 16	years
Right to use - others	10-15	years
Production licence fees	10-30	years
Computer software	3-20	years
Customer contracts and the related customer relationships	5-12	years
Trademark	15	years

Amortisation methods, useful lives and residual values are reviewed at each financial year-end and adjusted if appropriate.

(l) Impairment

The carrying amounts of the Group's/Company's assets are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, the assets' recoverable amounts are estimated. For goodwill and intangible assets that have indefinite useful lives or are not yet available for use, the recoverable amount is estimated each year at the same time.

An impairment loss is recognised if the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. The impairment loss is recognised in profit or loss.

Calculation of recoverable amount

The recoverable amount of a non-financial asset is the greater of the asset's value in use and fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate cash inflows largely independent of those from other assets, the recoverable amount is determined for the cash-generating unit to which the asset belongs.

Reversals of impairment

An impairment loss in respect of a financial asset is reversed if the subsequent increase in recoverable amount can be related objectively to an event occurring after the impairment loss was recognised in profit or loss.

An impairment loss in respect of goodwill is not reversed. Impairment losses recognised in prior periods in respect of other non-financial assets are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

(m) Interest-bearing liabilities

Interest-bearing liabilities are stated at cost.

(n) Trade and other payables

Trade and other payables are stated at cost.

(o) Employee benefits

Defined contribution plans

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions into a separate entity (Provident Fund) and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution pension plans are recognised as an employee benefit expense in profit or loss in the periods during which services are rendered by employees.

Defined benefit plans

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. The Group's/Company's net obligation in respect of defined benefit pension plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value.

In case of plan assets (funded defined benefit plan), the estimating amount of future benefit that employees have earned in return for their service in the current and prior periods are deducted with the fair value of any plan assets.

The discount rate is the yield at the reporting date on corporate bond with high credit quality that have maturity dates approximating the terms of the Group's/Company's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The calculation is performed annually by a qualified actuary using the projected unit credit method.

The Group/Company recognises all actuarial gains and losses arising from defined benefit plans in profit or loss.

Other long-term employee benefits

The Group's/Company's net obligation in respect of long-term employee benefits other than pension plans is the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value, and the fair value of any related assets is deducted. The discount rate is the yield at the reporting date on corporate bond with high credit quality that have maturity dates approximating the terms of the Group's/Company's obligations. The calculation is performed using the projected unit credit method. Any actuarial gains and losses are recognised in profit or loss in the period in which they arise.

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Termination benefits

Termination benefits are recognised as an expense when the Group/Company is committed demonstrably, without realistic possibility of withdrawal, to a formal detailed plan to either terminate employment before the normal retirement date, or to provide termination benefits as a result of an offer made to encourage voluntary redundancy. Termination benefits for voluntary redundancies are recognised as an expense if the Group/Company has made an offer of voluntary redundancy, it is probable that the offer will be accepted, and the number of acceptances can be estimated reliably. If benefits are payable more than 12 months after the reporting period, then they are discounted to their present value.

Short-term employee benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided.

A liability is recognised for the amount expected to be paid if the Group/Company has a present legal or constructive obligation to pay the amount as a result of past service provided by the employee, and the obligation can be estimated reliably.

Share based payments

The employee share option program allows certain of the Group's directors and employees to acquire shares of the Company under certain conditions. The proceeds received on exercise of the options, net of any directly attributable transaction costs, are credited to share capital (nominal value) and share premium when the options are exercised.

(p) Provisions

A provision is recognised if, as a result of a past event, the Group/Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount on provisions is recognised as finance cost.

(q) Revenue

Revenue excludes value added taxes and is arrived at after deduction of trade discounts.

Sale of goods and services rendered

Revenue is recognised in profit or loss when the significant risks and rewards of ownership have been transferred to the buyer. No revenue is recognised if there is continuing management involvement with the goods or there are significant uncertainties regarding recovery of the consideration due, associated costs or the probable return of goods. Service income is recognised as services are provided.

Investments

Revenue from investments comprises dividend and interest income from investments and bank deposits.

Dividend income

Dividend income is recognised in profit or loss on the date the Group's/Company's right to receive payments is established.

Interest income

Interest income is recognised in profit or loss as it accrues.

(r) Finance costs

Finance costs comprise interest expense on borrowings, unwinding of the discount on provisions and contingent consideration, fair value losses on financial assets at fair value through profit or loss, impairment losses recognised on financial assets (other than trade receivables), and losses on hedging instruments that are recognised in profit or loss.

Borrowing costs that are not directly attributable to the acquisition, construction or production of a qualifying asset are recognised in profit or loss using the effective interest method.

(s) Lease payments

Payments made under operating leases are recognised in profit or loss on a straight line basis over the term of the lease.

Contingent lease payments which the lease adjustment is confirmed, are accounted for by revising the minimum lease payments over the remaining term of the lease.

(t) Income tax

Income tax expense for the year comprises current and deferred tax. Current and deferred tax are recognised in profit or loss except to the extent that the items recognised directly in other comprehensive income.

Current tax is the expected tax payable or receivable on the taxable income or loss for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognised in respect of temporary differences between the carrying amounts of assets and liabilities.

Deferred tax is not recognised for the following temporary differences:
- the initial recognition of goodwill;
- the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit or loss;
- differences relating to investments in subsidiaries and jointly-controlled entities to the extent that it is probable that they will not reverse in the foreseeable future.

The measurement of deferred tax reflects the tax consequences that would follow the manner in which the Group/Company expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Deferred tax is measured at the tax rates that are expected to be applied to the temporary differences when they reverse, using tax rates enacted or substantively enacted by the reporting date.

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In determining the amount of current and deferred tax, the Group/Company takes into account the impact of uncertain tax positions and whether additional taxes and interest may be due. The Group/Company believes that its accruals for tax liabilities are adequate for all open tax years based on its assessment of many factors, including interpretations of tax law and prior experience. This assessment relies on estimates and assumptions and may involve a series of judgements about future events. New information may become available that causes the Group/Company to change its judgement regarding the adequacy of existing tax liabilities; such changes to tax liabilities will impact tax expense in the period that such a determination is made.

Deferred tax assets and liabilities on different tax entities are offset if there is a legally enforceable right to offset current tax assets and liabilities, and they relate to income taxes levied by the same tax authority.

A deferred tax asset is recognised to the extent that it is probable that deferred tax assets can be utilised as future tax benefit. Deferred tax assets are reviewed at each reporting date and reduced to the extent that it is no longer probable that the related tax benefit will be realised.

(u) Earnings per share

The Group/Company presents basic earnings per share (EPS) data for its ordinary shares. Basic EPS is calculated by dividing the profit or loss attributable to ordinary shareholders of the Company by the weighted average number of ordinary shares outstanding during the year.

(v) Segment reporting

Segment results that are reported to the Group's Management Committee (the chief operating decision maker) include items directly attributable to a segment as well as those that can be allocated on a reasonable basis.

6 Transfers of businesses

On 4 April 2013, the shareholders approved the entire business transfer and other activities in relation to the matter of Bangkok Polyethylene Plc. ("BPE") and PTT Polyethylene Co., Ltd. ("PTTPE"). Both companies are the Company's subsidiaries. This transfer is effective under the law on 1 July 2013. The details of the consideration transferred and the carrying values of assets and liabilities at the date of transferred were as follows:

	BPE	PTTPE	Total
		(in million Baht)	
Cash and cash equivalent	14	61	75
Trade accounts receivable	1,647	3,764	5,411
Other receivables	108	284	392
Inventories	1,181	3,974	5,155
Short-term loans to related parties	-	5,289	5,289
Other current assets	6	292	298
Investment in subsidiaries	-	190	190
Property, plant and equipment	5,519	37,880	43,399
Intangible assets	292	1,890	2,182
Deferred tax asset	-	245	245
Other non-current assets	5	143	148
Total assets	**8,772**	**54,012**	**62,784**
Short-term loans from related parties	(1,000)	-	(1,000)
Trade accounts payable	(1,010)	(4,218)	(5,228)
Other payables	(288)	(1,097)	(1,385)
Payables to contractor	(72)	(61)	(133)
Income tax payable	(95)	-	(95)
Dividend payable	(2,142)	(15,134)	(17,276)
Other current liabilities	(32)	(195)	(227)
Long-term loans from related parties	(2,195)	(9,077)	(11,272)
Finance lease liabilities	(7)	(15)	(22)
Deferred tax liabilities	(13)	-	(13)
Employee benefit obligation	(78)	(14)	(92)
Total liabilities	**(6,932)**	**(29,811)**	**(36,743)**
Net carrying values of net assets acquired/ Net consideration transferred	**1,840**	**24,201**	**26,041**

Both companies had registered to dissolve the business with Department of Business Development, Ministry of Commerce on 30 August 2013. As at 31 December 2013, both companies are in the process of liquidation. (Note 14)

PTT Global Chemical Public Company Limited and its Subsidiaries
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7 Acquisitions of businesses

(i) Myriant Corporation, United States of America

On 23 December 2013, PTT Chemical International Private Limited., a subsidiary in which the Company holds a 100% interest, has acquired shares in Myriant Corporation (Myriant), which is incorporated in the United States of America representing a 25.03% interest from former shareholders for a cash consideration of USD 6.69 million (approximately Baht 218 million). The acquisition of shares in Myriant has resulted in an increase in the percentage of shareholding from 47.18% to 72.21% and changed the nature of investment from an associate to a subsidiary.

The principal business of Myriant is conducting research and development of Bio-Based Chemicals for production of various Bio-chemicals which are environmental friendly. Taking control of Myriant enables the Group to expand into Biotechnology research and development center and also strengthen the Group's commercial position for the future.

The purchase under this condition in accordance with TFRS 3 (Revised 2009) Business Combinations, which requires a recognition of assets, liabilities and contingent liabilities acquired at the acquisition date at fair value, including goodwill (if any). The Group has hired an independent appraiser to determine the fair value of assets and liabilities acquired at that date. However, the report on the review has not yet been finalized, for which reason the net assets acquired are provisionally recognised at value based on management estimates. The intellectual property is an important part of assets acquired and its valuation requires substantial time and specialist expertise. The result of the appraisal will be used to amend the accounting at fair value and to record the final determination of goodwill in the period that the report of the independent appraiser is received.

The following summarises the major classes of consideration transferred, and the recognised amounts of assets acquired and liabilities assumed at the acquisition date:

	Recognised value *(in million Baht)*
Cash and cash equivalents	220
Inventories	25
Accounts receivable	389
Property, plant and equipment	4,198
Long term loan to other party	673
Trade accounts payable	(82)
Other payables	(385)
Long term loan from related party	(2,660)
Long term loan from other party	(1,582)
Other assets/(liabilities), net	(785)
Net identifiable assets and liabilities	**11**
Less: non-controlling interests	(3)
Net assets acquired	**8**
Excess of consideration transferred over book value	1,064
Less: Fair value of the Group's interest in Myriant prior to business combination as of 23 December 2013	(854)
Total consideration	**218**
Cash acquired	(220)
Net consideration	**(2)**

The Group recognised a gain from step acquisition totalling Baht 197 million in the consolidated statement of income from the re-measurement to fair value of ownership interests in Myriant of 47.18% before business acquisition.

For the period from 23 December 2013 (additional shares acquisition date and date of obtaining control of Myriant) to 31 December 2013, the business contributed net profit of USD 0.53 million (approximately Baht 16.27 million) to the Group's results.

The Group incurred acquisition-related costs of Baht 26.58 million for the acquisition which included external legal fees, due diligence costs and others which were included as part of the administrative expenses in the consolidated statement of income for the period which incurred.

(ii) Vencorex Holding, France

On 31 May 2012, PTTGC International (Netherlands) B.V. ("PTTGC NL") which the Company holds a 100% interest through a subsidiary PTT Chemical International Pte. Ltd., has purchased 51% ordinary shares in Perstorp Holding France SAS (subsequently changed name to Vencorex Holding) which is incorporated in France for a cash consideration of EUR 121 million (approximately Baht 4,785 million). This transaction was accounted for as a business combination. Finalisation of the valuation of net assets was completed in the 4th quarter of 2012.

Taking control of Vencorex Holding will enable the Group to move into the High Value Specialty Chemical sector which is a downstream business that will enhances higher value and provide an opportunity for future growth in accordance with the Company's strategies.

The following summarises the major classes of consideration transferred, and the recognised amounts of assets acquired and liabilities assumed at the acquisition date:

	Book value	**Fair value adjustments**	**Fair value**
		(in million Baht)	
Cash and cash equivalents	183	-	183
Inventories	2,072	264	2,336
Accounts receivable	3,354	-	3,354
Property, plant and equipment	6,334	1,136	7,470
Intangible assets	1,438	-	1,438
Accounts payable	(1,901)	-	(1,901)
Other payables	(260)	-	(260)
Other assets/(liabilities), net	(995)	-	(995)
Deferred tax assets/(deferred tax liabilities), net	90	(482)	(392)
Net identifiable assets and liabilities	**10,315**	**918**	**11,233**
Less: non-controlling interests			(5,504)
Net assets acquired			**5,729**
Gain on a bargain purchase			(944)
Total consideration			**4,785**
Cash acquired			(183)
Net consideration - paid			**4,602**

Under the Securityholders Agreement, there are put options given to previous shareholders to sell an additional 49% holding in Vencorex Holding and PTTGC NL has obtained a call option to buy the remaining 49% holding in Vencorex Holding if the previous shareholders do not exercise their right with conditions and exercise prices as stipulated in the agreement.

(iii) NatureWorks LLC, United States of America

On 31 May 2012, PTTGC International (USA) Inc. ("PTTGC USA") which the Company holds a 100% interest through a subsidiary PTT Chemical International Pte. Ltd., purchased 50% of the ordinary shares in NatureWorks LLC ("NatureWorks"), which is incorporated in the United States of America for a cash consideration of USD 150 million (approximately Baht 4,758 million). This transaction is accounted for as a business combination. Finalisation of the valuation of net assets was completed in 4th quarter 2012.

The investment in NatureWorks will provide a competitive advantage to the Company because NatureWorks is the only Bio Plastic manufacturer whose production is commercially feasible. NatureWorks thus has experience and is leading the market in terms of the market share as well as the technology that is widely accepted by customers leading and has a potential for future development into other Bio Plastic products.

The following summarises the major classes of consideration transferred, and the recognised amounts of assets acquired and liabilities assumed at the acquisition date:

	Book value	**Fair value adjustment**	**Fair value**
		(in million Baht)	
Cash and cash equivalents	2,701	-	2,701
Inventories	948	24	972
Accounts receivables	323	-	323
Property, plant and equipment	1,070	514	1,584
Intangible assets	24	346	370
Accounts payables	(436)	-	(436)
Other payables	(295)	-	(295)
Other assets/(liabilities), net	(480)	4	(476)
Net assets acquired	**3,855**	**888**	**4,743**
Goodwill			15
Total consideration			**4,758**
Cash acquired			(2,701)
Net consideration - paid			**2,507**

8 Acquisitions of associate

On 10 January 2013, PTT Utility Company Limited ("PTTUT") and Independent Power (Thailand) Company Limited ("IPT") formed the new amalgamated company and registered the new company namely Global Power Synergy Company Limited ("GPSC") with The Ministry of Commerce.

Pursuant to the amalgamation, the Company as shareholder of PTTUT swapped all existing ordinary shares held in PTTUT for new ordinary shares issued by GPSC, resulting in the Company obtaining ownership interests of 30.31% in GPSC. Upon the completion of the share swap, the Company derecognised its investment in PTTUT and recognised the investment in GPSC as an investment in associate accounted for on an equity basis in the consolidated financial statements.

In the separate financial statements, the Company recorded the initial value of investment in GPSC, which is accounted for using the cost method, at the book value of PTTUT at the amalgamation date.

In the consolidated financial statements, the Company recorded the initial value of the investment in GPSC, which is accounted for using the equity method, at the fair value of GPSC shares received at the amalgamation date and consequently recognised the difference between the fair value of GPSC shares received at the amalgamation date and the Company's interest in PTTUT on that date amounting to Baht 29.4 million as gain on investment disposal in the consolidated statement of income.

9 Related parties

For the purposes of these financial statements, parties are considered to be related to the Group/Company if the Group/Company has the ability, directly or indirectly, to control or joint control the party or exercise significant influence over the party in making financial and operating decisions, or vice versa, or where the Group/Company and the party are subject to common control or common significant influence. Related parties may be individuals or other entities.

Relationships with related parties were as follows:

Name of entities	Country of incorporation/ nationality	Nature of relationships
PTT Plc.	Thailand	Major shareholder, some common directors and management and the Company's director as a management
TOC Glycol Co., Ltd.	Thailand	Subsidiary, 100% shareholding and the Company's management as a director
Thai Tank Terminal Limited	Thailand	Subsidiary, 51% shareholding, some common directors and the Company's management as a director
Thai Styrenics Co., Ltd.	Thailand	Subsidiary,100% shareholding and the Company's management as a director
Thai Oleochemicals Co., Ltd.	Thailand	Subsidiary, 100% shareholding and the Company's management as a director
Bangkok Polyethylene Plc. (In process of liquidation)	Thailand	Subsidiary, 100% shareholding
Bio Creation Co., Ltd.	Thailand	Subsidiary, 100% shareholding and the Company's management as a director
Bio Spectrum Co., Ltd.	Thailand	Subsidiary, 100% shareholding
PTT Polyethylene Co., Ltd. (In process of liquidation)	Thailand	Subsidiary, 100% shareholding
PTT Phenol Co., Ltd.	Thailand	Subsidiary, 100% shareholding and the Company's management as a director

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Name of entities	Country of incorporation/ nationality	Nature of relationships
PTT Maintenance and Engineering Co., Ltd.	Thailand	Subsidiary, 60% shareholding, some common directors and the Company's management as a director
Auria BioChemicals Co., Ltd.	Thailand	Subsidiary, 54% shareholding by the Company and 46% shareholding by subsidiary of the Company's subsidiary
NPC Safety and Environmental Service Co., Ltd.	Thailand	Subsidiary, 100% shareholding, some common directors and the Company's management as a director
PTT Chemical International Pte. Ltd.	Singapore	Subsidiary, 100% shareholding, some common directors and the Company's management as a director
Thai Fatty Alcohols Co., Ltd.	Thailand	Subsidiary of the Company's subsidiary, 100% shareholding by the Company's subsidiary and the Company's management as a director
PTT Chemical International (Asia Pacific ROH) Ltd.	Thailand	Subsidiary of the Company's subsidiary, 100% shareholding by the Company's subsidiary, some common directors and the Company's management as a director
Myriant Corporation	United States of America	Subsidiary of the Company's subsidiary, 72% shareholding by the Company's subsidiary and the Company's management as a director
PTTGC International (Netherlands) B.V.	Netherlands	Subsidiary of the Company's subsidiary, 100% shareholding by the Company's subsidiary and the Company's management as a director
PTTGC International (USA) Inc.	United States of America	Subsidiary of the Company's subsidiary, 100% shareholding by the Company's subsidiary, some common management and the Company's management as a director
Vencorex Holding	France	Subsidiary of subsidiary of the Company's subsidiary, 51% shareholding by subsidiary of the Company's subsidiary and the Company's management as a director
Vencorex (Thailand) Co., Ltd.	Thailand	Subsidiary of subsidiary of subsidiary of the Company's subsidiary, 100% shareholding by subsidiary of subsidiary of the Company's subsidiary

PTT Global Chemical Public Company Limited and its Subsidiaries
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Name of entities	Country of incorporation/ nationality	Nature of relationships
Vencorex France	France	Subsidiary of subsidiary of subsidiary of the Company's subsidiary, 100% shareholding by subsidiary of subsidiary of the Company's subsidiary
Thai Ethoxylate Co., Ltd.	Thailand	Jointly - controlled entity, 50% shareholding and the Company's management as a director
Emery Oleochemical (M) Sdn. Bhd.	Malaysia	Jointly - controlled entity of the Company's subsidiary, 50% shareholding by the Company's subsidiary, some common management and the Company's management as a director
Emery Specialty Chemicals Sdn. Bhd.	Malaysia	Jointly - controlled entity of the Company's subsidiary, 50% shareholding by the Company's subsidiary, some common management and the Company's management as a director
Emeryoleo Specialties (M) Sdn. Bhd.	Malaysia	Subsidiary of jointly - controlled entity of the Company's subsidiary, 100% shareholding by jointly - controlled entity of the Company's subsidiary, some common management and the Company's management as a director
NatureWorks LLC	United States of America	Jointly - controlled entity of subsidiary of the Company's subsidiary, 50% shareholding by subsidiary of the Company's subsidiary and the Company's management as a director
NatureWorks Asia Pacific Co., Ltd.	Thailand	Subsidiary of jointly - controlled entity of subsidiary of the Company's subsidiary, 100% shareholding by jointly - controlled entity of subsidiary of the Company's subsidiary
Global Power Synergy Co., Ltd. (Amalgamation between PTTUT and IPT)	Thailand	Associate, 30% shareholding, some common directors and the Company's management as a director
Thai Petroleum Pipeline Co., Ltd.	Thailand	Major shareholding by the Company's major shareholder
Dhipaya Insurance Plc.	Thailand	Shareholding by the Company's shareholder
Thaioil Plc.	Thailand	Major shareholding by the Company's major shareholders

PTT Global Chemical Public Company Limited and its Subsidiaries
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Name of entities	Country of incorporation/ nationality	Nature of relationships
Bangchak Petroleum Plc.	Thailand	Major shareholding by the Company's major shareholder
Business Services Alliance Co., Ltd.	Thailand	Major shareholding by the Company's major shareholder, the Company and two Company's associates, each of 25% shareholding of preferred stock
PTT Natural Gas Distribution Co., Ltd.	Thailand	Major shareholding by the Company's major shareholder
PTT Retail Services Co., Ltd.	Thailand	Subsidiary of the Company's related party that has major shareholding by the Company's major shareholder
PTT Retail Management Co., Ltd.	Thailand	Subsidiary of the Company's related party that has major shareholding by the Company's major shareholder
PTTEP Siam Limited	Thailand	Subsidiary of the Company's related party that has major shareholding by the Company's major shareholder
PTTEP International Limited	Thailand	Subsidiary of the Company's related parties that has major shareholding by the Company's major shareholder
PTT Exploration and Production Plc.	Thailand	Major shareholding by the Company's major shareholder and some common directors
PTT Tank Terminal Limited	Thailand	Major shareholding by the Company's major shareholder
PTT Polymer Marketing Co., Ltd.	Thailand	Associate, 25% shareholding, major shareholding by the Company's major shareholder and the Company's management as a director
PTT Polymer Logistic Co., Ltd.	Thailand	Major shareholding by the Company's major shareholder
PTT Asahi Chemical Co., Ltd.	Thailand	Major shareholding by the Company's major shareholder and some common directors
PTT International Co., Ltd.	Thailand	Major shareholding by the Company's major shareholder
PTT Energy Solutions Co., Ltd.	Thailand	Associate, 20% shareholding, major shareholding by the Company's major shareholder and the Company's management as a director

PTT Global Chemical Public Company Limited and its Subsidiaries
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Name of entities	Country of incorporation/ nationality	Nature of relationships
PTT LNG Co., Ltd.	Thailand	Major shareholding by the Company's major shareholder
PTT ICT Solutions Co., Ltd.	Thailand	Associate, 40% shareholding and the Company's management as a director
Rayong Olefins Co., Ltd.	Thailand	Shareholding by the Company's shareholder
Vinythai Plc.	Thailand	Associate, 25% shareholding and the Company's management as a director
Star Petroleum Refining Plc.	Thailand	Major shareholding by the Company's major shareholder
Community Partnership Association	Thailand	The Company's director as a management and some common management
Amata Natural Gas Distribution Co., Ltd.	Thailand	Subsidiary of the Company's related party that has major shareholding by the Company's major shareholder
Eastern Fluid Transport Co., Ltd.	Thailand	Associate, 15% shareholding, 15% shareholding by the Company's subsidiary and the Company's management as a director
HMC Polymers Co., Ltd.	Thailand	The Company's shareholder and the Company's management as a director
Energy Complex Co., Ltd.	Thailand	Jointly - controlled entity of the Company's major shareholder and related party
IRPC Plc.	Thailand	Major shareholding by the Company's major shareholder and some common directors
Alliance Petrochemical Investment (Singapore) Pte. Ltd.	Singapore	The Company's management as a director
Carigali-PTTEPI Operating Company Sdn. Bhd.	Malaysia	Jointly - controlled entity of the Company's subsidiary that has major shareholding by the Company's major shareholder
PTT Green Energy Pte. Ltd.	Singapore	Major shareholding by the Company's major shareholder
PTT International Trading Pte. Ltd.	Singapore	Major shareholding by the Company's major shareholder

PTT Global Chemical Public Company Limited and its Subsidiaries
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The pricing policies for particular types of transactions are explained further below:

Transactions	Pricing policies
Sale of goods	Contract price / Regional market price / World market price
Rendering of services	Contract price
Purchase of goods / raw materials / services	Contract price / Market price
Interest on loan	Average cost of fund / Contractually agreed rate

Significant transactions for the year ended 31 December 2013 and 2012 with related parties were as follows:

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Major Shareholder				
Sales of goods or rendering of services	192,740	264,841	185,171	255,015
Purchases of goods or receiving of services	363,601	395,808	350,526	363,532
Interest income	-	2	-	1
Other income	105	25	65	25
Interest expense	-	167	-	167
Other expense	241	199	195	96
Subsidiaries				
Sales of goods or rendering of services	-	-	31,436	37,626
Purchases of goods or receiving of services	-	-	11,311	19,999
Interest income	-	-	536	1,238
Dividend income	-	-	23,049	10,554
Other income	-	-	476	611
Interest expense	-	-	100	115
Other expense	-	-	1,061	1,272
Jointly-controlled entity				
Dividend income	-	-	133	63
Other income	-	-	22	17
Associates				
Sales of goods or rendering of services	74,857	70,176	47,171	19,124
Purchases of goods or receiving of services	7,520	181	3,202	124
Interest income	237	102	237	102
Dividend income	-	-	288	299
Other income	118	351	77	70
Other expense	349	320	315	276
Other related parties				
Sales of goods or rendering of services	82,455	47,536	80,288	43,097
Purchases of goods or receiving of services	36,544	37,237	35,482	33,964
Other income	140	447	36	53
Other expense	603	470	383	247

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	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Key management personnel				
Key management personnel compensation				
Short-term employee benefits	362	418	213	227
Post-employment benefits and other long term benefits	11	7	4	3
Reversal of short-term benefits for the year 2012	(52)	-	(52)	-
Total key management personnel compensation	**321**	**425**	**165**	**230**

Balances as at 31 December with related parties were as follows:

Trade accounts receivable - related parties	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Major Shareholder				
PTT Plc.	16,113	22,347	15,423	21,136
Subsidiaries				
Bangkok Polyethylene Plc.	-	-	-	2,379
PTT Polyethylene Co., Ltd.	-	-	-	57
TOC Glycol Co., Ltd.	-	-	722	674
Thai Oleochemicals Co., Ltd.	-	-	17	16
Thai Tank Terminal Limited	-	-	6	5
Thai Styrenics Co., Ltd.	-	-	3	6
PTT Phenol Co., Ltd.	-	-	2,131	2,448
Associates				
Global Power Synergy Co., Ltd.	7	-	-	-
PTT Polymer Marketing Co., Ltd.	7,023	6,462	6,773	1,397
Vinythai Plc.	992	602	986	598
Other related parties				
PTT Polymer Logistic Co., Ltd.	7	7	-	-
Thaioil Plc.	23	33	-	-
Star Petroleum Refining Plc.	755	666	731	655
PTTEP Siam Limited	9	11	-	-
PTT Exploration and Production Plc.	3	2	-	-
PTT Asahi Chemical Co., Ltd.	103	320	-	1
IRPC Plc.	3,495	1,458	3,449	1,427
HMC Polymers Co., Ltd.	470	803	468	473
PTT International Trading Pte. Ltd.	6,094	1,284	6,094	1,284
Bangchak Petroleum Plc.	58	-	58	-
PTT Tank Terminal Co., Ltd.	141	2	4	-
PTTEP International Co., Ltd.	1	1	-	-
Total	35,294	33,998	36,865	32,556
Less allowance for doubtful accounts	-	-	-	-
Net	**35,294**	**33,998**	**36,865**	**32,556**

PTT Global Chemical Public Company Limited and its Subsidiaries
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	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Bad and doubtful debts expense for the year	-	-	-	-

Other receivables - related parties

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Major Shareholder				
PTT Plc.	289	293	259	281
Subsidiaries				
Bangkok Polyethylene Plc.	-	-	-	11
Bio Creation Co., Ltd.	-	-	2	1
PTT Chemical International (Asia Pacific ROH) Ltd.	-	-	3	2
PTT Polyethylene Co., Ltd.	-	-	-	49
PTT Maintenance and Engineering Co., Ltd.	-	-	87	58
TOC Glycol Co., Ltd.	-	-	28	24
Thai Fatty Alcohol Co., Ltd.	-	-	1	1
Thai Oleochemicals Co., Ltd.	-	-	12	10
Thai Tank Terminal Limited	-	-	362	5
NPC Safety and Environmental Service Co., Ltd.	-	-	14	11
PTT Chemical International Pte. Ltd.	-	-	-	1
PTT Utility Co., Ltd.	-	-	-	6
PTT Phenol Co., Ltd.	-	-	9	6
Vencorex Holding	-	-	5	1
Vencorex (Thailand) Co, Ltd.	-	-	4	-
Auria BioChemicals Co., Ltd.	-	-	1	-
Myriant Corporation	-	-	54	-
Jointly - controlled entities				
Thai Ethoxylate Co., Ltd.	-	-	5	5
NatureWorks LLC	-	-	2	2
Emery Oleochemical (M) Sdn. Bhd.	-	-	1	-
Associates				
Global Power Synergy Co., Ltd.	538	-	344	-
PTT Polymer Marketing Co., Ltd.	4	6	4	4
PTT ICT Solutions Co., Ltd.	13	21	13	19
PTT Energy Solutions Co., Ltd.	-	6	-	6
Eastern Fluid Transport Co.,Ltd.	7	2	4	2
Myriant Corportion	-	14	-	14
Other related parties				
PTT Tank Terminal Ltd.	19	1	-	-
PTT Asahi Chemical Co., Ltd.	9	30	-	-
PTT International Co., Ltd.	2	-	-	-
PTT Polymer Logistic Co., Ltd.	1	2	-	-
Energy Complex Co., Ltd.	-	1	-	-
Thaioil Plc.	2	2	2	2
IRPC Co., Ltd.	1	-	-	-
Star Petroleum Refining Co., Ltd.	2	7	1	5
PTT Exploration and Production Plc.	-	1	-	-

Other receivables - related parties (continue)	**Consolidated financial statements**		**Separate financial statements**	
	2013	2012	2013	2012
	(in million Baht)			
Other related parties *(continue)*				
PTTEP Siam Limited	1	-	-	-
PTTEP International Co., Ltd.	3	-	-	-
Dhipaya Insurance Plc.	690	702	600	414
HMC Polymers Co., Ltd.	1	5	-	-
Business Service Alliance Co., Ltd.	13	13	13	13
NatureWorks Asia Pacific Co., Ltd.	1	-	1	-
Emeryoleo Specialties (M) Sdn. Bhd.	1	3	1	3
Total	1,597	1,109	1,832	956
Less allowance for doubtful accounts	-	-	-	-
Net	**1,597**	**1,109**	**1,832**	**956**

	Consolidated financial statements		**Separate financial statements**	
	2013	2012	2013	2012
	(in million Baht)			
Bad and doubtful debts expense for the year	-	-	-	-

Loans to related parties	**Interest rate**		**Consolidated financial statements**		**Separate financial statements**	
	2013	2012	2013	2012	2013	2012
Short-term loans	*(% per annum)*		*(in million Baht)*			
Subsidiaries						
Bangkok Polyethylene Plc.	-	5.17-5.29	-	-	-	900
TOC Glycol Co., Ltd.	-	5.17-5.29	-	-	-	800
Thai Styrenics Co., Ltd.	5.08-5.11	-	-	-	660	-
NPC Safety and Environmental Service Co., Ltd.	5.08-5.11	5.17-5.29	-	-	182	205
Total			-	-	842	1,905
Less allowance for doubtful accounts			-	-	-	-
Short-term loans to related parties, net			**-**	**-**	**842**	**1,905**

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Loans to related parties	**Interest rate**		**Consolidated financial statements**		**Separate financial statements**	
	2013	2012	2013	2012	2013	2012
	(% per annum)		*(in million Baht)*			
Long-term loans						
Subsidiaries						
Bangkok Polyethylene Plc.	-	5.17-5.29	-	-	-	2,749
PTT Polyethylene Co., Ltd.	-	5.17-5.29	-	-	-	11,659
Thai Oleochemicals Co., Ltd.	5.08-5.11	5.17-5.29	-	-	1,789	2,080
Thai Fatty Alcohols Co., Ltd.	-	5.17-5.29	-	-	-	398
Vencorex Holding	6.00	6.00	-	-	454	105
Myriant Corporation	greater of the U.S. Prime Rate plus margin or fixed rate	-	-	-	2,647	-
Indirect associate						
Myriant Corporation	-	greater of the U.S. Prime Rate plus margin or fixed rate	-	1,220	-	1,220
Total			-	1,220	4,890	18,211
Less current portion due within one year			-	-	(37)	(6,545)
Less allowance for doubtful accounts			-	-	-	-
Long-term loans to related parties, net			**-**	**1,220**	**4,853**	**11,666**

Summary of loans to related parties				
Short-term loans	-	-	842	1,905
Current portion due within one year	-	-	37	6,545
Long-term loans	-	1,220	4,853	11,666
Total	-	1,220	5,732	20,116
Less allowance for doubtful accounts	-	-	-	-
Total loans to related parties, net	**-**	**1,220**	**5,732**	**20,116**

	Consolidated financial statements		**Separate financial statements**	
	2013	2013	2013	2012
		(in million Baht)		
Bad and doubtful debts expense for the year	-	-	-	-

Movements during the year ended 31 December 2013 and 2012 of loans to related parties were as follows:

Loans to related parties	**Consolidated financial statements**		**Separate financial statements**	
	2013	2012	2013	2012
		(in million Baht)		
Short-term loans				
Subsidiaries				
At 1 January	-	-	1,905	3,945
Increase	-	-	445	387
Decrease	-	-	(1,013)	(2,427)
Transfers of businesses	-	-	(495)	-
At 31 December	**-**	**-**	**842**	**1,905**
Long-term loans				
Subsidiaries				
At 1 January	-	-	16,991	23,431
Increase	-	-	1,949	105
Decrease	-	-	(4,186)	(6,545)
Transfers of businesses	-	-	(11,272)	-
Transfers	-	-	1,220	-
Effect of change in exchange rates	-	-	188	-
	-	-	4,890	16,991
Indirect associate				
At 1 January	1,220	-	1,220	-
Increase	1,291	1,241	1,291	1,241
Transfers	(2,511)	-	(2,511)	-
Effect of change in exchange rates	-	(21)	-	(21)
	-	1,220	-	1,220
Total	**-**	**1,220**	**4,890**	**18,211**
Less Current portion	-	-	(37)	(6,545)
At 31 December	**-**	**1,220**	**4,853**	**11,666**

	Consolidated financial statements		**Separate financial statements**	
	2013	2012	2013	2012
		(in million Baht)		
Investments in subsidiaries *(Note 14)*	**-**	**-**	**42,072**	**68,155**
Investments in jointly-controlled entity *(Note 14)*	**-**	**-**	**210**	**210**
Investments in associates *(Note 15)*	**12,549**	**6,151**	**9,717**	**3,399**

Trade accounts payable - related parties	**Consolidated financial statements**		**Separate financial statements**	
	2013	2012	2013	2012
		(in million Baht)		
Major Shareholder				
PTT Plc.	33,850	31,553	33,753	26,611
Subsidiaries				
PTT Polyethylene Co., Ltd.	-	-	-	2,115
PTT Utility Co., Ltd.	-	-	-	340
Thai Oleochemicals Co., Ltd.	-	-	40	18
PTT Phenol Co., Ltd.	-	-	1	-

PTT Global Chemical Public Company Limited and its Subsidiaries
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Trade accounts payable - related parties (continue)	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Associate				
Global Power Synergy Co., Ltd.	1,987	-	1,199	-
Other related parties				
Rayong Olefins Co., Ltd.	-	39	-	39
Star Petroleum Refining Plc.	710	443	710	443
PTT Asahi Chemical Co., Ltd.	17	20	-	-
IRPC Plc.	2,771	1,696	2,771	1,618
HMC Polymers Co., Ltd.	106	71	106	-
PTT International Trading Pte. Ltd.	51	97	51	-
Bangchak Petroleum Plc.	9	-	9	-
Total	**39,501**	**33,919**	**38,640**	**31,184**

Other payables - related parties	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Major Shareholder				
PTT Plc.	171	585	155	488
Subsidiaries				
Bangkok Polyethylene Plc.	-	-	-	47
PTT Polyethylene Co., Ltd.	-	-	-	18
PTT Maintenance and Engineering Co., Ltd.	-	-	155	72
TOC Glycol Co., Ltd.	-	-	24	20
Thai Oleochemicals Co., Ltd.	-	-	22	18
Thai Tank Terminal Limited	-	-	107	103
NPC Safety and Environmental Service Co., Ltd.	-	-	50	30
PTT Utility Co., Ltd.	-	-	-	2
PTT Phenol Co., Ltd.	-	-	6	-
Thai Styrenics Co., Ltd.	-	-	2	2
PTT Chemical International (Asia Pacific ROH) Ltd.	-	-	37	31
Associates				
Global Power Synergy Co., Ltd.	3	-	2	-
Vinythai Plc.	13	12	11	5
PTT ICT Solutions Co., Ltd.	40	84	37	77
PTT Polymer Marketing Co., Ltd.	1	1	1	1
PTT Energy Solution Co., Ltd.	9	1	9	-
Other related parties				
PTT Polymer Logistics Co., Ltd.	219	225	189	8
Dhipaya Insurance Plc.	7	85	2	59
IRPC Plc.	11	12	11	-
Energy Complex Co., Ltd.	2	3	2	2
Star Petroleum Refining Plc.	10	20	10	20
Business Services Alliance Co., Ltd.	69	38	46	12
PTT Asahi Chemical Co., Ltd.	-	1	-	-
HMC Polymer Co., Ltd.	-	237	-	-
PTT International Trading Pte. Ltd.	7	-	7	-
Total	**562**	**1,304**	**885**	**1,015**

Payables to contractor - related parties	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Major Shareholder				
PTT Plc.	1	-	-	-
Subsidiary				
PTT Maintenance and Engineering Co., Ltd.	-	-	473	375
Associate				
PTT ICT Solutions Co., Ltd.	51	32	51	32
Other related parties				
Dhipaya Insurance Plc.	15	-	-	-
Business Services Alliance Co., Ltd.	1	-	-	-
Total	**68**	**32**	**524**	**407**

Loans from related parties	Interest rate		Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012	2013	2012
Short-term loans	*(% per annum)*		*(in million Baht)*			
Subsidiaries						
TOC Glycol Co., Ltd.	2.71-3.10	2.39-3.27	-	-	1,238	711
PTT Polyethylene Co., Ltd	-	2.39-3.27	-	-	-	3,225
Total loans from related parties			**-**	**-**	**1,238**	**3,936**

Movements during the year ended 31 December 2013 and 2012 of loans from related parties were as follows:

Loans from related parties	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Subsidiaries				
At 1 January	-	-	3,936	1,201
Increase	-	-	2,086	3,225
Decrease	-	-	-	(490)
Transfers of businesses	-	-	(4,784)	-
At 31 December	**-**	**-**	**1,238**	**3,936**

Significant agreements with related parties

As at 31 December 2013, the Company has significant agreements with related parties as follows:

Olefins Sales Agreements

The Company has 4 Ethylene sales and purchase agreements with a major shareholder and 2 related parties. Selling prices are determined based on prices prevailing in the world market, Ethane price and Ethylene price in the world market. These agreements are for the periods from 7 years to 15 years, commencing from the effective date specified in each agreement. One agreement that is expired in July 2014 is automatically renewable except for advance cancellation not less than 1 year through written notice by each party. Other three agreements will expire in August 2021, in December 2021 and in May 2022.

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The Company has 2 Propylene sales and purchase agreements with 2 related parties. Selling prices are determined based on Polypropylene and Propylene prices in the world market. These agreements are for the periods from 12 years to 15 years, commencing from the effective date specified in each agreement and expiring in December 2016 and in December 2023.

By Product sales and purchase agreements

The Company has a Hydrogen sales and purchase agreements with a related party. Selling prices in each agreement are determined based on Natural Gas price for the industry. The agreement is for the periods of 15 years, commencing from the date as specified in the agreement and expiring in March 2024.

The Company has a Tail Gas sales and purchase agreements with a related party. Selling prices are determined based on Natural Gas price for the industry. The agreement is for the period of 15 years, commencing from the date as specified in the agreement and expiring in July 2022.

Utilities and Other Services Agreements

The Company has 2 Power Supply agreements with 2 related parties. Selling prices in these agreements are determined based on reference price from the Provincial Electricity Authority. These agreements are for the periods of 15 years, commencing from the date as specified in each agreement and expiring in September 2014 and in December 2016.

The Company has 2 Utilities agreements covering electricity, steam and demineralised water with a related party. These agreements are for the periods from 10 years to 15 years, commencing from the date as specified in each agreement and expiring in December 2016 and December 2021.

The Company and certain related parties have various Utilities agreements covering electricity, steam, and water with a related party. These agreements are for the periods of 15 years, commencing from the date as specified in each agreement and expiring from December 2021 to June 2026. These agreements can be renewed for the period of 5 years with the terms and conditions agree by both parties.

The Company has a Product Transportation agreements with a related party. The agreement is for the period of 3 years, commencing from the date as specified in the agreement and expiring in December 2015. The agreement is automatically renewable for another period of 3 years except for advance cancellation through written notice by each party, not exceeding a total period of 15 years.

Feedstock and Fuel Gas sales and purchase agreements

The Company has a LPG sales and purchase agreements with a major shareholder. Selling prices are determined based on the Polypropylene price. The agreement is for the period of 15 years, commencing from the date as specified in the agreement and expiring in May 2021.

The Company has a Natural Gas sales and purchase agreements with a major shareholder. Selling prices are determined based on fuel oil prices. The agreement is for the period of 20 years, commencing from the date as specified in the agreement and expiring in December 2018. The agreement is renewable for the period of 4 years, by providing not less than 1 year advance written notice to the counterparty.

The Company has 2 Natural Gas sales and purchase agreements with a major shareholder. Selling prices are determined based on gas price as specified in the agreement and on the Thailand Producer Price Index (PPI). These agreements are for the period of 10 years, commencing from the date as specified in each agreement and expiring in May 2018 and December 2018.

The Company and a related party have 2 Natural Gas sales and purchase agreements with a major shareholder. Selling price in an agreement based on gas price as specified in the agreement and another agreement is determined based on the Thailand Producer Price Index. These agreements are for the period from 10 years to 15 years, commencing from the date as specified in each agreement and expiring between November 2019 and July 2023.

The Company has a Benzene sales and purchase agreement with a related party. Selling price is determined based on the benzene price as specified in the agreement. The agreement is for the period of 15 years, commencing from the date as specified in the agreements and expiring in March 2024.

The Company has a Natural Gas Liquid sales and purchase agreement with a major shareholder. Selling price is determined based on the standard price of Naphtha in the region. The agreement is for the period of 15 years, commencing from the date as specified in the agreement and expiring in May 2021. The agreement is renewable for the period of 5 years with the agreement of both parties.

The Company has 2 Ethane, Propane and LPG sales and purchase agreements with a major shareholder. Selling price in the agreement is determined based on the Polyethylene and Polypropylene price and another agreement is determined based on the Polyethylene price. These agreements have been extended and consequently will expire in December 2020.

The Company has 2 LPG sales and purchase agreement with a major shareholder. Selling prices are determined based on Polypropylene price. These agreements are for the period of 8 years, commencing from the date as specified in each agreement and expiring in December 2020.

The Company has an Ethane sales and purchase agreement with a major shareholder. Selling price is determined based on prices prevailing in the high density Polyethylene price in the world market. The agreement is for the period of 15 years, commencing from the date as specified in the agreement and expiring in January 2025. The agreement is renewable for 5 years, by providing not less than 1 year advance written notice to the counterparty.

The Company has an Ethane Rich Gas sales and purchase agreement with a related party. Selling price is determined based on prevailing prices of Polyethylene and Polypropylene in the region. This agreement is for the period of 10 years and will expire in January 2021.

From 1 August 2012, the Company has entered into the adjustment of the pricing formula in the sales and purchase agreements of petrochemical natural gas feedstock with a major shareholder.

Petroleum Product Offtake Agreement

The Company has a Petroleum Product sales and purchase agreements with a major shareholder and another company. For domestic sales, the product price reflects prices prevailing in Thailand for products of a similar quality that are sold in or imported to Thailand. For export sales, the product price reflects the prevailing international spot price for that product. These agreements are for the period of 18 years, commencing from the date as specified in the agreement and expiring in February 2024. The agreement is automatically renewable except for advance cancellation through written notice by each party.

PTT Global Chemical Public Company Limited and its Subsidiaries
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Expansion Phase Product Offtake Agreement

The Company has an expansion phase product offtake agreement with a major shareholder, whereas a major shareholder agree to purchase 100% of the volume of refined petroleum products produce by reforming and upgrading complexes. As specified in the Product Offtake Agreement, at least 50% of such volume will be sold at a competitive domestic market price and the remainder sold at a competitive export market price or other mutually agreed price. The agreement is for the period of 18 years, commencing from the date as specified in the agreement and expiring in February 2024. The agreement is automatically renewable except for advance cancellation through written notice by each party.

Long-term Crude Oil and Other Raw materials Supply Agreements

The Company entered into two supply agreements for crude oil and other raw materials with a major shareholder, the reference price being based on market price of crude oil and other raw materials. These agreements are for the periods of 15 years and 20 years, will expire in December 2016 and February 2024. The agreements are automatically renewable except for advance cancellation through written notice by each party.

Crack Spread Swap Agreements

The Company has entered into crack spread swap agreements with a major shareholder to hedge the Company's oil refinery margin. Under the agreements the floating amount of the basket refinery margin, (calculated based on the Singapore price of refined petroleum products, Gasoil, Kerosene and Fuel Oil against the price of Dubai crude oil), is swapped for a fixed amount of the basket refinery margin for a fixed quantity per month. Under the agreement, the Company shall make payment or receive of the crack spread difference according to terms and conditions stipulated in the agreements.

Crude Oil and Feedstock Time Spread Agreements

The Company has entered into crude oil and feedstock time spread agreements to mitigate price risk with a major shareholder, calculated based on the difference of the average price of crude oil and feedstock for the current month and the price of the following month. The Company shall make payment or receive of the difference according to terms and conditions stipulated in the agreements.

Sales and Purchase Aromatics Product Agreements

The Company, a major shareholder, related parties and various other companies have entered into raw material and product sales and purchase agreements. The sales and purchase prices of raw material and product are based on the prices specified in the agreements. These agreements are for the periods from 1 year to 15 years from the agreement date and expiring from 2014 to 2023. The agreements are automatically renewable except for an advance cancellation period of 3 months to 2 years through written notice by each party.

Polyethylene Sales and Purchase Agreement

The Company and a related party have the Polyethylene sales and purchase agreements with a related party. The Company agreed to sell all Polyethylene to a related party for distributing to the customers in the market. Under the agreement, the Polyethylene pricing structure is changed to link to the Polyethylene product price, which the Company sells to end customers, adjusted by the appropriate marketing expenses for fairness to both parties. These agreements are for the periods of 15 years, commencing from the effective date as specified in each agreement. Two agreements will expire in December 2021, one agreement will expire in January 2022 and another will expire in September 2023.

Loan Agreements

The Company has an unsecured loan agreement with a related party for the long-term credit facility of Baht 4,426 million. The loan agreement consists of long-term loan totalling Baht 2,676 million and short-term loan totalling Baht 1,750 million. The loan bears interest at the rate of the Company's average cost of funds. This loan is repayable in semi-annually instalments, commencing from June 2012 and due within 10 years.

The Company have 4 secured loan agreements with a related party for the long-term credit facility of USD 81 million. The loan bears interest at the greater of United States Prime Rate plus margin or fixed rate. These long-term loans are repayable at the end of the loan agreement in March 2015, June 2015, July 2015 and March 2016.

The Company has an unsecured loan agreement with a related party for the long-term credit facility of EUR 60 million. The loan bears interest at fixed rate. This long-term loan is repayable at the end of the loan agreement in July 2017.

The Company has unsecured short-term lending agreements for the period of 3 years through Liquidity Management System "LMS" with a related party with the credit facility of Baht 1,000 million. This loan bears interest at the rate of the Company's average cost of funds.

The Company has unsecured short-term borrowing agreements for the period of 3 years through Liquidity Management System "LMS" with a related party with the credit facility of Baht 4,000 million. This loan bears interest at the rate of the Company's average return on current investment minus 0.25% per annum.

The Company provides unsecured short-term loans to 2 related parties by receiving the promissory notes amounting to Baht 842 million. The loans bear interest at the rate of the Company's average cost of funds. The promissory notes are for the period of 1 month and are renewable.

The Company has an uncommitted and unsecured short-term Inter-Company Borrowing & Lending agreement (ICBL) for the period of 1 year with a major shareholder with the borrowing and lending credit facility of Baht 5,000 and Baht 2,000 million respectively. The agreement will expire on 19 December 2014. This facility bears interest based on market rate referenced to BIBOR or LIBOR plus interest rate spread by taking into account the return on short-term investment, short-term interest rate and the credit ratings of the Company or the borrowing company.

Service Agreements

The Company has Shared Service agreements with 11 related parties for the provision of general services. All of these agreements are effective from the date as specified in the agreements and are automatically renewable until either party agrees to terminate with 3 months written notice. The service charges will be agreed in the fourth quarter of each year.

The Company has a Technical Services agreement with a related party. Under the contract, the Company agreed to obtain certain technical advisory services, limited to 2,100 service hours in each year. The agreement duration is 5 years, including the initial service fee as specified in the agreement which will be adjusted in line with the increase in the labour cost index. The agreement can be renewed for another 5 years.

The Company has Management and Engineering Agreement, Design, Supply, Construction and Installation agreement, Inspection of Construction, Equipment and Machinery Agreement and Management and Maintenance Work Agreement with a related party. These agreements are for the periods from 6 months to 5 years and 4 months, commencing from the date as specified in the agreement and expiring in December 2014.

The Company has 3 Services agreements to have the right to lay the pipelines for delivery of raw material and product on pipeline structure with a major shareholder. These agreements are for the period of 15 years from the agreement date and will expire in June 2025.

The Company has a Project Management Consultancy Services agreement with a related party to Convert Heavy Gas to Olefins Feedstock Project. The agreement is for the period of 28 months and will expire in March 2015.

The Company has a Security Service and Fire Protection agreement with a related party. The agreements is to provide security and fire protection service to asset, employees and visitors in the location of the Company. The agreement is for the period of 3 years and will expire in December 2014.

The Company has 3 Warehouse Management agreements with a related party. One Agreement is for the period of 3 years and will expire in December 2013. Two other agreements are for the period of 10 years and will expire in December 2019. These agreements are renewable by providing not less than 30 days written notice to the counterparty.

The Company has Design Construction and Installation Service agreement BD Pipeline, Storage Tanks and the facilities for BV Project with a related party. The agreement is for the period of 2 years and will expire in December 2013.

The Company has Tank Maintenance Service agreement with a related party. The agreement duration is 2 years and 3 months and will expire in July 2015.

The Company has entered into Information and Communication Technology Service agreement with a related party. A related party will provide Information Technology system maintenance and support services, system structure and data center management, system supporting and advisory, including system design and development to meet the Company's requirements. This agreement is for the period of 1 year, commencing from the date as specified in the agreement and expired in December 2013.

The Company has the engineering, procurement, and construction contract for the Aromatics 2 Debottlenecking Project with a related party and another party. This agreement is for the period 2 years and will expire in September 2015.

Rental Agreement

The Company has Office Rental and Service agreement with a related party. The agreement is for the period of 2 years and will expire in September 2014 with rental and service rate and conditions as stipulated in the agreement.

The Company has entered into Land Lease agreement with a major shareholder to operate jetty and buffer tank farm services. The agreement is for the period of 30 years, commencing from the date signed in the agreement by both parties, with land lease rate and condition as specified in the agreement, and will expire in December 2021.

PTT Global Chemical Public Company Limited and its Subsidiaries
Notes to the financial statements

10 Cash and cash equivalents

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Cash on hand	4	3	1	-
Cash at banks - current accounts	1,963	2,990	35	(11)
Cash at banks - savings accounts	2,419	9,194	972	7,316
Cash at banks - foreign accounts	3,840	699	3,691	695
Fixed deposits	2,052	3,048	4	3
Highly liquid current investments	8,304	15,335	6,000	11,000
Total	**18,582**	**31,269**	**10,703**	**19,003**

The currency denomination of cash and cash equivalents as at 31 December was as follows:

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Thai Baht (THB)	12,062	26,831	7,009	18,305
United States Dollars (USD)	5,306	2,904	3,692	697
Euro (EUR)	550	719	-	-
Singapore Dollar (SGD)	54	121	-	-
Japanese Yen (JPY)	74	89	-	-
Ringgit (MYR)	380	570	-	-
Brazilian Real (BRL)	106	20	-	-
Others	50	15	2	1
Total	**18,582**	**31,269**	**10,703**	**19,003**

11 Trade accounts receivable and notes receivable

	Note	Consolidated financial statements		Separate financial statements	
		2013	2012	2013	2012
		(in million Baht)			
Related parties	*9*	35,294	33,998	36,865	32,556
Other parties		23,178	18,796	12,865	8,638
Total		**58,472**	**52,794**	**49,730**	**41,194**
Less allowance for doubtful accounts		(84)	(53)	(19)	(21)
Net		**58,388**	**52,741**	**49,711**	**41,173**

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Bad and doubtful debts expense for the year	29	8	-	-

PTT Global Chemical Public Company Limited and its Subsidiaries
Notes to the financial statements

Aging analyses for trade accounts receivable were as follows:

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Related parties				
Within credit terms	35,265	33,974	36,865	32,556
Overdue:				
Less than 3 months	28	24	-	-
3 - 6 months	-	-	-	-
6 - 12 months	1	-	-	-
Over 12 months	-	-	-	-
	35,294	33,998	36,865	32,556
Less allowance for doubtful accounts	-	-	-	-
Net	**35,294**	**33,998**	**36,865**	**32,556**
Other parties				
Within credit terms	22,539	18,117	12,845	8,574
Overdue:				
Less than 3 months	550	611	1	43
3 - 6 months	10	26	-	-
6 - 12 months	24	13	-	-
Over 12 months	55	29	19	21
	23,178	18,796	12,865	8,638
Less allowance for doubtful accounts	(84)	(53)	(19)	(21)
Net	**23,094**	**18,743**	**12,846**	**8,617**
Total	**58,388**	**52,741**	**49,711**	**41,173**

The normal credit term granted by the Group/Company ranges from 15 days to 90 days.

The currency denomination of trade accounts receivable as at 31 December was as follows:

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Thai Baht (THB)	40,749	43,063	39,378	38,522
United States Dollars (USD)	14,475	6,108	10,333	2,651
Euro (EUR)	2,775	3,284	-	-
Japanese Yen (JPY)	104	79	-	-
Ringgit (MYR)	209	152	-	-
Others	76	55	-	-
Total	**58,388**	**52,741**	**49,711**	**41,173**

PTT Global Chemical Public Company Limited and its Subsidiaries
Notes to the financial statements

12 Other receivables

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Prepaid expenses	1,780	1,450	1,304	714
Accrued Income	571	742	882	347
Other receivables	708	333	366	438
Others	145	140	77	43
Total	**3,204**	**2,665**	**2,629**	**1,542**

13 Inventories

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Finished goods	20,307	16,348	14,585	8,688
Work in progress	1,736	1,806	6	-
Raw materials	20,361	11,383	19,084	10,044
Factory supplies and spare parts	8,068	7,972	6,323	4,084
Goods in transit	103	3,750	3	3,532
	50,575	41,259	40,001	26,348
Less allowance for decline in value	(315)	(184)	(57)	-
allowance for obsolescence	(22)	(28)	(6)	-
Net	**50,238**	**41,047**	**39,938**	**26,348**

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Inventories recognised as an expense in 'cost of sales of goods:				
- Cost	497,932	515,467	437,940	447,353
- (Reversal of) write - down	110	(76)	57	-
Net	**498,042**	**515,391**	**437,997**	**447,353**

PTT Global Chemical Public Company Limited and its Subsidiaries
Notes to the financial statements

14 Investments in subsidiaries and jointly-controlled entity

	Note	Separate financial statements 2013	2012
		(in million Baht)	
Investment in subsidiaries			
At 1 January		68,155	59,112
Acquisitions		5,809	9,942
Transfer of businesses	*6*	190	-
Impairment losses		(1,041)	(586)
Loss from capital reduction in subsidiary		(263)	-
Capital distribution		(26,273)	(313)
Disposals		(4,500)	-
Others		(5)	-
At 31 December		**42,072**	**68,155**
Investment in jointly-controlled entity			
At 1 January		210	210
Acquisitions		-	-
Disposals		-	-
At 31 December		**210**	**210**
Total			
At 1 January		68,365	59,322
Acquisitions		5,809	9,942
Transfer of businesses	*6*	190	-
Impairment losses		(1,041)	(586)
Loss from capital reduction in subsidiary		(263)	-
Capital distribution		(26,273)	(313)
Disposals		(4,500)	-
Others		(5)	-
At 31 December		**42,282**	**68,365**

Investments in subsidiaries and jointly-controlled entity as at 31 December 2013 and 2012, and dividend income from those investments for the years then ended were as follows:

	Separate financial statements													
	Ownership Interest		Paid-up capital		Cost		Impairment		At cost-net		Fair value of listed securities		Dividend income for the year ended	
	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012
	(%)							*(in million Baht)*						
Subsidiaries														
Bangkok Polyethylene Plc. (In process of liquidation)	100	100	1,700	1,700	1	3,664	-	-	1	3,664	-	-	318	-
Bio Creation Co., Ltd.	100	100	92	370	92	370	-	-	92	370	-	-	-	-
Bio Spectrum Co., Ltd.	100	75	146	221	146	146	(41)	-	105	146	-	-	-	-
TOC Glycol Co., Ltd.	100	100	5,395	5,395	5,395	5,395	-	-	5,395	5,395	-	-	2,913	4,315
Thai Ethanolamine Co., Ltd. (liquidation process completed in 2013)	-	100	-	900	-	1	-	-	-	1	-	-	-	-
Thai Oleochemicals Co., Ltd.	100	100	7,400	7,400	7,400	7,400	-	-	7,400	7,400	-	-	-	-
PTT Polyethylene Co., Ltd. (In process of liquidation)	100	100	22,000	22,000	-	22,600	-	-	-	22,600	-	-	18,874	5,720
NPC Safety and Environmental Service Co., Ltd.	100	100	165	165	165	165	-	-	165	165	-	-	-	-

PTT Global Chemical Public Company Limited and its Subsidiaries
Notes to the financial statements

	Separate financial statements													
	Ownership Interest		Paid-up capital		Cost		Impairment		At cost-net		Fair value of listed securities		Dividend income for the year ended	
	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012
	(%)				(in million Baht)									
Subsidiaries (continue)														
PTT Maintenance and Engineering Co., Ltd.	60	60	137	137	82	82	-	-	82	82	-	-	14	43
Thai Tank Terminal Limited	51	51	900	900	459	459	-	-	459	459	-	-	552	467
Thai Styrenics Co., Ltd.	100	-	190	-	190	-	-	-	190	-	-	-	-	-
PTT Chemical International Pte. Ltd.	100	100	17,288	16,821	17,288	16,821	(1,000)	-	16,288	16,821	-	-	-	-
PTT Utility Co., Ltd.	-	60	-	6,859	-	4,500	-	-	-	4,500	-	-	-	9
PTT Phenol Co., Ltd.	100	60	9,001	8,351	11,846	6,552	-	-	11,846	6,552	-	-	378	-
Auria BioChemicals Co., Ltd.	54	-	90	-	49	-	-	-	49	-	-	-	-	-
					43,113	68,155	(1,041)	-	42,072	68,155	-	-	23,049	10,554
Jointly-controlled entity														
Thai Ethoxylate Co., Ltd.	50	50	420	420	210	210	-	-	210	210	-	-	133	63
					210	210	-	-	210	210	-	-	133	63
Total					**43,323**	**68,365**	**(1,041)**	**-**	**42,282**	**68,365**	**-**	**-**	**23,182**	**10,617**

The following summarised financial information on jointly-controlled entity which have been proportionately consolidated in the consolidated financial statements represents the Group's share:

	Owner-ship *(%)*	Current assets	Non-current assets	Total assets	Current liabilities	Non-current liabilities *(in million Baht)*	Total liabilities	Total revenues for the year	Total expenses for the year	Profit for the year
31 December 2013										
Thai Ethoxylate Co., Ltd.	50	694	201	895	211	2	213	1,426	1,311	115
31 December 2012										
Thai Ethoxylate Co., Ltd.	50	728	213	941	237	3	240	1,666	1,533	133

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Change in investment in subsidiaries

At the Board of Directors Meeting of the Company held on 15 March 2013, the Board approved to establish Auria BioChemicals Co., Ltd. ("Auria") with Myriant Corporation ("Myriant") to conduct Bio-based Chemicals research and development activities. Subsequently, Auria is incorporated in Thailand with the registered share capital of Baht 90 million on 3 May 2013. The Company holds 54% interest with investment cost totaling Baht 48.6 million and Myriant holds 46% interest.

At the Board of Directors Meeting of PTT Chemical International Pte. Ltd. held on 21 March 2013, the Board approved to increase the registered share capital to USD 6.69 million (divided into 6.69 million shares at 1 USD par value), to invest in Myriant Corporation of which the said Company called and fully received in December 2013.

At the Board of Directors Meeting of the Company held on 26 April 2013, the Board approved the 40% share acquisition of an interest in PTT Phenol Co., Ltd. ("PPCL") from PTT Plc. The Company signed the share sales and purchase agreement of 37.01 million shares, amounting to Baht 4,644 million. Sales and purchase transaction was completed in May 2013. As a result, the Company's shareholding in PPCL increased from 60% to 100% and recognised non-controlling interests to owners of the Company amounting to Baht 4,724 million.

At the Extraordinary General Meeting of shareholders of Bio Creation Co., Ltd. held on 27 May 2013, the shareholders approved the reduction of registered capital from Baht 560 million, 5.6 million shares to Baht 140 million, 1.4 million shares, at Baht 100 par value with the issued and paid-up capital at Baht 66 per share. As a result, the issued and paid-up capital decreased from Baht 369.6 million to Baht 92.4 million. The reduction of issued and paid-up capital of Baht 277.2 million has been offset a deficit in retained earnings, totalling Baht 262.8 million and paid the remaining balance totalling Baht 14.4 million to shareholder.

At the Extraordinary General Meeting of shareholders of PTT Phenol Co., Ltd. held on 11 July 2013, the shareholders approved to increase the registered share capital from Baht 9,252 million to Baht 11,851.20 million (divided into 25.99 million shares at 100 Baht par value) and approved to pay the additional registered share capital at Baht 25 per share, totalling Baht 649.80 million.

At the Extraordinary General Meeting of shareholders of Bio Spectrum Co., Ltd. held on 17 October 2013, the shareholders approved the reduction of registered share capital from Baht 300 million (paid-up Baht 221 million), 3 million shares, to Baht 225 million (paid-up Baht 146 million), 2.25 million shares at 100 Baht par value, with net reduction totalling Baht 75 million, 0.75 million shares for the existing ordinary shares held by a shareholder. The Company distributed the reduction in capital by transferred the Production Technology amounting to Baht 75 million to a shareholder. As a result of capital reduction, the Group's shareholding in Bio Spectrum Co., Ltd. increased from 75% to 100% and recognised non-controlling interests to owners of the Company amounting to Baht 65 million.

At the Board of Directors Meeting of PTT Chemical International Pte. Ltd. held on 27 April 2012, the Board approved to increase the registered share capital for an amount of USD 27.5 million, to invest in Emery Specialties (M) Sdn. Bhd. The share capital was registered and called at USD 3.26 million and 4.66 million (divided into 3.26 million shares and 4.66 million shares at USD 1 par value), of which fully received in February 2013 and December 2013 respectively.

At the Board of Directors Meeting of PTT Chemical International Pte. Ltd. held on 6 December 2011, the Board approved to increase the registered share capital to EUR 122.37 million (divided into 122.37 million shares at 1 EUR par value), to invest in PTTGC International (Netherlands) B.V., of which the company called and fully received in May 2012.

At the Board of Directors Meeting of PTT Chemical International Pte. Ltd. held on 2 April 2012, the Board approved to increase the registered share capital of USD 150.5 million (divided into 150.50 million shares at 1 USD par value), to invest in PTTGC International (USA) Inc., of which the company called and fully received in May 2012.

At the Board of Directors Meeting of PTT Chemical International Pte. Ltd. held on 21 September 2012, the Board approved to increase the registered share capital of USD 9.5 million (divided into 9.5 million shares at USD 1 par value), to invest in Emery Oleochemical (M) Sdn. Bhd. of which the company called and received of USD 5 million in December 2012.

On 30 October 2012, the Company has paid the additional paid-up capital to Bio Creation Co., Ltd. at Baht 16 per share, totalling Baht 89.60 million. The additional payment made the investment in Bio Creation Co., Ltd. increase from Baht 280 million (Baht 50 per share) to Baht 369.60 million (Baht 66 per share).

Dividends paid by subsidiaries and jointly-controlled entity

At the Annual General Meeting of the shareholders of Thai Tank Terminal Ltd. held on 5 April 2013, the shareholders approved the appropriation of dividends of Baht 120.22 per share, amounting to Baht 1,082 million. The dividend was paid to the shareholders in July 2013 and January 2014.

At the Board of Directors Meeting of PTT Phenol Co., Ltd. held on 11 April 2013, the Board approved the appropriation of interim dividends of Baht 630 million and set up legal reserve of 5% of retained earnings at the end of 2012 or equivalent to Baht 204.45 million. The dividend was paid to the shareholders in July 2013.

At the Annual General Meeting of the shareholders of PTT Polyethylene Co., Ltd. held on 19 April 2013, the shareholders approved the appropriation of dividends of Baht 43 per share, amounting to Baht 9,460 million, of which Baht 26 per share, amounting to Baht 5,720 million, was paid as an interim dividend in 2012. The remaining dividend at the rate of Baht 17 per share, amounting to Baht 3,740 million was paid to the shareholders in April 2013.

At the Annual General Meeting of the shareholders of TOC Glycol Co., Ltd. held on 25 April 2013, the shareholders approved the appropriation of dividends of Baht 78 per share, amounting to Baht 4,208 million, of which amounting to Baht 2,374 million, was paid as an interim dividend. The remaining dividend at the rate of Baht 34 per share, amounting to Baht 1,834 million was paid to the shareholders in April 2013.

At the Annual General Meeting of the shareholders of Thai Ethoxylate Co., Ltd. held on 25 April 2013, the shareholders approved the appropriation of dividends of Baht 63.25 per share, amounting to Baht 266 million. The dividend was paid to the shareholders in May 2013.

At the Annual General Meeting of the shareholders of PTT Maintenance and Engineering Co., Ltd. held on 29 April 2013, the shareholders approved the appropriation of dividends of Baht 11.75 per share, amounting to Baht 24 million. The dividend was paid to the shareholders in May 2013.

At the Board of Director Meeting of PTT Polyethylene Co., Ltd. held on 20 June 2013, the Board approved the appropriation of interim dividends of Baht 67.53 - 69.80 per share, amounting to Baht 14,856.6 - 15,356.0 million and has assigned Managing Director to finalise the final payment. Subsequently on 30 June 2013, Managing Director approved the interim dividend of Baht 68.79 per share, amounting to Baht 15,133.8 million. The dividend was paid to the shareholders in July 2013.

At the Board of Director Meeting of Bangkok Polyethylene Plc. held on 21 June 2013, the Board approved the appropriation of interim dividends of Baht 12.20 - 13.32 per share, amounting to Baht 2,074.0 - 2,264.4 million and has assigned Managing Director to finalise the final payment. Subsequently on 30 June 2013, Managing Director approved the interim dividend of Baht 12.60 per share, amounting to Baht 2,142 million. The dividend was paid to the shareholders in July 2013.

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At the Board of Directors Meeting of TOC Glycol Co., Ltd. held on 21 November 2013, the Board approved the appropriation of interim dividends of Baht 20 per share, amounting to Baht 1,079 million. The dividend was paid to the shareholders in November 2013.

At the Annual General Meeting of the shareholders of Thai Tank Terminal Ltd. held on 20 April 2012, the shareholders approved the appropriation of dividends of Baht 101.67 per share, amounting to Baht 915 million. The dividend was paid to the shareholders in May 2012, December 2012 and January 2013.

At the Annual General Meeting of the shareholders of Thai Ethoxylate Co., Ltd. held on 24 April 2012, the shareholders approved the appropriation of dividends of Baht 30 per share, amounting to Baht 126 million. The dividend was paid to the shareholders in May 2012.

At the Annual General Meeting of the shareholders of PTT Utility Co., Ltd. held on 25 April 2012, the shareholders approved the appropriation of dividends of Baht 0.21 per share, amounting to Baht 14 million. The dividend was paid to the shareholders in May 2012.

At the Annual General Meeting of the shareholders of PTT Maintenance and Engineering Co., Ltd. held on 26 April 2012, the shareholders approved the appropriation of dividends of Baht 35.50 per share, amounting to Baht 71 million. The dividend was paid to the shareholders in April 2012.

At the Annual General Meeting of the shareholders of TOC Glycol Co., Ltd. held on 30 April 2012, the shareholders approved the appropriation of dividends of Baht 36 per share, amounting to Baht 1,942.20 million. The dividend was paid to the shareholders in May 2012.

At the Board of Directors Meeting of the shareholders of TOC Glycol Co., Ltd. held on 8 June 2012, the Board approved the appropriation of interim dividends of Baht 15 per share, amounting to Baht 809.25 million. The dividend was paid to the shareholders in June 2012.

At the Board of Directors Meeting of the shareholders of TOC Glycol Co., Ltd. held on 26 September 2012, the Board approved the appropriation of interim dividends of Baht 14 per share, amounting to Baht 755.30 million. The dividend was paid to the shareholders in September 2012.

At the Board of Directors Meeting of the shareholders of PTT Polyethylene Co., Ltd. held on 7 September 2012, the Board approved the appropriation of interim dividends of Baht 14 per share, amounting to Baht 3,080 million. The dividend was paid to the shareholders in September 2012.

At the Board of Directors Meeting of the shareholders of TOC Glycol Co., Ltd. held on 22 November 2012, the Board approved the appropriation of interim dividends of Baht 15 per share, amounting to Baht 809 million. The dividend was paid to the shareholders in November 2012.

At the Board of Directors Meeting of the shareholders of PTT Polyethylene Co., Ltd. held on 26 December 2012, the Board approved the appropriation of interim dividends of Baht 12 per share, amounting to Baht 2,640 million. The dividend was paid to the shareholders in December 2012.

Impairment loss on investment in subsidiary

The Company recognised impairment loss on the investment in PTT Chemical International Pte. Ltd. totalling Baht 1,000 million in the separate financial statements for the year ended 31 December 2013 as a result of recoverable amount in investment in Myriant Corporation held by PTT Chemical International Pte. Ltd. was less than its carrying amount. Impairment loss has no impact on the group's consolidated financial performance because investments in separate financial statements are accounted for using the cost method. Investments in associate in the consolidated financial statements are accounted for using the equity method.

Others

On 30 August 2013, PTT Polyethylene Co., Ltd. ("PTTPE") and Bangkok Polyethylene Plc. ("BPE") had registered to dissolve the business with Department of Business Development, Ministry of Commerce. Subsequently on 28 November 2013, PTTPE and BPE distributed capital to the Company amounting to Baht 24,152 million and 1,834 million respectively. The Company recognised gain from disposal of investment amounting to Baht 1,552 million and loss from investment amounting to Baht 5 million from the subsidiaries, respectively in separated statement of income for the year ended 31 December 2013. As at 31 December 2013, both companies are in the liquidation process.

On 31 October 2012, Thai Ethanolamine Co., Ltd. ("EA") had registered to dissolve the business with Department of Business Development, Ministry of Commerce. Subsequently on 22 May 2013, EA had completed the liquidation process with Department of Business Development and also distributed the remaining balance of outstanding investment amounting to Baht 0.79 million to the shareholders.

15 Investments in associates

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
At 1 January	6,151	6,178	3,399	3,399
Share of net loss of equity- accounted associates	(78)	(44)	-	-
Acquisitions	7,434	-	6,318	-
Dividend income	(291)	(300)	-	-
Gain from change in investment holding	39	276	-	-
Disposals	(648)	-	-	-
Effect of change in exchange rates	(58)	41	-	-
At 31 December	**12,549**	**6,151**	**9,717**	**3,399**

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Investments in associates as at 31 December 2013 and 2012, and dividend income from those investments for the years then ended were as follows:

	Consolidated financial statements													
	Ownership interest		Paid-up capital		Cost		Equity		Impairment		Equity - net		Dividend income for the year ended	
	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012
	(%)				(in million Baht)									
Associates														
PTT Polymer Marketing Co., Ltd.	25	25	40	40	10	10	223	158	-	-	223	158	-	-
Vinythai Plc.	25	25	7,111	7,111	3,297	3,297	4,205	4,432	-	-	4,205	4,432	253	296
Eastern Fluid Transport Co., Ltd.	23	23	10	10	2	2	19	18	-	-	19	18	8	4
PTT ICT Solutions Co., Ltd.	40	40	150	150	60	60	303	245	-	-	303	245	30	-
PTT Energy Solution Co., Ltd.	20	20	150	150	30	30	38	34	-	-	38	34	-	-
Global Power Synergy Co., Ltd.	30	-	11,237	-	6,318	-	7,761	-	-	-	7,761	-	-	-
					9,717	**3,399**	**12,549**	**4,887**	**-**	**-**	**12,549**	**4,887**	**291**	**300**
Indirect associates														
Myriant Corporation	-	47.35	-	0.07	-	1,919	-	1,184	-	-	-	1,184	-	-
Erca Moerdijk B.V.	-	12.50	-	63	-	80	-	80	-	-	-	80	-	-
					-	**1,999**	**-**	**1,264**	**-**	**-**	**-**	**1,264**	**-**	**-**
Total					**9,717**	**5,398**	**12,549**	**6,151**	**-**	**-**	**12,549**	**6,151**	**291**	**300**

	Separate financial statements													
	Ownership interest		Paid-up capital		Cost		Impairment		At cost -net		Fair value of listed securities		Dividend income	
	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012
	(%)				*(in million Baht)*									
Associates														
PTT Polymer Marketing Co., Ltd.	25	25	40	40	10	10	-	-	10	10	-	-	-	-
Vinythai Plc.	25	25	7,111	7,111	3,297	3,297	-	-	3,297	3,297	3,108	5,329	253	296
Eastern Fluid Transport Co., Ltd.	15	15	10	10	2	2	-	-	2	2	-	-	5	3
PTT ICT Solutions Co., Ltd.	40	40	150	150	60	60	-	-	60	60	-	-	30	-
PTT Energy Solution Co., Ltd.	20	20	150	150	30	30	-	-	30	30	-	-	-	-
Global Power Synergy Co., Ltd.	30	-	11,237	-	6,318	-	-	-	6,318	-	-	-	-	-
Total					**9,717**	**3,399**	**-**	**-**	**9,717**	**3,399**	**3,108**	**5,329**	**288**	**299**

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The following summarised financial information on associates which have been accounted for using the equity method is not adjusted for the percentage of ownership held by the Group:

	Owner -ship (%)	Total assets	Total liabilities	Total revenues for the year	Net profit (loss) for the year
			(in million Baht)		
31 December 2013					
Associates					
PTT Polymer Marketing Co., Ltd.	25	9,203	8,313	76,666	262
Vinythai Plc.	25	21,783	5,638	17,513	198
Eastern Fluid Transport Co., Ltd.	23	114	42	104	38
PTT ICT Solutions Co., Ltd.	40	1,947	1,190	2,371	220
PTT Energy Solutions Co., Ltd.	20	410	224	463	16
Global Power Synergy Co., Ltd.	30	45,490	20,180	26,333	1,187
Total		**78,947**	**35,587**	**123,750**	**1,921**
31 December 2012					
Associates					
PTT Polymer Marketing Co., Ltd.	25	8,084	7,459	71,135	147
Vinythai Plc.	25	21,285	4,688	17,090	1,692
Eastern Fluid Transport Co., Ltd.	23	97	19	92	26
PTT ICT Solutions Co., Ltd.	40	1,786	1,168	2,358	238
PTT Energy Solutions Co., Ltd.	20	352	187	412	7
		31,604	**13,521**	**91,087**	**2,110**
Indirect associate					
Myriant Corporation	47.35	3,615	3,416	19	(1,178)
		3,615	**3,416**	**19**	**(1,178)**
Total		**35,219**	**16,937**	**91,106**	**932**

16 Other investments

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Current investment				
Promissory notes -financial institutions	25,802	28,792	24,676	27,000
	25,802	**28,792**	**24,676**	**27,000**
Other long - term investments				
Debt securities held to maturity	77	-	-	-
Other non marketable equity securities				
Alliance Petrochemical Investment (Singapore) Pte. Ltd. (15.34% Shareholding by the Company)	290	290	290	290
Guangzhou Keylink Chemical Co., Ltd. (15% Shareholding by the Group)	21	30	-	-
Exeltium SAS (4% Shareholding by the Group)	319	286	-	-
Business Services Alliance Co., Ltd. (50% Preferred share Shareholding)	1	1	1	1
	708	**607**	**291**	**291**
Total	**26,510**	**29,399**	**24,967**	**27,291**

The currency denomination of other investments as at 31 December was as follows:

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Thai Baht (THB)	20,848	28,793	20,001	27,001
United States Dollars (USD)	2,117	290	1,761	290
Euro Dollars(EUR)	319	286	-	-
Chinese Yuan (CNY)	3,226	30	3,205	-
Total	**26,510**	**29,399**	**24,967**	**27,291**

17 Property, plant and equipment

	Consolidated financial statements						
	Land& improvement	Plant, machinery, factory equipment and tools	Buildings& buildings improvement	Furniture, fixtures and equipment	Vehicles	Asset under construction	Total
	(in million Baht)						
Cost							
At 1 January 2012	7,032	290,579	13,915	3,149	936	11,458	327,069
Additions	24	467	15	149	70	9,905	10,630
Acquired through business acquisition	301	6,354	1,006	3	-	1,390	9,054
Transfers	31	11,014	431	37	(12)	(11,021)	480
Disposals	(7)	(318)	(14)	(30)	(109)	(21)	(499)
Effect of change in exchange rates	6	394	22	-	(1)	35	456
At 31 December 2012 and 1 January 2013	**7,387**	**308,490**	**15,375**	**3,308**	**884**	**11,746**	**347,190**
Additions	4	522	120	214	45	16,044	16,949
Acquired through business acquisition	-	-	410	15	-	4,222	4,647
Transfers	25	7,209	399	13	1	(7,894)	(247)
Disposals	(7)	(469)	(15)	(60)	(79)	-	(630)
Disposals of investment in subsidiary	(226)	(20,469)	(494)	(39)	-	(510)	(21,738)
Effect of change in exchange rates	39	844	219	2	-	416	1,520
At 31 December 2013	**7,222**	**296,127**	**16,014**	**3,453**	**851**	**24,024**	**347,691**

	Consolidated financial statements						
	Land& improvement	Plant, machinery, factory equipment and tools	Buildings& buildings improvement	Furniture, fixtures and equipment	Vehicles	Asset under construction	Total
	(in million Baht)						
Depreciation and impairment losses							
At 1 January 2012	(385)	(85,408)	(3,522)	(1,893)	(518)	-	(91,726)
Depreciation charge for the year	(64)	(12,999)	(689)	(443)	(120)	-	(14,315)
Transfers	3	(633)	(30)	3	5	-	(652)
Disposals	1	257	5	32	108	-	403
Impairment losses	-	-	-	-	-	(205)	(205)
Effect of change in exchange rates	-	(186)	(9)	(2)	(1)	-	(198)
At 31 December 2012 and 1 January 2013	**(445)**	**(98,969)**	**(4,245)**	**(2,303)**	**(526)**	**(205)**	**(106,693)**
Depreciation charge for the year	(66)	(12,870)	(789)	(364)	(103)	-	(14,192)
Transfers	-	147	(137)	16	(1)	-	25
Disposals	-	276	12	59	72	-	419
Disposals of investment in subsidiary	-	3,977	106	17	-	-	4,100
(Reversal) impairment losses	-	35	9	1	-	(23)	22
Effect of change in exchange rates	-	(111)	(13)	1	-	-	(123)
At 31 December 2013	**(511)**	**(107,515)**	**(5,057)**	**(2,573)**	**(558)**	**(228)**	**(116,442)**

	Consolidated financial statements						
	Land& improvement	Plant, machinery, factory equipment and tools	Buildings& buildings improvement	Furniture, fixtures and equipment	Vehicles	Asset under construction	Total
			(in million Baht)				
Net book value							
At 1 January 2012							
Owned assets	6,647	205,171	10,393	1,150	197	11,458	235,016
Assets under finance leases	-	-	-	106	221	-	327
	6,647	**205,171**	**10,393**	**1,256**	**418**	**11,458**	**235,343**
At 31 December 2012 and 1 January 2013							
Owned assets	6,942	209,521	11,130	912	191	11,541	240,237
Assets under finance leases	-	-	-	93	167	-	260
	6,942	**209,521**	**11,130**	**1,005**	**358**	**11,541**	**240,497**
At 31 December 2013							
Owned assets	6,711	188,612	10,957	736	165	23,796	230,977
Assets under finance leases	-	-	-	144	128	-	272
	6,711	**188,612**	**10,957**	**880**	**293**	**23,796**	**231,249**

The gross amount of the Group's fully depreciated property and equipment that was still in use as at 31 December 2013 amounted to Baht 15,756 million. *(2012: Baht 14,991 million)*

Security

At 31 December 2013, the Group's properties with a net book value of Baht 8,221 million *(2012: Baht 24,680 million)* were registered to secure Bank loan (see note 22).

Property, plant and equipment under construction

Capitalised borrowing costs relating to the acquisition of the land and the construction of the new factory amounted to Baht 23 million *(2012: nil)*, with a capitalization rate of 4.94% *(2012: nil)*.

	Separate financial statements						
	Land& improvement	Plant, machinery, factory equipment and tools	Buildings& buildings improvement	Furniture, fixtures and equipment	Vehicles	Asset under construction	Total
				(in million Baht)			
Cost							
At 1 January 2012	3,905	186,606	6,726	2,070	532	9,191	209,030
Additions	21	175	3	99	58	7,398	7,754
Transfers	9	7,924	163	25	-	(8,210)	(89)
Disposals	(5)	(175)	(11)	(15)	(71)	(10)	(287)
At 31 December 2012 and 1 January 2013	**3,930**	**194,530**	**6,881**	**2,179**	**519**	**8,369**	**216,408**
Additions	2	305	3	169	23	9,915	10,417
Transfer of businesses *(Note 6)*	1,204	39,861	1,317	26	104	887	43,399
Transfers	5	4,920	45	(14)	1	(5,146)	(189)
Disposals	-	(181)	(1)	(42)	(62)	-	(286)
At 31 December 2013	**5,141**	**239,435**	**8,245**	**2,318**	**585**	**14,025**	**269,749**
Depreciation and impairment losses							
At 1 January 2012	(276)	(69,626)	(1,983)	(1,536)	(354)	-	(73,775)
Depreciation charge for the year	(25)	(7,026)	(277)	(281)	(71)	-	(7,680)
Disposals	2	156	4	15	68	-	245
At 31 December 2012 and 1 January 2013	**(299)**	**(76,496)**	**(2,256)**	**(1,802)**	**(357)**	**-**	**(81,210)**
Depreciation charge for the year	(40)	(8,494)	(339)	(231)	(69)	-	(9,173)
Transfers	-	(4)	(10)	15	(1)	-	-
Disposals	-	131	1	42	56	-	230
At 31 December 2013	**(339)**	**(84,863)**	**(2,604)**	**(1,976)**	**(371)**	**-**	**(90,153)**

	Separate financial statements						
	Land& improvement	Plant, machinery, factory equipment and tools	Buildings& buildings improvement	Furniture, fixtures and equipment	Vehicles	Asset under construction	Total
			(in million Baht)				
Net book value							
At 1 January 2012							
Owned assets	3,629	116,980	4,743	453	25	9,191	135,021
Assets under finance leases	-	-	-	81	153	-	234
	3,629	**116,980**	**4,743**	**534**	**178**	**9,191**	**135,255**
At 31 December 2012 and 1 January 2013							
Owned assets	3,631	118,034	4,625	298	22	8,369	134,979
Assets under finance leases	-	-	-	79	140	-	219
	3,631	**118,034**	**4,625**	**377**	**162**	**8,369**	**135,198**
At 31 December 2013							
Owned assets	4,802	154,572	5,641	202	102	14,025	179,344
Assets under finance leases	-	-	-	140	112	-	252
	4,802	**154,572**	**5,641**	**342**	**214**	**14,025**	**179,596**

The gross amount of the Company's fully depreciated property and equipment that was still in use as at 31 December 2013 amounted to Baht 5,197 million. *(2012: Baht 4,020 million).*

18 Land leasehold right

	Consolidated financial statements	Separate financial statements
	(in million Baht)	
Cost		
At 1 January 2012	2,427	2,317
Additions	50	-
Transfers	(11)	(11)
Effect of change in exchange rates	4	-
At 31 December 2012 and 1 January 2013	**2,470**	**2,306**
Additions	46	-
Disposal of investment in subsidiary	(47)	-
Effect of change in exchange rates	(4)	-
At 31 December 2013	**2,465**	**2,306**
Amortisation and impairment losses		
At 1 January 2012	(1,259)	(1,252)
Amortisation charge for the year	(79)	(78)
At 31 December 2012 and 1 January 2013	**(1,338)**	**(1,330)**
Amortisation charge for the year	(80)	(78)
Disposal of investment in subsidiary	1	-
At 31 December 2013	**(1,417)**	**(1,408)**
Net book value		
At 1 January 2012	**1,168**	**1,065**
At 31 December 2012 and 1 January 2013	**1,132**	**976**
At 31 December 2013	**1,048**	**898**

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19 Goodwill

	Consolidated financial statements		
	Goodwill from business combination	Goodwill from acquisition	Total
		(in million Baht)	
Cost			
At 1 January 2012	7,709	3,033	10,742
Acquired through business acquisitions	-	15	15
Effect of change in exchange rates	-	12	12
At 31 December 2012 and 1 January 2013	**7,709**	**3,060**	**10,769**
Acquired through business acquisitions	-	1,106	1,106
Disposal of investment in subsidiary	(633)	-	(633)
Effect of change in exchange rates	-	63	63
At 31 December 2013	**7,076**	**4,229**	**11,305**
Impairment losses			
At 1 January 2012	-	-	-
Impairment loss	-	-	-
At 31 December 2012 and 1 January 2013	**-**	**-**	**-**
Impairment loss	-	-	-
At 31 December 2013	**-**	**-**	**-**
Net book value			
At 1 January 2012	**7,709**	**3,033**	**10,742**
At 31 December 2012 and 1 January 2013	**7,709**	**3,060**	**10,769**
At 31 December 2013	**7,076**	**4,229**	**11,305**

	Separate financial statements		
	Goodwill from business combination	Goodwill from acquisition	Total
		(in million Baht)	
Cost			
At 1 January 2012	7,010	-	7,010
Effect of change in exchange rates	-	-	-
At 31 December 2012 and 1 January 2013	**7,010**	**-**	**7,010**
Effect of change in exchange rates	-	-	-
At 31 December 2013	**7,010**	**-**	**7,010**
Impairment losses			
At 1 January 2012	-	-	-
Impairment loss	-	-	-
At 31 December 2012 and 1 January 2013	**-**	**-**	**-**
Impairment loss	-	-	-
At 31 December 2013	**-**	**-**	**-**
Net book value			
At 1 January 2012	**7,010**	**-**	**7,010**
At 31 December 2012 and 1 January 2013	**7,010**	**-**	**7,010**
At 31 December 2013	**7,010**	**-**	**7,010**

20 Intangible assets

	Consolidated financial statements						
	License for production process	Software licences	Customer contracts and the related customer relationships	Right to use pipeline	Right for other operation	Intangible in progress	Total
Cost				*(in million Baht)*			
At 1 January 2012	4,737	1,619	3,175	424	612	365	10,932
Additions	315	85	-	-	15	257	672
Acquired through business acquisitions	-	115	148	-	1,330	215	1,808
Transfers	38	145	-	1	173	(267)	90
Effect of change in exchange rates	-	5	(5)	-	8	4	12
At 31 December 2012 and 1 January 2013	**5,090**	**1,969**	**3,318**	**425**	**2,138**	**574**	**13,514**
Additions	36	67	-	13	62	279	457
Transfers	(8)	200	-	-	47	(243)	(4)
Disposals	-	(2)	-	-	(257)	-	(259)
Disposal of investment in subsidiary	-	(30)	(110)	(19)	(63)	-	(222)
Effect of change in exchange rates	-	205	11	-	167	13	396
At 31 December 2013	**5,118**	**2,409**	**3,219**	**419**	**2,094**	**623**	**13,882**

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	Consolidated financial statements						
	License for production process	Software licences	Customer contracts and the related customer relationships	Right to use pipeline	Right for other operation	Intangible in progress	Total
				(in million Baht)			
Amortisation and impairment losses							
At 1 January 2012	(1,077)	(759)	(91)	(173)	(327)	-	(2,427)
Amortisation charge for the year	(253)	(242)	(327)	(28)	(123)	-	(973)
Impairment loss	(33)	-	-	-	-	-	(33)
Effect of change in exchange rates	-	(4)	2	-	1	-	(1)
At 31 December 2012 and 1 January 2013	**(1,363)**	**(1,005)**	**(416)**	**(201)**	**(449)**	**-**	**(3,434)**
Amortisation charge for the year	(238)	(274)	(355)	(27)	(191)	-	(1,085)
Disposals	-	2	-	-	256	-	258
Transfers	-	-	-	-	10	-	10
Disposals of investment in subsidiary	-	15	15	3	16	-	49
Effect of change in exchange rates	-	(195)	(5)	-	(28)	-	(228)
At 31 December 2013	**(1,601)**	**(1,457)**	**(761)**	**(225)**	**(386)**	**-**	**(4,430)**
Net book value							
At 1 January 2012	**3,660**	**860**	**3,084**	**251**	**285**	**365**	**8,505**
At 31 December 2012 and 1 January 2013	**3,727**	**964**	**2,902**	**224**	**1,689**	**574**	**10,080**
At 31 December 2013	**3,517**	**952**	**2,458**	**194**	**1,708**	**623**	**9,452**

	Separate financial statements						
	License for production process	Software licences	Customer contracts and the related customer relationships	Right to use pipeline	Right for other operation	Intangible in progress	Total
			(in million Baht)				
Cost							
At 1 January 2012	1,415	1,176	2,518	310	103	247	5,769
Additions	-	47	-	-	12	122	181
Transfers	-	92	-	1	-	(51)	42
At 31 December 2012 and 1 January 2013	**1,415**	**1,315**	**2,518**	**311**	**115**	**318**	**5,992**
Additions	36	12	-	13	-	64	125
Transfer of businesses *(Note 6)*	2,100	32	-	31	7	12	2,182
Transfers	-	109	-	-	-	(1)	108
At 31 December 2013	**3,551**	**1,468**	**2,518**	**355**	**122**	**393**	**8,407**
Amortisation and impairment losses							
At 1 January 2012	(746)	(573)	(60)	(131)	(12)	-	(1,522)
Amortisation charge for the year	(90)	(126)	(192)	(19)	(17)	-	(444)
At 31 December 2012 and 1 January 2013	**(836)**	**(699)**	**(252)**	**(150)**	**(29)**	**-**	**(1,966)**
Amortisation charge for the year	(146)	(143)	(202)	(21)	(21)	-	(533)
At 31 December 2013	**(982)**	**(842)**	**(454)**	**(171)**	**(50)**	**-**	**(2,499)**
Net book value							
At 1 January 2012	**669**	**603**	**2,458**	**179**	**91**	**247**	**4,247**
At 31 December 2012 and 1 January 2013	**579**	**616**	**2,266**	**161**	**86**	**318**	**4,026**
At 31 December 2013	**2,569**	**626**	**2,064**	**184**	**72**	**393**	**5,908**

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21 Deferred tax

Deferred tax assets and liabilities as at 31 December were as follows:

	Consolidated financial statements			
	Assets		Liabilities	
	2013	2012	2013	2012
	(in million Baht)			
Total	2,207	1,515	(5,474)	(4,777)
Set off of tax	(1,508)	(846)	1,508	846
Net deferred tax assets (liabilities)	**699**	**669**	**(3,966)**	**(3,931)**

	Separate financial statements			
	Assets		Liabilities	
	2013	2012	2013	2012
	(in million Baht)			
Total	1,371	664	(4,313)	(3,841)
Set off of tax	(1,371)	(664)	1,371	664
Net deferred tax assets (liabilities)	**-**	**-**	**(2,942)**	**(3,177)**

Movements in total deferred tax assets and liabilities during the year were as follows:

	Consolidated financial statements					
		(Charged) / credited to:				
	At 1 January 2013	Profit and loss *(note 35)*	Equity	Acquisition of subsidiary	Exchange differences	**At 31 December 2013**
			(in million Baht)			
Deferred tax assets						
Inventories	6	25	-	-	1	32
Employee benefit expenses	319	35	-	-	37	391
Fair value adjustment at amalgamation date	305	9	-	-	-	314
Coverable oil spill expenses form insurance	-	150	-	-	-	150
Capital distribution from subsidiaries	-	365	-	-	-	365
Others	885	62	-	(20)	28	955
Total	**1,515**	**646**	**-**	**(20)**	**66**	**2,207**
Deferred tax liabilities						
Property, plant and equipment	(2,710)	(105)	-	(575)	(30)	(3,420)
Finance lease assets	(10)	1	-	-	-	(9)
Fair value adjustment at amalgamation date	(2,057)	203	-	134	-	(1,720)
Gain on disposal of investment	-	(310)	-	-	-	(310)
Others	-	(6)	-	(7)	(2)	(15)
Total	**(4,777)**	**(217)**	**-**	**(448)**	**(32)**	**(5,474)**
Net	**(3,262)**	**429**	**-**	**(468)**	**34**	**(3,267)**

PTT Global Chemical Public Company Limited and its Subsidiaries
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	Consolidated financial statements					
		(Charged) / credited to:				
	At 1 January 2012	Profit and loss *(note 35)*	Equity	Acquisition of subsidiary	Exchange differences	**At 31 December 2012**
			(in million Baht)			
Deferred tax assets						
Inventories	27	(21)	-	-	-	6
Loss carryforward	345	(345)	-	-	-	-
Employee benefit expenses	297	22	-	-	-	319
Fair value adjustment at amalgamation date	322	(17)	-	-	-	305
Others	484	282	3	115	1	885
Total	**1,475**	**(79)**	**3**	**115**	**1**	**1,515**
Deferred tax liabilities						
Property, plant and equipment	(2,302)	21	-	(416)	(13)	(2,710)
Finance lease assets	(12)	2	-	-	-	(10)
Fair value adjustment at amalgamation date	(2,186)	129	-	-	-	(2,057)
Others	(31)	122	-	(91)	-	-
Total	**(4,531)**	**274**	**-**	**(507)**	**(13)**	**(4,777)**
Net	**(3,056)**	**195**	**3**	**(392)**	**(12)**	**(3,262)**

PTT Global Chemical Public Company Limited and its Subsidiaries
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		Separate financial statements (Charged) / credited to:			
	At 1 January 2013	Profit and loss *(note 35)*	Equity	Transfer of business *(note 6)*	**At 31 December 2013**
			(in million Baht)		
Deferred tax assets					
Inventories	5	8	-	-	13
Employee benefit expenses	215	37	-	17	269
Fair value adjustment at amalgamation date	242	9	-	-	251
Coverable oil spill expenses form insurance	-	150	-	-	150
Capital distribution from subsidiaries	-	365	-	-	365
Others	202	(136)	-	257	323
Total	**664**	**433**	**-**	**274**	**1,371**
Deferred tax liabilities					
Inventories	(19)	13	-	-	(6)
Property, plant and equipment	(1,991)	(339)	-	(42)	(2,372)
Finance lease assets	(9)	1	-	-	(8)
Net gain on fair value remeasurement of interest rate swap contracts	(3)	3	-	-	-
Fair value adjustment at amalgamation date	(1,819)	203	-	-	(1,616)
Gain on disposal of investment	-	(310)	-	-	(310)
Others	-	(1)	-	-	(1)
Total	**(3,841)**	**(430)**	**-**	**(42)**	**(4,313)**
Net	**(3,177)**	**3**	**-**	**232**	**(2,942)**

		Separate financial statements (Charged) / credited to:		
	At 1 January 2012	Profit and loss *(note 35)*	Equity	**At 31 December 2012**
		(in million Baht)		
Deferred tax assets				
Inventories	24	(19)	-	5
Employee benefit expenses	213	2	-	215
Loss carryforward	345	(345)	-	-
Fair value adjustment at amalgamation date	259	(17)	-	242
Others	11	191	-	202
Total	**852**	**(188)**	**-**	**664**
Deferred tax liabilities				
Inventories	-	(19)	-	(19)
Property, plant and equipment	(1,851)	(140)	-	(1,991)
Finance lease assets	(10)	1	-	(9)
Net gain on fair value remeasurement of interest rate swap contracts	(16)	13	-	(3)
Fair value adjustment at amalgamation date	(1,948)	129	-	(1,819)
Total	**(3,825)**	**(16)**	**-**	**(3,841)**
Net	**(2,973)**	**(204)**	**-**	**(3,177)**

22 Interest-bearing liabilities

Interest bearing liabilities are defined as bank overdrafts, loans and finance lease liabilities which are as follows;

	Note	Consolidated financial statements		Separate financial statements	
		2013	2012	2013	2012
		(in million Baht)			
Current					
Bank overdrafts and short-term loans from financial institutions					
secured		1,407	-	-	-
unsecured		3,192	2,869	-	-
Short-term loans from related parties					
unsecured	*9*	-	-	1,238	3,936
Short-term loans		**4,599**	**2,869**	**1,238**	**3,936**
Current portion of long-term loans from financial institutions					
secured		960	2,220	-	-
unsecured		3,798	3,303	3,169	2,852
Current portion of long-term loans from other parties					
unsecured		17	12	-	-
Current portion of debentures					
unsecured		15,065	8,000	15,065	8,000
Current portion of long-term loans		**19,840**	**13,535**	**18,234**	**10,852**
Current portion of financial lease liabilities		234	200	151	97
Total current		**24,673**	**16,604**	**19,623**	**14,885**
Non-current					
Long-term loans from financial institutions					
secured		7,619	19,293	-	-
unsecured		33,122	35,436	32,183	34,191
Long-term loans from other parties					
secured		1,910	307	-	-
unsecured		283	136	-	-
Debentures					
unsecured		52,878	65,280	52,878	65,280
Long-term loans		**95,812**	**120,452**	**85,061**	**99,471**
Finance lease liabilities		290	306	116	131
Total non-current		**96,102**	**120,758**	**85,177**	**99,602**
Total		**120,775**	**137,362**	**104,800**	**114,487**

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The currency denomination of interest-bearing liabilities as at 31 December was as follows:

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Thai Baht (THB)	66,651	86,804	59,130	68,336
United States Dollars (USD)	49,300	47,887	45,670	46,151
Euro (EUR)	3,414	1,359	-	-
Japanese Yen (JPY)	-	18	-	-
Ringgit (MYR)	1,379	1,291	-	-
Others	31	3	-	-
Total	**120,775**	**137,362**	**104,800**	**114,487**

As at 31 December 2013, the Group and the Company had unutilised credit facilities totalling Baht 55,210 million and 37,180 million, respectively. *(2012: Baht 53,342 million and 48,436 million, respectively)*

The periods to maturity of interest-bearing liabilities, excluding finance lease liabilities, as at 31 December were as follows:

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Within one year	24,439	16,404	19,472	14,788
After one year but within five years	49,752	65,355	43,422	53,801
After five years	46,060	55,097	41,639	45,670
Total	**120,251**	**136,856**	**104,533**	**114,259**

Long-term loans as at 31 December were secured on the following assets;

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Property, Plant and equipment	8,221	24,680	-	-

Debentures and Loans from financial institutions of the Group were as follow;

Debentures

As at 31 December 2013, the Company had unsubordinated and unsecured debentures in US dollar and Thai Baht in the amount of Baht 67,943 million (Original amount of Baht 67,878 million and fair value adjustment of debentures from business combination of Baht 65 million) *(2012: Baht 73,280 million (Original amount of Baht 73,019 million and fair value adjustment of debentures from business combination of Baht 261 million)).* These debentures have maturity periods between 5 years to 10 years, bear different interest rates and repayment schedules as specified in each agreement.

Details of the Company's debentures as at 31 December 2013 were as follows:

	Currency	Facilities *(in million)*	Face Value per share	Years	Interest Rates (%) p.a.	Repayment Terms
Unsubordinated debentures at 99.46% of the face value unsecured	USD	300	10,000	10	5.5	Interest is payable on semi-annual basis and maturity in June 2015
Unsubordinated debenture unsecured	Baht	2,800	1,000	10	5.5	Interest is payable on semi-annual basis and maturity in October 2017
Unsubordinated debenture unsecured	Baht	500	1,000	7	5.6	Interest is payable on semi-annual basis and maturity in October 2015
Unsubordinated debenture unsecured	Baht	4,000	1,000	1-3 4-5 6-7	5.3 6 6.45	Interest is payable on quarterly basis and maturity in December 2015
Unsubordinated debenture unsecured	Baht	1,058	1,000	7	4.9	Interest is payable on semi-annual basis and maturity in June 2016
Unsubordinated debenture unsecured	Baht	1,942	1,000	10	5.5	Interest is payable on semi-annual basis and maturity in June 2019
Unsubordinated debenture unsecured	Baht	15,000	1,000	5	5.5	Interest is payable on quarterly basis and maturity in April 2014
Unsubordinated debenture at 99.108% of the face value unsecured	USD	1,000	100	10	4.25	Interest is payable on semi-annual basis and maturity in September 2022

Loans from financial institutions

As at 31 December 2013, the Group and the Company had long-term and revolving long-term credit facility agreements with several financial institutions totalling Baht 45,499 million and 35,352 million, respectively (Original amount of Baht 45,438 million and 35,222 million and fair value adjustment of loans from business combination of Baht 61 million and 130 million, respectively), *(2012: Baht 60,252 million and Baht 37,043 million, respectively (Original amount of Baht 59,816 million and 36,891 million and fair value adjustment of loans from business combination of Baht 436 million and 152 million, respectively))*, bear different interest rates as specified in each agreement. The Company is required to comply with certain covenants pertaining to maintenance of certain financial ratios, percentage of share held by the major shareholder and other conditions as specified in each agreement.

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Details of the Group's loans as at 31 December 2013 were as follows:

Currency	Facilities *(in million)*	Interest Rates (%) p.a.	Repayment Terms
The Company			
Baht	1,000	THBFIX 6 M plus margin	Principal is repayable on semi-annual basis, in 9 instalments commencing from October 2011.
Baht	7,500	Highest interest rate for 6 month-fixed deposit plus margin	Principal is repayable on semi-annual basis, in 15 instalments commencing from August 2011.
Baht	1,500	Fixed rate	Principal is repayable on semi-annual basis, in 9 instalments commencing from September 2011.
Baht	1,600	THBFIX 6 M plus margin	Principal is repayable on semi-annual basis, in 8 instalments commencing from March 2013
Baht	2,500	THBFIX 6 M plus margin	Principal is repayable on annual basis, in 3 instalments commencing from July 2016.
Baht	2,000	Highest interest rate for 6 month-fixed deposit plus margin	Principal is repayable at the end of contract, in May 2017.
Baht	3,000	Prime Rate less discount	Principal is repayable at the end of contract, in December 2017.
Baht	9,898	Highest interest rate for 6 month-fixed deposit plus margin	Principal is repayable on semi-annual basis, in 20 instalments commencing from March 2011.
USD	80	LIBOR 1M/3M/6M plus margin	Principal is repayable at the end of contract, in September 2015.
Baht	7,000	FDR 6 M plus margin	Principal is repayable on semi-annual basis, in 15 instalments commencing from September 2013.
Baht	3,000	FDR 6 M plus margin	Principal is repayable on semi-annual basis, in 14 instalments commencing from April 2014.

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Currency	Facilities *(in million)*	Interest Rates (%) p.a.	Repayment Terms
Subsidiaries			
Baht	170	THBFIX 3 M plus a margin	Principal is repayable on quarterly basis, in 12 instalments, commencing from March 2012.
Baht	140	THBFIX 3 M plus a margin	Principal is repayable on quarterly basis, in 12 instalments, commencing from September 2012.
Baht	760	BIBOR 3 M plus a margin	Principal is repayable on quarterly basis, in 14 instalments, commencing from September 2012.
Baht	6,320	FDR 6 M-average of 4 banks plus a margin	Principal is repayable on semi-annual basis, in 11 instalments commencing from September 2013.
Baht	3,240	FDR 6 M-average of 4 banks plus a margin	Principal is repayable on semi-annual basis, in 17 instalments commencing from September 2013.
Baht	7,000	FDR 6 M plus a margin	Principal is repayable on semi-annual basis, in 20 instalments commencing from March 2017.
Jointly-controlled entities			
USD	50	LIBOR plus a margin	Principal is repayable at the end of contract, in July 2015.
EURO	13	Fixed rate	Principal is repayable at the end of contract, in July 2021.
Ringgit	105	Cost of fund plus a margin	Principal is repayable at the end of contract, in July 2021.

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23 Trade accounts payable

	Note	Consolidated financial statements		Separate financial statements	
		2013	2012	2013	2012
		(in million Baht)			
Related parties	9	39,501	33,919	38,640	31,184
Other parties		6,154	4,566	995	563
Total		**45,655**	**38,485**	**39,635**	**31,747**

The currency denomination of trade accounts payable as at 31 December was as follows:

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Thai Baht (THB)	40,894	34,724	39,247	31,650
United States Dollars (USD)	1,774	1,074	388	97
Euro (EUR)	2,471	2,321	-	-
Singapore Dollars (SGD)	10	9	-	-
Japanese Yen (JPY)	12	13	-	-
Ringgit (MYR)	390	332	-	-
Brazilian real (BRL)	90	-	-	-
Others	14	12	-	-
Total	**45,655**	**38,485**	**39,635**	**31,747**

24 Other payables

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Accrued operating expenses	3,914	3,461	2,017	1,652
Accrued interest expenses	806	747	700	700
Other payables	1,976	3,384	1,715	1,767
Deposits and advances received	107	454	8	5
Retention payables	322	117	87	35
Current portion of finance lease liabilities	234	200	151	97
Others	441	515	24	20
Total	**7,800**	**8,878**	**4,702**	**4,276**

25 Other current liabilities

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Withholding tax payable	211	298	174	248
Payable to revenue department	24	254	-	-
Other tax payable	168	373	131	309
Others	176	193	49	52
Total	**579**	**1,118**	**354**	**609**

26 Employee benefit obligations

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Statement of financial position				
Statement of financial position obligations for:				
Present value of unfunded obligation	2,628	2,484	1,054	893
Present value of funded obligation	830	840	-	-
Other long-term employee benefits	514	326	299	264
Total	**3,972**	**3,650**	**1,353**	**1,157**
Fair value of plan assets	(704)	(576)	-	-
Net	**3,268**	**3,074**	**1,353**	**1,157**

Movement in the present value of the defined benefit obligations:

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Defined benefit obligations at 1 January	3,650	2,598	1,157	1,057
Defined benefit obligations from acquisition of business	-	642	-	-
Transfer of businesses *(Note 6)*	-	-	92	-
Benefits paid by the plan	(140)	(177)	(40)	(26)
Current service costs and interest	362	339	144	126
Actuarial losses (gain) recognised in profit or loss	(94)	231	-	-
Currency translation differences	163	16	-	-
Others	31	1	-	-
Defined benefit obligations at 31 December	**3,972**	**3,650**	**1,353**	**1,157**

The assets for funded plan were as follows:

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Equity securities	242	320	-	-
Government and corporate bonds	356	222	-	-
Others	106	34	-	-
Total	**704**	**576**	**-**	**-**

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Movement in the fair value of the plan assets:

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Fair value of the plan asset as at 1 January	576	496	-	-
Contributions paid into the plan	78	54	-	-
Benefits paid by the plan	(26)	(18)	-	-
Expected return on plan assets	22	34	-	-
Actuarial losses	51	11	-	-
Currency translation differences	11	3	-	-
Others	(8)	(4)	-	-
Fair value of the plan asset as at 31 December	**704**	**576**	**-**	**-**

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Statement of income:				
Recognised in profit or loss:				
Long-term employee benefit obligations	321	271	108	94
Other long-term employee benefit obligations	61	40	36	32
Actuarial losses (gain)	(145)	220	-	-
Total	**237**	**531**	**144**	**126**

Expense recognised in profit or loss (note 32)

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Current service costs	223	205	87	76
Interest on obligation	139	134	57	50
Expected return on plan assets	(22)	(33)	-	-
Actuarial losses (gain)	(145)	220	-	-
Others	42	5	-	-
Total	**237**	**531**	**144**	**126**

The expense is recognised in the following line items in the statement of income:

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Cost of sales	125	117	67	59
Administrative expenses	257	194	77	67
Actuarial losses (gain)	(145)	220	-	-
Total	**237**	**531**	**144**	**126**

Principle actuarial assumptions at the reporting date (expressed as weighted averages):

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
		(%)		
Discount rate as at 31 December	3-4.8	2.8-5	4.8	4.8
Future salary increases	2-7	3.32-7	6	6
Resignation rate	0-15	0-15	0-3	0-3
Retirement age	55-65 Years	60 Years	60 Years	60 Years

Assumptions regarding future mortality are based on published statistics and mortality tables

27 Share capital

	Par value per share *(Baht)*	2013 Number	2013 Amount	2012 Number	2012 Amount
		(million shares / million Baht)			
Authorised					
At 1 January ordinary shares	*10*	4,512.9	45,129.3	4,512.9	45,129.3
Reduction of shares	*10*	(4.1)	(40.8)	-	-
At 31 December ordinary shares	*10*	**4,508.8**	**45,088.5**	**4,512.9**	**45,129.3**
Issued and paid-up					
At 1 January ordinary shares	*10*	4,508.8	45,088.5	4,506.1	45,061.1
Issue of new shares	*10*	-	-	2.7	27.4
At 31 December ordinary shares	*10*	**4,508.8**	**45,088.5**	**4,508.8**	**45,088.5**

At the Annual General Meeting of shareholders of the Company held on 4 April 2013, the shareholders approved the reduction of the Company's registered capital from Baht 45,129,302,690 to Baht 45,088,491,170 by decreasing the number of 4,081,152 registered shares at par value of Baht 10 per share. The Company registered the reduction of the Company's registered capital with the Ministry of Commerce on 17 April 2013.

During 2012, the Company issued new ordinary shares of 2.74 million shares at Baht 10 par value, totalling Baht 27.4 million. The details are as follows:

Date	No. of share (million shares)	Description
31 January 2012	0.53	Supporting the conversion of warrants
30 April 2012	0.69	Supporting the conversion of warrants
30 July 2012	0.29	Supporting the conversion of warrants
15 October 2012	1.23	Supporting the conversion of warrants
Total	**2.74**	

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28 Additional paid-in capital and reserves

Share premium

Section 51 of the Public Companies Act B.E. 2535 requires companies to set aside share subscription monies received in excess of the par value of the shares issued to a reserve account ("share premium"). Share premium is not available for dividend distribution.

Surplus on business combination

Surplus on business combination was mainly the result of the increase in the net value of assets of PTT Aromatics and Refining Public Company Limited and PTT Phenol Company Limited which were re-measured and recognised at fair value at the amalgamation date of PTT Chemical Public Company Limited and PTT Aromatics and Refining Public Company Limited.

Legal reserve

Section 116 of the Public Companies Act B.E. 2535 requires that a company shall allocate not less than 5% of its annual net profit, less any accumulated losses brought forward, to a reserve account ("legal reserve"), until this account reaches an amount not less than 10% of the registered authorised capital. The legal reserve is not available for dividend distribution.

Other components of equity

Currency translation differences

The currency translation differences account within equity comprises all foreign currency differences arising from the translation of the financial statements of foreign operations, as well as from the translation of liabilities that hedge the Company's net investment in a foreign operation.

Cash flow hedges

The cash flow hedges account within equity comprises the cumulative net change in the fair value of cash flow hedges related to hedged transactions that have not yet occurred for effective portion.

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29 Segment information

The Group has significant business segments which offer different products and services, and are managed separately. For each of the business segments, the chief operating decision maker (CODM) reviews internal management reports on at least a quarterly basis. The operations in each of the Group's reportable segments have 7 reportable segments as described below.

Segment 1	Refinery and shared facilities
Segment 2	Aromatics
Segment 3	Olefins and Derivatives
Segment 4	EO-Based Performance
Segment 5	Green Chemicals
Segment 6	High Volume Specialties
Segment 7	Services and Others

Other operations in 2013 and 2012, none of these segments meets the quantitative thresholds for determining additional reportable segments.

Performance information of each reportable segment is measured based on segment profit before interest expense, tax, depreciation and amortisation which as included in the internal management reports that are reviewed by the Group's CODM. Management believes that using profit before interest expense, tax, depreciation and amortisation to measure performance is the most relevant in evaluating the results of certain segments relative to other entities that operate within these industries.

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Information about reporting segments for the year ended 31 December 2013

	Refinery & shared facilities	Aromatics	Olefins & Derivatives	EO-Based Performance	Green Chemicals	High Volume Specialties	Services & Others	Elimination	Total
					(in million Baht)				
External revenues	244,673	116,548	107,128	17,141	29,004	35,890	2,497	-	552,881
Inter-segment revenues	16,628	71,161	21,912	2	1,421	1	4,551	(115,676)	-
Total segment revenues	**261,301**	**187,709**	**129,040**	**17,143**	**30,425**	**35,891**	**7,048**	**(115,676)**	**552,881**
Cost of sales and services	253,832	173,585	96,274	12,948	26,092	33,402	4,582	(115,252)	485,463
Selling and administrative expenses	1,662	1,302	3,817	470	2,739	2,080	2,041	(1,540)	12,571
Profit before interest expense, tax , depreciation and amortisation	**7,667**	**12,870**	**29,506**	**3,819**	**2,222**	**556**	**2,863**	**(1,141)**	**58,362**
Interest income	257	343	434	53	42	64	1,016	(650)	1,559
Finance costs	(844)	(966)	(1,778)	(31)	(222)	(447)	(2,428)	632	(6,084)
Depreciation and amortisation	(3,240)	(3,327)	(5,425)	(759)	(1,220)	(2,426)	(400)	127	(16,670)
Dividend income	-	-	-	-	-	-	23,470	(23,470)	-
Share of profit (loss) of equity- accounted associates	-	-	93	-	(596)	-	430	(5)	(78)
Others	807	3	(957)	26	(1)	(39)	(2,110)	-	(2,271)
Profit (loss) before tax	**4,647**	**8,923**	**21,873**	**3,108**	**225**	**(2,292)**	**22,841**	**(24,507)**	**34,818**
Net profit (loss) for reportable segment	**4,265**	**7,991**	**21,173**	**3,094**	**513**	**(1,324)**	**22,035**	**(24,488)**	**33,277**

Information about reporting segments for the year ended 31 December 2012

	Refinery & shared facilities	Aromatics	Olefins & Derivatives	EO-Based Performance	Green Chemicals	High Volume Specialties	Services & Others	Elimination	Total
					(in million Baht)				
External revenues	270,448	113,923	100,214	16,239	30,083	27,321	7,389	-	565,617
Inter-segment revenues	12,735	71,674	19,025	1	836	109	10,460	(114,840)	-
Total segment revenues	**283,183**	**185,597**	**119,239**	**16,240**	**30,919**	**27,430**	**17,849**	**(114,840)**	**565,617**
Cost of sales and services	274,713	174,069	88,987	11,950	27,503	25,231	13,276	(114,607)	501,122
Selling and administrative expenses	721	1,352	3,575	441	2,517	1,215	2,682	(1,771)	10,732
Profit before interest expense, tax , depreciation and amortisation	**8,636**	**10,140**	**27,489**	**3,917**	**1,612**	**1,978**	**2,814**	**582**	**57,168**
Interest income	2	3	518	50	28	126	1,449	(1,378)	798
Finance costs	(827)	(1,420)	(2,152)	(92)	(311)	(449)	(2,451)	1,382	(6,320)
Depreciation and amortisation	(3,048)	(3,500)	(5,234)	(761)	(1,084)	(1,721)	(1,409)	109	(16,648)
Dividend income	-	-	-	-	-	-	10,919	(10,919)	-
Share of profit (loss) of equity- accounted associates	-	-	467	-	(618)	-	101	6	(44)
Others	27	(29)	741	24	83	97	(32)	-	911
Profit (loss) before tax	**4,790**	**5,194**	**21,830**	**3,138**	**(290)**	**31**	**11,390**	**(10,218)**	**35,865**
Net profit (loss) for reportable segment	**4,765**	**4,859**	**20,859**	**3,119**	**(340)**	**608**	**10,388**	**(10,257)**	**34,001**

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	Refinery & shared facilities	Aromatics	Olefins & Derivatives	EO-Based Performance	Green Chemicals	High Volume Specialties	Services & Others	Elimination	Total
					(in million Baht)				
At 31 December 2013									
Segment assets	105,904	91,803	133,943	16,303	30,811	40,871	68,342	(55,615)	432,362
Investment in associates	-	-	-	-	-	-	12,549	-	12,549
Change in non-current assets	(1,498)	(2,303)	5,208	461	3,794	2,979	(56,873)	44,984	(3,248)
At 31 December 2012									
Segment assets	106,628	92,295	136,062	14,883	24,575	39,615	125,805	(103,801)	436,062
Investment in associates	-	-	-	-	-	-	6,151	-	6,151
Change in non-current assets	(2,951)	(1,840)	1,603	(654)	1,979	9,008	3,026	(2,828)	7,343

Geographical segments

In presenting information on the basis of geographical segments, segment sales and service revenues are based on the geographical location of customers. Segment non-current assets (exclude derivatives and deferred tax) are based on the geographical location of the assets.

Geographical information

	Revenues	
	2013	2012
	(in million Baht)	
Thailand	329,302	348,384
The People's Republic of China	93,486	66,115
Singapore	35,565	45,044
Malaysia	16,947	14,287
United States of America	8,566	7,101
Other countries	69,015	84,686
Total	**552,881**	**565,617**

	Non-current assets	
	2013	2012
	(in million Baht)	
Thailand	245,329	254,972
France	10,535	9,230
United States of America	9,553	5,864
Malaysia	3,386	2,808
Other countries	2,313	1,490
Total	**271,116**	**274,364**

Major customers

The Group's sales and service revenues mainly comprise of revenue from one customer of Refinery and shared facilities, Aromatics and Olefins and derivatives segment represents Baht 192,740 million *(2012: Baht 264,841 million)* and revenue from another customer of Olefins and derivatives segment represents Baht 67,820 million *(2012: Baht 63,646 million)*.

30 Selling expenses

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Distribution	2,133	1,687	539	481
Promotional	152	158	11	21
Marketing	96	170	12	-
Personnel	463	298	-	-
Total	**2,844**	**2,313**	**562**	**502**

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31 Administrative expenses

	Note	Consolidated financial statements		Separate financial statements	
		2013	2012	2013	2012
		(in million Baht)			
Personnel		3,980	3,947	2,580	2,574
Oil spill incident expense	*3*	1,059	-	1,059	-
Consultancy fee		428	473	200	335
Professional fee		460	365	452	326
Feasibility study expense		161	125	162	106
Secondment fee		122	151	294	325
Actuarial losses		-	220	-	-
Depreciation and amortisation		1,461	1,274	773	752
Loss on disposal of fixed assets		202	53	30	15
Others		3,314	3,084	2,064	1,758
Total		**11,187**	**9,692**	**7,614**	**6,191**

32 Employee benefit expenses

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Management				
Salaries, bonus, wages and other welfares	349	404	203	218
Contribution to provident funds	13	14	10	9
Long-term employee benefits	5	4	4	3
Other long-term employee benefits	6	3	-	-
Reversal of short-term employee benefits for the year 2012	(52)	-	(52)	-
	321	**425**	**165**	**230**
Other employees				
Salaries, bonus, wages and other welfares	15,129	9,504	7,715	4,678
Contribution to provident funds	280	425	439	244
Long-term employee benefits	316	267	104	91
Other long-term employee benefits	55	37	36	32
	15,780	**10,233**	**8,294**	**5,045**
Total	**16,101**	**10,658**	**8,459**	**5,275**

Defined benefit plans

Details of the defined benefit plans are given in note 26.

Defined contribution plans

The defined contribution plans comprise provident funds established by the Group for its employees. Membership to the funds is on a voluntary basis. Contributions are made monthly by the employees at the minimum rate as required by law not exceeding 15% of their basic salaries and the Group contributes at the minimum rate as required by law not exceeding 15% of the employees' basic salaries. The provident funds are registered with the Ministry of Finance as juristic entities and are managed by a licensed Fund Manager.

33 Expenses by nature

The statements of income include an analysis of expenses by function. Expenses by nature disclosed in accordance with the requirements of various TFRS were as follows:

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Included in cost of sales of goods:				
Changes in inventories of finished goods and work in progress	(3,889)	(3,152)	(5,903)	(915)
Raw materials used	336,291	333,057	242,995	211,422
Personnel expense	11,658	6,413	5,879	2,701
Depreciation of property, plant and equipment	13,352	13,594	8,724	7,229
Amortisation of intangible assets	464	434	209	161
Included in selling and administrative expenses:				
Personnel expense	4,443	4,245	2,580	2,574
Depreciation of property, plant and equipment	840	721	449	451
Amortisation of intangible assets	621	539	324	283
Minimum lease payments recognised as an operating lease expense	369	339	306	274

34 Finance costs

	Note	Consolidated financial statements		Separate financial statements	
		2013	2012	2013	2012
		(in million Baht)			
Interest expense :					
Major shareholder	*9*	-	167	-	167
Subsidiaries	*9*	-	-	100	115
Debentures		3,750	2,954	3,750	2,954
Bank loans and overdrafts		2,005	2,845	1,481	1,619
Loans from other parties		10	-	-	-
Total interest expense		**5,765**	**5,966**	**5,331**	**4,855**
Other finance costs		342	354	243	254
Less: Capitalised as cost of assets under construction	*17*	(23)	-	-	-
Net		**6,084**	**6,320**	**5,574**	**5,109**

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35 Income tax expense

	Note	Consolidated financial statements		Separate financial statements	
		2013	2012	2013	2012
		(in million Baht)			
Current tax expense					
Current year		2,321	1,563	1,920	1,331
Under provided in prior years		84	48	75	50
		2,405	1,611	1,995	1,381
Deferred tax expense					
Movements in temporary differences	*21*	(429)	(195)	(3)	204
Total		**1,976**	**1,416**	**1,992**	**1,585**

Reconciliation of effective tax rate

	Consolidated financial statements			
	2013		2012	
	Rate (%)	*(in million Baht)*	*Rate (%)*	*(in million Baht)*
Profit before income tax expense		34,818		35,865
Income tax using the Thai corporation tax rate	20.0	6,964	23.0	8,249
Effect of different tax rates in foreign jurisdictions		(2)		(14)
Income not subject to tax		(5,486)		(6,977)
Expenses not deductible for tax purposes		416		104
Under provided in prior years		84		48
Others		-		6
Total	**5.7**	**1,976**	**3.9**	**1,416**

	Separate financial statements			
	2013		2012	
	Rate (%)	*(in million Baht)*	*Rate (%)*	*(in million Baht)*
Profit before income tax expense		46,630		25,773
Income tax using the Thai corporation tax rate	20.0	9,326	23.0	5,928
Income not subject to tax		(7,766)		(4,463)
Expenses not deductible for tax purposes		358		70
Under provided in prior years		74		50
Total	**4.3**	**1,992**	**6.1**	**1,585**

Income tax reduction

Royal Decree No. 530 B.E. 2554 dated 21 December 2011 grants a reduction in the corporate income tax rate for the three accounting periods 2012, 2013 and 2014; from 30% to 23% for the accounting period 2012 which begins on or after 1 January 2012 and to 20% for the following two accounting periods (2013 and 2014) which begin on or after 1 January 2013 and 2014, respectively.

It is understood that the Government will proceed to amend the law in order to maintain the corporate income tax rate at not higher than 20% for the accounting period 2015 which begins on or after 1 January 2015 and onwards in order to give full effect to the Cabinet resolution dated 11 October 2011 to increase Thailand's tax competitiveness.

36 Promotional privileges

By virtue of the provisions of the Industrial Investment Promotion Act of B.E. 2520, the Company has been granted privileges by the Board of Investment relating to production of upstream, intermediate and downstream petrochemical, utilities and production support facilities, jetty for transportation and storage of liquid product and transportation by marine vessels, production of petroleum product, research and development of polymer products and chemical formula, lab testing services and refinery. The privileges granted include:

(a) exemption from payment of import duty on machinery approved by the Board;

(b) exemption from payment of income tax for certain operations for a period of eight years from the date on which the income is first derived from such operations with additional conditions that not over 100 percent of investment excluded land and working capital.

(c) a 50% reduction in the normal income tax rate on the net profit derived from certain operations for a period of five years, commencing from the expiry date in (b) above.

As promoted companies, the Company must comply with certain terms and conditions prescribed in the promotional certificates.

Summary of revenues from promoted and non-promoted businesses:

	Separate financial statements					
	2013			2012		
	Promoted businesses	Non-promoted businesses	Total	Promoted businesses	Non-promoted businesses	Total
	(in million Baht)					
Export sales	5,224	82,125	87,349	27,480	7,218	34,698
Local sales	149,272	235,035	384,307	311,625	123,942	435,567
Service income	46	294	340	73	296	369
Total revenue	**154,542**	**317,454**	**471,996**	**339,178**	**131,456**	**470,634**

Certain subsidiaries in the Group have been granted promotional privileges as same as the Company.

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37 Basic earnings per share

The calculation of basic earnings per share for the year ended 31 December 2013 and 2012 were based on the profit for the year attributable to ordinary shareholders of the Company and the weighted average number of ordinary shares outstanding during the year as follows:

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht / million shares)			
Profit attributable to ordinary shareholders of the Company (basic)	**33,277.41**	**34,001.27**	**44,637.63**	**24,188.36**
Number of ordinary shares outstanding at 1 January	4,508.85	4,506.09	4,508.85	4,506.09
Effect of shares issued during the year	-	1.35	-	1.35
Weighted average number of ordinary shares outstanding (basic)	**4,508.85**	**4,507.44**	**4,508.85**	**4,507.44**
Earnings per share (basic) *(in Baht)*	**7.38**	**7.54**	**9.90**	**5.37**

38 Dividends

At the Annual General Meeting of the shareholders of the Company held on 4 April 2013, the shareholders approved the appropriation of annual dividend from 2012 performance at Baht 3.40 per share, amounting to Baht 15,329 million. The Company had paid interim dividend of the first half year of 2012 at Baht 0.95 per share, amounting to Baht 4,282 million on 17 September 2012. The remaining dividend was paid for the second half year of 2012 at Baht 2.45 per share, amounting to Baht 11,047 million. The dividend amounting to Baht 11,044 million was paid to the rightful shareholders in April 2013.

At the Board of Directors' Meeting held on 16 August 2013, the Board approved the appropriation of interim dividends from the earnings from 1 January 2013 to 30 June 2013 at Baht 1.62 per share, amounting to Baht 7,304 million. The dividend amounting to Baht 7,302 million was paid to the rightful shareholders in September 2013.

At the Annual General Meeting of the shareholders of the Company held on 2 April 2012, the shareholders approved the appropriation of dividends of Baht 1.30 per share, amounting to Baht 5,858 million. The dividend was paid to the shareholders in April 2012.

At the Board of Directors' Meeting held on 17 August 2012, the Board approved the appropriation of interim dividends from the earnings from 1 January 2012 to 30 June 2012 at Baht 0.95 per share, which was paid to the shareholders entitled to receive dividends, totalling approximately Baht 4,282 million in September 2012.

39 Financial instruments

Financial risk management policies

The Group/Company is exposed to normal business risks from changes in market interest rates and currency exchange rates and from non-performance of contractual obligations by counterparties. The Group/Company does not hold or issue derivative financial instruments for speculative or trading purposes.

Risk management is integral to the whole business of the Group/Company. The management continually monitors the Group's/Company's risk management process to ensure that an appropriate balance between risk and control is achieved.

Capital management

The Board of Directors' policy is to maintain a strong capital base so as to maintain investor, creditor, partners and other stakeholders. In addition, the Board monitors the return on capital and the level of dividends to ensure business sustainability.

Interest rate risk

Interest rate risk is the risk that future movements in market interest rates will affect the results of the Group's / Company's operations and its cash flows because the Group's/Company's finances loans which have both floating and fixed interest rates for their operations. The Group/Company has managed this risk to ensure the appropriateness to the business operation.

The effective interest rates of loans receivable as at 31 December and the periods in which the loans receivable mature or re-price was as follows:

		Consolidated financial statements			
	Effective interest Rate *(% per annum)*	Within 1 year	After 1 year but within 5 years	After 5 years	Total
		(in million Baht)			
2013					
Non-current					
Loans to related party	-	-	-	-	-
Total		-	-	-	-
2012					
Non-current					
Loans to related party	greater of the U.S. Prime Rate plus margin	-	1,220	-	1,220
Total		**-**	**1,220**	**-**	**1,220**

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		Separate financial statements			
	Effective interest Rate *(% per annum)*	Within 1 year	After 1 year but within 5 years	After 5 years	Total
			(in million Baht)		
2013					
Current					
Loans to related parties	Average cost of funds	879	-	-	879
Non-current					
Loans to related parties	Average cost of funds/ greater of the U.S. Prime Rate plus margin	-	4,007	846	4,853
Total		**879**	**4,007**	**846**	**5,732**
2012					
Current					
Loans to related parties	Average cost of funds	8,450	-	-	8,450
Non-current					
Loans to related parties	Average cost of funds/ greater of the U.S. Prime Rate plus margin	-	10,548	1,118	11,666
Total		**8,450**	**10,548**	**1,118**	**20,116**

The effective interest rates of interest-bearing liabilities at 31 December 2013 and 2012 and the periods in which those liabilities mature or re-price were disclosed in note 22.

Foreign currency risk

The Group/Company is exposed to foreign currency risk relating to purchases and sales, including borrowings which are denominated in foreign currencies. The Group/Company primarily utilizes forward exchange contracts to hedge such financial assets and liabilities denominated in foreign currencies. The forward exchange contracts entered into at the reporting date also relate to anticipated purchases and sales, denominated in foreign currencies, for the subsequent period.

At 31 December, the Group and the Company were exposed to foreign currency risk in respect of financial assets and liabilities denominated in the following currencies:

	Note	Consolidated financial statements		Separate financial statements	
		2013	2012	2013	2012
		(in million Baht)			
USD					
Cash and cash equivalents	*10*	5,306	2,904	3,692	697
Trade accounts receivable	*11*	14,475	6,108	10,333	2,651
Other receivables		614	182	268	167
Long-term loans to related parties	*9*	-	1,220	2,647	1,220
Long-term loans to other parties		673	-	-	-
Other investments	*16*	2,117	290	1,761	290
Interest-bearing liabilities	*22*	(49,300)	(47,887)	(45,670)	(46,151)
Trade accounts payable	*23*	(1,774)	(1,074)	(388)	(97)
Payable to contractors		(874)	(664)	(686)	(352)
Other payables		(1,608)	(1,186)	(869)	(488)
Gross statement of financial position exposure		**(30,371)**	**(40,107)**	**(28,912)**	**(42,063)**
Currency forwards		**(950)**	**(2,245)**	**(3,747)**	**37**

The Company performs foreign currency risk management on assets and liabilities held in USD. Any net USD liabilities held are naturally hedged by USD portion of net profit to minimize the impact from fluctuation in foreign currency to the Company's performance.

In addition to forward exchange contracts, the Group uses derivatives financial instruments, principally currency swaps and interest rate swap, to manage exposure to fluctuations in interest rates and in exchange rates. As at 31 December 2013, the Company entered into foreign currency and interest rate swap contracts, totalling Baht 2,575 million *(2012: Baht 2,579 million)* to repay certain interest bearing liabilities in foreign currencies.

	Note	Consolidated financial statements		Separate financial statements	
		2013	2012	2013	2012
		(in million Baht)			
EUR					
Cash and cash equivalents	*10*	550	719	-	-
Trade accounts receivable	*11*	2,775	3,284	-	-
Other receivables		121	80	38	37
Long-term loans to related parties	*9*	-	-	454	105
Long-term loans to other parties		100	-	-	-
Other investments	*16*	319	286	-	-
Interest-bearing liabilities	*22*	(3,414)	(1,359)	-	-
Trade accounts payable	*23*	(2,471)	(2,321)	-	-
Payable to contractors		(83)	(148)	(83)	(96)
Other payables		(684)	(559)	(22)	(15)
Gross statement of financial position exposure		**(2,787)**	**(18)**	**387**	**31**
Currency forwards		**79**	**56**	**-**	**-**

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	Note	Consolidated financial statements 2013	Consolidated financial statements 2012	Separate financial statements 2013	Separate financial statements 2012
			(in million Baht)		
SGD					
Cash and cash equivalents	*10*	54	121	-	-
Other receivables		17	1	1	1
Trade accounts payable	*23*	(10)	(9)	-	-
Payable to contractors		(3)	(20)	(3)	(20)
Other payables		(4)	-	(2)	-
Gross statement of financial position exposure		**54**	**93**	**(4)**	**(19)**
Currency forwards		**-**	**-**	**-**	**-**
JPY					
Cash and cash equivalents	*10*	74	89	-	-
Trade accounts receivable	*11*	104	79	-	-
Other receivables		5	-	5	-
Interest-bearing liabilities	*22*	-	(18)	-	-
Trade accounts payable	*23*	(12)	(13)	-	-
Payable to contractors		(130)	(65)	(130)	(65)
Other payables		(144)	(31)	(144)	(26)
Gross statement of financial position exposure		**(103)**	**41**	**(269)**	**(91)**
Currency forwards		**-**	**-**	**-**	**-**
MYR					
Cash and cash equivalents	*10*	380	570	-	-
Trade accounts receivable	*11*	209	152	-	-
Other receivables		85	47	-	-
Interest-bearing liabilities	*22*	(1,379)	(1,291)	-	-
Trade accounts payable	*23*	(390)	(332)	-	-
Other payables		(717)	(483)	-	-
Gross statement of financial position exposure		**(1,812)**	**(1,337)**	**-**	**-**
Currency forwards		**-**	**-**	**-**	**-**
Others					
Cash and cash equivalents	*10*	156	35	2	1
Trade accounts receivable	*11*	76	55	-	-
Other receivables		2	2	2	2
Other investments	*16*	3,226	30	3,205	-
Interest-bearing liabilities	*22*	(31)	(3)	-	-
Trade accounts payable	*23*	(104)	(12)	-	-
Payable to contractors		(32)	-	-	-
Other payables		(69)	(14)	(70)	(1)
Gross statement of financial position exposure		**3,224**	**93**	**3,139**	**2**
Currency forwards		**(3,274)**	**-**	**(3,274)**	**-**

Credit risk

Credit risk is risk of failure from a customer or a counterparty to settle its obligations to the Group as and when they fall due.

Management has a policy in place and the exposure to credit risk is monitored on an ongoing basis. Credit evaluations are performed on all customers requiring credit over a certain amount. At the reporting date, there were no significant concentrations of credit risk. The maximum exposure to credit risk is represented by the carrying amount of each financial asset in the statement of financial position. However, the majority of the customers are on the long-term contracted commitment and parts of them are the Company's shareholders which the company has consistently collected from them. For the customers who do not have the long-term contracted commitments, the Group monitors the risk on an ongoing basis and would do the business only with the credible customers by limiting the credit lines and requesting the guarantee on some cases. For the export, the credit of counterparty will be considered and will demand a payment on a case to case basis and also has commercial credit insurance. Management does not anticipate material losses from its debt collection.

Liquidity risk

The Group/Company monitors its liquidity risk and maintains a level of cash and cash equivalents deemed adequate by management to finance the Group's/Company's operations and to mitigate the effects of fluctuations in cash flows.

Determination of Fair values

A number of the Group's/Company's accounting policies and disclosures require the valuation of fair value, for both financial and non-financial assets and liabilities. The fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction. Fair values have been determined for measurement and/or disclosure purposes based on the following methods. When applicable, further information about the assumptions made in determining fair values is disclosed in the notes specific to that asset or liability.

The fair value of trade and other short-term receivables is taken to approximate the carrying value.

The fair value of investments in equity securities, which are held for held-to-maturity, is determined by reference to their quoted bid price at the reporting date. The fair value of held-to-maturity investments is determined for disclosure purposes only.

The fair value of interest rate swaps is based on broker quotes at the reporting date. Those quotes are tested for reasonableness by discounting estimated future cash flows based on the terms and maturity of each contract, and using market interest rates for a similar instrument at the measurement date.

The fair value of forward exchange contracts is based on their listed market price of forward rate for the residual maturity of the contract comparing with exchange rate at the valuation date.

The fair value of non-derivative financial liabilities, which is determined for disclosure purposes, is calculated based on the present value of future principal and interest cash flows, discounted at the market rate of interest at the reporting date.

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A fair value of debentures, together with the carrying values as at 31 December was as follows:

	Consolidated financial statements		Separate financial statements	
	Fair value	Carrying value	Fair value	Carrying value
	(in million Baht)			
2013				
Current				
Debentures	15,132	15,065	15,132	15,065
Non-current				
Debentures	51,671	52,878	51,671	52,878
Total	**66,803**	**67,943**	**66,803**	**67,943**
2012				
Current				
Debentures	8,192	8,000	8,299	8,000
Non-current				
Debentures	68,254	65,280	67,839	65,280
Total	**76,446**	**73,280**	**76,138**	**73,280**

40 Commitments with non-related parties

	Consolidated financial statements		Separate financial statements	
	2013	2012	2013	2012
	(in million Baht)			
Capital commitments				
Contracted but not provided for				
Land	16	16	16	16
Plant, machinery and equipment	13,568	2,592	4,526	1,288
Buildings	89	118	89	12
Others	235	316	117	311
Total	**13,908**	**3,042**	**4,748**	**1,627**
Non-cancellable operating lease commitments				
Within one year	169	189	22	10
After one year but within five years	162	341	74	40
After five years	223	368	40	35
Total	**554**	**898**	**136**	**85**
Other commitments				
Unused letters of credits	358	253	53	136
Bank guarantees	2,978	7,030	843	5,920
Forward contracts	11,325	1,827	7,021	37
Swap contracts	3,786	4,724	2,813	2,694
Guarantees for credit facilities and bank guarantees	333	615	333	615
Other agreements	3,303	3,306	1,626	1,237
Total	**22,083**	**17,755**	**12,689**	**10,639**

41 Litigation

On 3 December 2009, a company filed for arbitration against PTT Plc. ("PTT") and the Company as a producer to perform according to purchase and sales of raw materials agreement, of which the said company has been committed by PTT, or to compensate for damages of approximately Baht 13,805 million. On 8 March 2010, the dispute was thrown out of the case-list by the arbitration ruling that the Company was not a party to the contract.

Subsequently, on 27 August 2010, the said company filed a civil suit against PTT and the Company as a producer to perform according to purchase and sales of raw materials agreement, of which the said company has been committed by PTT, or to compensate for damages of approximately Baht 9,380 million. In this regards, the Company filed objections against the indictment with the civil court on the basis that the Company was not a party to the contract. On 18 March 2013, the Civil Court called to hear the decision of the arbitration between such Company and PTT. Since the arbitration process has not yet finalised, the Civil Court therefore considered to postpone the hearing decision of arbitration to 21 May 2013.

Subsequently, on 21 May 2013, the Civil Court considered that the arbitration process between such company and PTT has not yet finalized; therefore, they has temporary thrown out of the case-list until the final decision has been reached under arbitration process. Then, either party or both parties can resubmit the case to the Civil Court for further trail. The Company believes that the outcome of the consideration will not result in any liability to the Company, and therefore, has not provided against any loss that may result from this matter in the financial statements.

42 Events after the reporting period

On 2 January 2014, Myriant Corporation ("Myriant"), a subsidiary of PTT Chemical International Private Limited (subsidiary of the Company with 100% interest) has purchased shares from the existing shareholders totalling 3,406,569 shares and subsequently cancelled of those purchased shares. As a result, the group's shareholding in Myriant changed from 72.21% to 84.21%.

At the Board of Directors' meeting held on 18 February 2014, the Board approved to submit for approval at the Annual General Meeting of the Shareholders, a full year 2013 dividend payment at the rate of Baht 3.40 per share, of which Baht 1.62 per share was paid as an interim dividend in September 2013 as discussed in note 38. Thus, the remaining dividend will be at the rate of Baht 1.78 per share to the shareholders entitled to receive dividends. This dividend is subject to the approval of the Shareholders at the Annual General Meeting to be held on 8 April 2014.

PTT Global Chemical Public Company Limited and its Subsidiaries
Notes to the financial statements

43 Thai Financial Reporting Standards (TFRS) not yet adopted

The Group/Company has not adopted the new and revised TFRS that have been issued but are not yet effective. Those new and revised TFRS that are applicable to the Group's/Company's operations, which become effective for annual financial periods beginning on or after 1 January in the year indicated in the following table, are as follows:

TFRS	Topic	Year effective
TAS 1 (revised 2012)	Presentation of financial statements	2014
TAS 7 (revised 2012)	Statement of Cash Flows	2014
TAS 12 (revised 2012)	Income Taxes	2014
TAS 17 (revised 2012)	Leases	2014
TAS 18 (revised 2012)	Revenue Recognition	2014
TAS 19 (revised 2012)	Employee Benefits	2014
TAS 21 (revised 2012)	The Effects of Changes in Foreign Exchange Rates	2014
TAS 24 (revised 2012)	Related Party Disclosures	2014
TAS 28 (revised 2012)	Investments in Associates	2014
TAS 31 (revised 2012)	Interests in Joint Ventures	2014
TAS 34 (revised 2012)	Interim Financial Reports	2014
TAS 36 (revised 2012)	Impairment of Assets	2014
TAS 38 (revised 2012)	Intangible Assets	2014
TFRS 2 (revised 2012)	Share-based Payment	2014
TFRS 3 (revised 2012)	Business Combinations	2014
TFRS 5 (revised 2012)	Non-current Assets held for Sale and Discontinued Operations	2014
TFRS 8 (revised 2012)	Operating Segments	2014
TFRIC 1	Changes in Existing Decommissioning, Restoration and Similar Liabilities	2014
TFRIC 4	Determining whether an Arrangement contains a Lease	2014
TFRIC 10	Interim Financial Reporting and Impairment	2014
TFRIC 13	Customer Loyalty Programmes	2014
TIC 27	Evaluating the Substance of Transactions Involving the Legal Form of a Lease	2014

Management expects to adopt and apply these new and revised TFRS in accordance with the FAP's announcement and expects that there will be no material impact on the financial statements in the period of initial application.

44 Others

On 10 December 2013, the Company had signed the Manufacturing Joint Venture - Heads of Agreement with PT Pertamina (Persero), the Indonesia National Oil Company, for the joint investment of a world scale Petrochemical Complex in Indonesia which is expected to start commercial operation in 2018.

On 16 December 2013, the Company and PT Pertamina (Persero) entered into the Marketing and Trading Joint Venture Agreement to initially conduct polymer products marketing and distribution throughout Indonesia. The joint venture agreement is in the process of approval by Indonesian's regulation. The Company expect to complete the set up of the joint venture in 2014.

AUDIT FEE AND NON-AUDIT FEE

1. Audit Fee

PTTGC and its subsidiaries paid a total audit fee of 7,366,333 THB to KPMG Phoomchai Audit Limited, which is the auditor of PTTGC.

- Of this amount PTTGC paid 3,402,000 THB and 3,964,333 THB for its subsidiaries.
- A total of 30,000 Singapore Dollars and 444,300 Euro was paid to the audit company that the auditors worked for, including persons or entities that are related to the auditors and the audit company.

2. Non-Audit Fee

PTTGC and its subsidiaries paid for Non-Audit fee to Business process advisory services, Legal advisory services, Tax compliance service & Tax Consulting services, reviewing of the internal control on information technology system and Agreed-upon Procedures for:

- Incomplete services in the fiscal year of 2013 that will be paid for a total of 1,485,000 THB
- For the fiscal year of 2013 paid a total of 43,727,364 THB, 205,722 Euro and 5,250 Singapore Dollars to the audit company that the auditors worked for, including persons or entities that are related to the auditors and the audit company; plus incomplete services in the fiscal year of 2013 that will be paid for a total of 6,402,752 THB, 24,512 Euro, and 15,925 USD

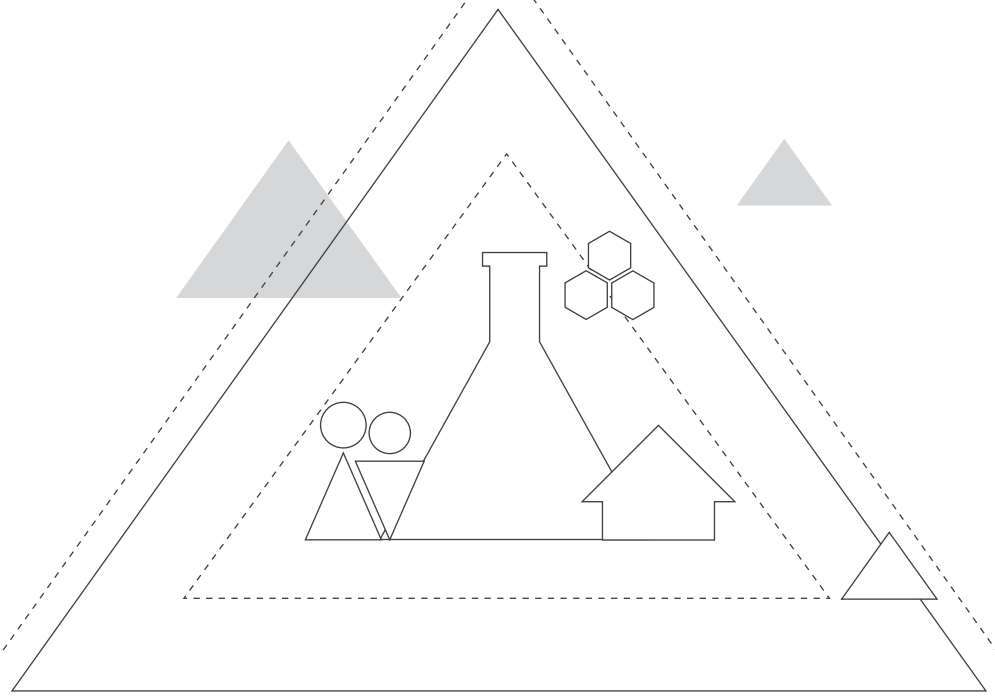
TECHNICAL TERMS

Aromatics	A group of unsaturated cyclic hydrocarbons containing one or more benzene rings of six carbon atoms. They are highly reactive and chemically versatile. The group name is derived from the strong and not unpleasant odor characteristic of most chemicals in this family.
Bis-Phenol A (BPA)	BPA is an intermediate product produced from acetone and phenol used to produce polycarbonate and epoxy resins.
Butadiene	Butadiene is an intermediate in 4 carbon atoms family, used in the making of synthetic rubber. It is also used extensively in the production of plastics.
Butene-1	Butene-1 is an organic chemical base, derived from cracking of petroleum or C4 distillate, and used mainly to produce butadiene and butanol.
Carotenoid	Carotenoid is used as a colorant in food for human consumption and as constituents in vitamins and dietary supplements.
EO Base Performance Product	EO Based is Ethylene Oxide derivatives such as Ethylene Oxide, Ethylene Glycol, Ethanolamine and Ethoxylate.
Ethanolamine	Ethanolamines include monoethanolamines, diethanolamines and triethanolamines. Ethanolamines are used as sweeteners, detergent and specialty cleaner formulations, flexible urethane foam catalysts, and pharmaceuticals.
Ethoxylate	Ethoxylate is produced from ethylene oxide and is often processed to be used as a foaming control agent in soap and detergent.
Ethylene	Ethylene is an essential organic chemical base derived from the thermal cracking of ethane and naphtha or from dehydration of ethanol. It is used to produce many organic chemical intermediates, such as polyethylene, ethylene oxide, ethylene glycol, vinyl chloride, styrene, acetaldehyde and ethanol.
Ethylene Glycol (EG)	EG is produced from ethylene (ethene), via the intermediate ethylene oxide. Ethylene oxide reacts with water to produce ethylene glycol. On purpose product is Monoethylene glycol and major byproducts are the ethylene glycol oligomers diethylene glycol and triethylene glycol.

Ethylene Oxide (EO)	EO is a highly reactive chemical intermediate used in the production of ethylene glycol and other oxide derivatives such as glycol ethers, polyethylene glycol, polyether polyols, diethylene and triethylene glycols and ethanolamines.
High Density Polyethylene (HDPE)	Produced from ethylene, HDPE is an inexpensive, flexible, durable and chemical-resistant. One of the major uses of HDPE is in blow-molding applications, such as bottles for milk and non-carbonated drinks, fuel tanks for automobiles and containers of household and industrial chemicals. HDPE is also used for films and pipes.
Hydrocracking	Hydrocracking is an oil refinery process that makes use of hydrogen. The process may be used for producing gasoline, jet fuels and high-quality lubricating oils. It may also convert distillation residues into lighter oils.
Linear Low Density Polyethylene (LLDPE)	LLDPE is a type of polyethylene and has basic properties similar to LDPE. LDPE and LLDPE are to a certain extent substitutable for each other. The most significant end use for LLDPE is shrinked film.
Low Density Polyethylene (LDPE)	LDPE is a type of polyethylene used for thin films, tubes, mechanical parts, toys and electric wire insulation.
Methyl Ester	Methyl ester is oleochemicals derived from vegetable feedstock, such as palm-kernel oils. Methyl ester may be used in the esterification reaction for biodiesel resources.
Methylamines	Methylamine derivatives have beneficial uses in many industries, including water treatment, gas and oil treatment, animal nutrient, agricultural chemicals and personal care products.
Mixed C4s	Mixed C4 is a colorless gas produced from naphtha crackers. It may be used in as a raw material for the production of butadiene and butane-1.
Mixed Xylenes	Mixed Xylene is a mixture containing xylenes such as orthoxylene, metaxylene and paraxylene and is used in the production of solvents and high value downstream product.
Mono Ethylene Glycol (MEG)	MEG is an organic chemical compound derived from the oxidation of ethylene. It is produced by the reaction of ethylene oxide and water. MEG is mainly used for polyester and anti-freeze production.

Naphtha	Naphtha is a general term used for low boiling hydrocarbon fractions that are a product of crude oil or condensate splitter.
Olefins	Olefins are straight or branched-chain hydrocarbon with at least one unsaturated carbon-carbon bond. Produced by cracking feedstock from raw materials such as natural gas and light naphtha. The main olefins are ethylene and propylene and also include butadiene, and C4 derivatives.
Oleochemicals	Oleochemicals are bio-based and environmentally friendly chemicals derived from plants and animal fats, which have similar functions as petrochemicals derived from petroleum.
O-Xylene or Orthoxylene (OX)	An aromatic compound used in the manufacture of plasticizers and unsaturated polyester.
Poly Ethylene Terephthalate (PET)	PET is made by the combination of ethylene glycol and terephthalic acid. Typical end uses for PET are packaging and fibers.
Poly Vinyl Chloride (PVC)	PVC is a versatile thermoplastic polymer produced from VCM. It is extensively used in the construction sector for a variety of applications including pipes, siding and window/door profiles, wire and cable insulation, rigid film/sheet and flooring.
Polymers	When certain individual molecules (monomers) come together and link up in a chain-like fashion, they form a polymer. The chemical reaction that forms a polymer is called polymerization.
Polyurethane (PU)	PU is a polymer composed of a chain of organic units joined by urethane links.
Propylene	Propylene is a flammable gas which is largely derived either as a co-product of the refinery FCC process used to make gasoline or as a co-product of the steam cracking process used to make ethylene. Propylene has virtually no independent end use, but is an important input for a significant number of industrial products, and is the main feedstock used to make polypropylene and acrylonitrile.

P-xylene or Paraxylene (PX)	Paraxylene is an aromatic hydrocarbon in the form of a colorless, flammable liquid that is recovered from mixed xylenes streams by adsorption and by isomerization of aromatics. It is an upstream raw material for PTA and DMT, which are used for production of downstream polyester fiber and PET packaging resin.
Pyrolysis Gasoline	Pyrolysis gasoline is a naphtha-range product with a high aromatics content used in the production of benzene, toluene and mixed xylenes and as a motor vehicle gas blending stock.
Toluene	Toluene is an aromatic hydrocarbon used as an octane enhancer in gasoline, as a chemical intermediate in the production of benzene, paraxylene, toluene di-isocyanate and as a solvent in paints.
Toluene Di-Isocyanate (TDI)	TDI is an intermediary chemical used in the production of polyurethane.



TOGETHER

WE CAN MAKE IT

ptt GLOBAL CHEMICAL

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