



1. Policy and Business Overview

1.1 Vision, Objectives, Goals, and Strategies

Bangchak Petroleum Public Company Limited was established to conduct its energy business in 1984. The Company strives to strike a balance between business value and social and environmental value. Bangchak Petroleum PCL has constantly applied the Sufficiency Economy philosophy, corporate governance, and social responsibility concept to business management for goal achievement. To grow its business base, this year Bangchak started to move into the petroleum exploration and production (E&P) business to secure national energy and grow sustainable value.

In 2014, Bangchak was completing three decades of sustainable growth in parallel with stewardship of the environment and society. Through the years, Bangchak has adhered to its business culture (Develop sustainable business, while safeguarding the environment and society). Meanwhile, it has also continually applied the Sufficiency Economy principles, good governance, and social responsibility to its business management so as to achieve corporate goals. Bangchak is committed to business development to grow into a “Green Energy Company”, striking a fine balance between business value and environmental/social worth.

In creating business value, Bangchak sets a goal of growth to add sustainable value in tandem with social and environmental stewardship. Specifically, it restructured its refining income, formerly accounting for 70% to 30% for the marketing business. Recognizing high volatility facing the refining business, from volatile oil prices and refining margins subject to global and regional economies, which affect its performance, Bangchak sets its goal in 2020 for the EBITDA from refining business and marketing business at 50% versus EBITDA from emerging businesses at 50%, including clean-energy business and other energy businesses. These emerging businesses command steady income and low risks posed by external factors. They include solar power generation and other alternative energy, including biodiesel production from palm oil, ethanol production from Energy Crops, biogas and biomass energy, including petroleum exploration and production (E&P) business to secure oil supply.



One of Bangchak's goals is to invest in developing current businesses through investment in the 3E Project, encompassing Efficiency, Energy, and the Environment. To elaborate, it seeks to develop the Continuous Catalyst Regeneration to replace the old unit with efficient technology, marked by efficiency, improved energy consumption, and longer operating periods before maintenance. Also, it seeks to erect a cogeneration power plant to raise its energy stability and consume natural gas, a greener fuel, while heightening safety and environmental. In addition, Bangchak has planned its marketing business expansion by setting a goal for sales volumes of 120 thousand barrels per day (KBD); developing high-quality products and services to match consumers' needs; and modernizing its service station format while growing its service station network to cover more high-potential areas. That way, Bangchak service stations may become rest areas with diverse services matching customers' needs and maximizing their satisfaction.

For new-venture investment, Bangchak still focuses on alternative energy business, including ethanol production, crude palm oil-based biodiesel, solar power plant, geothermal energy, waste-to-energy power plant, biogas energy, and biomass gas to sustain and promote the growing demand for alternative/renewable energy. At the same time, Bangchak is moving to invest in the petroleum exploration and production business (E&P) so as to enhance oil and energy security, as well as constantly investing in other promising businesses in and outside Thailand.

In the meantime, Bangchak focuses on organizational development. Eyeing system and work process development for greater efficiency, transparency, and international competitiveness, Bangchak has applied the TQA (Thailand Quality Award) criteria to its own development efforts in its stride toward management excellence. To achieve this, it focuses on clear operational approaches with comprehensive implementation so that the approaches can be assessed and improved, then coordinated under uniform directions toward corporate goals. In personnel development, Bangchak strives to become Thailand's Best Employer by defining personnel improvement plans under the framework of four main factors for today's human resources administration: employee engagement, efficient corporate administration, an interesting and attractive employer brand, and high-performance culture.



Besides managing businesses to boost value in a secure, continued manner, Bangchak relies on a policy to create Green Society by erecting a model, marked by Green Process (preserve the environment at every stage of production), Green Product (sell alternative/renewable energy that is environment-friendly), and Green Office (green hiring and procurement, application of energy-saving corporate resources). At the same time, the Company must expand its Green Society network to its affiliates, business partners, and stakeholders, which include society and communities around its refinery. This is achieved through its Thailand Go Green activities, purchase of used vegetable oil, and continual environmental/social promotional activities. Finally, the Company's goal is to continually foster innovations of the Green Society network and expand in ASEAN, with an ultimate aim to become ASEAN's Innovative Green and Clean Company Leader in the future.

With the concept of sustainable management to strike a balance between value and worth, Bangchak has included a social and environmental KPI as a corporate KPI, thus enabling it to properly cascade its social and environmental goals into action through its sections and departments. In other words, various action plans must link to or must not conflict with such goals. The direction for social and environmental management relies on key strategies for managing sustainable businesses as follows.

1. Open, Transparent and Verifiable

The Company adheres to an open, transparent and verifiable policy in its operations. Operational data are transparently disclosed under good corporate governance and The Stock Exchange of Thailand rules. Applying proactive environmental management, it discloses online data on quality of air and effluents around the refinery by posting electronic sign board at the entrance to the refinery and surrounding communities.

2. Socially and Environmentally Friendly Business Models (Ongoing process)

As Bangchak's culture is to develop sustainable business, while safeguarding the environment and society, the Company is determined to do business in such a way that not only can it sustain continuous growth, but also simultaneously generate positive impacts on society and the environment. Such a model that the Company has been operating successfully is the cooperation model of petrol stations operated by agricultural



cooperatives. Also, Bangchak buys agricultural products of communities for use as its sales promotional giveaways to grow these products' markets, while giving these products access to consumers. Bangchak joined the Ministry of Agriculture and Cooperatives, Ministry of Energy, and Bank for Agriculture and Agricultural Cooperatives in developing a new business of turning deserted orange plantations into an oil palm plantation to generate income for Rangsit farmers in line with the public sector's alternative/renewable energy promotion plan. An indirect benefit is that Rangsit areas can absorb water further to counteract land subsidence and floods that may ruin Bangkok Metropolis.

3. Carbon Neutral Company

Aware that the refining business consumes a large amount of energy and emits considerable carbon dioxide, Bangchak therefore aims to become a Low-Carbon Company to minimize impacts from its refining business as a result of its continuous efforts on clean energy business development, for instance, a 118-MW PPA solar power plant, palm oil biodiesel plants, cassava-based ethanol production plants, diesel production from algae, energy efficiency improvement or the use of clean fuels in the refinery.

Such balanced business management goals backed by determined and ethical staff—committed to the employee culture and values—, these will enable the Company to add value to business as well as society and the environment and become an organization of sustainable growth.

1.2 Transition and milestone development

2014

Bangchak and its subsidiaries earned Baht 183,016 million in sales and service revenue. EBITDA amounted to Baht 5,162 million. Net finance costs Baht 1,427 million. Reversal of allowance for loss from impairment of assets equaled Baht 821 million, while gain from foreign exchange and others was reported at Baht 674 million. Depreciation and amortization totaled Baht 3,294 million, whereas income tax credit amounted to Baht 463 million. These led to a net profit to Bangchak of Baht 756 million, resulting in net earnings of Baht 711.6 million to the owners of the Company and Baht 44.8 million to non-controlling interests.



Refining business

This year Bangchak planned a 46-day major turnaround period including maintenance for CDU and auxiliary units from May 1st to June 15th, which contributed to a net average throughput of 86.5 thousand barrels per day (KBD), a 13% drop from last year's 99.3 KBD. To prepare for this shutdown, reserve petroleum products were stocked to meet customers' demand while fulfilling legal requirements and, equally important, managing inventories at suitable volumes without affecting the refinery's operation so as to lower the risk arising from oil price volatility. The year's average GRM stood at US\$6.96 per barrel exclusive of hedging and stock gains/losses, which exceeded that of last year (US\$5.76 per barrel). Despite the drops in price spreads between nearly all products and Dubai crude this year, the Company was buoyed by low imported crude oil bills, which plummeted from last year, as seen in the price of the Dated Brent, a reference crude for North Sea and African crude (low-sulfur crude). The price drop stemmed from shale oil production in the US, which slashed its own crude oil imports from West African countries. Several economic factors influenced the demand-supply of the oil refining businesses worldwide, particularly those prone to price volatility. Therefore, to enable Bangchak to achieve goals while taking care of the environment, the Company took the following actions:

- Maintained new crude oil supply which yields low-sulfur fuel oil for exports and have more economic return than selling fuel oil for domestic consumption.
- Established Operational Excellence Enhancement, strived for Plant Reliability, and prevented Unplanned Shutdowns through plans encompassing Personnel and Process Safety Excellence, Process Safety Management System. For Efficiency and Reliability Excellence, the Company constantly managed risks through SIL (Safety Integrity Level), RCM (Reliability Centered Maintenance), and RBI (Risk-Based Inspection) for all processes and equipment. As for Environmental Protection Excellence, the Company commissioned experts to upgrade the standards for refinery environmental practices, safety, and work processes, thus garnering recognition worldwide. Besides valuing refinery safety, environment, and process equipment, the Company minimized risks of oil leaks in the transport system by requiring that all crude oil and petroleum product vessels are to be double-hulled.
- Regularly improved refining efficiency by executing the 3E (Efficiency, Energy, and Environment) Project to add value to products by installing a CCR (Continuous Catalytic Regeneration unit) in place of



the old one, which will improve consumption of energy and lengthening of turnaround cycles. A construction plan of cogeneration power plants for greater energy stability, and striving to raise its safety level and environmental stewardship.

- Achieved ISO 50001:2011 certification for energy management under the ANAB (American National Accreditation Board), echoing the success in developing and upgrading the standards for energy management systems at Bangchak Refinery and Oil Distribution Centers on a par with world-class refineries.

Regarding its participation in community and social development near the refinery, Bangchak promoted employees' participation in activities with communities to foster trust, friendship, benefit, and safety. Amid current, diverse urban communities (in particular the mushrooming growth of condominiums), Bangchak's plans and targets broke down into three phases: forming relationship, welcoming opportunities to think and participate in activities, and participating in development and driving toward self-reliance. In designing projects, the Company takes into account relationship and responses to the lifestyles of target groups. This year Bangchak initiated a community panel seminar to echo community ideas, leading to extension of qualitative activities that addressed public issues in Thai society—notably education, development of youths, and the environment, all top priorities of such communities. As for the Company's participation in the development of communities and society farther from the refinery, Bangchak strives to keep Thai society happy under the belief that “sustainable happiness is sharing”, which explains why the Company ran knowledge-sharing projects on social and environmental responsibility to grow allies in establishing a Green Society, including business partners, service stations, and the public. In addition, Bangchak continually organized emergency plan training and training on chemicals for communities, schools, and nearby condominiums to strengthen their confidence in safety. Communication formats for emergencies were modified and clarified for individual communities. With the clarity and determination for social and environmental responsibilities, Bangchak became ready in ideas and practices to lead and drive allies as well as stakeholders toward a Green Society, in which Bangchak's business partners command business caliber for responsible environmental as well as social improvement.



Marketing business

Bangchak's marketing business posted a total sales volume through all markets of average 86.3 KBD (417 million liters a month), a 0.1% gain over last year's 86.2 KBD. The total sales volume of clear fuels through the Company's service stations has risen by 6% as a result of constant network expansion of service stations, its re-imaging, and the introduction of Bangchak Hi Diesel product. Meanwhile, sales through the industrial market dropped by 3% because of the administration of distributed volumes in line with reduced outputs coinciding with the major turnaround maintenance.

Committed to leadership in alternative/renewable energy, Bangchak held on to the market leadership for E85 gasohol and No. 2 for E20 gasohol products. Its service stations across the country successfully sold gasohol and diesel of Euro IV standard as required by the government. In addition, the Company constantly improved the efficiency of products, for instance by selling Euro V E20 gasohol for the first time in Asia in early 2013; its sulfur content is below 10 ppm, a fivefold reduction from that of Euro IV. Ongoing during the year were Bangchak's image refurbishment and expansion of service stations for higher standard, sales promotion launches, and capability improvement. As a result, this year Bangchak's market share for all clear fuels sold through service stations rise to No. 2 from No. 3 last year, registering 249 million liters per month (Source: Department of Energy Business, November 2014) (a 5.9% rise over last year's 235 million liters per month), which exceeded the growth rate of national service stations of just 3.5% over the year. Still, with domestic supply still outstripping domestic demand, the marketing business drew fierce competition, prompting Bangchak to take several key measures to add sales volumes and maintain its customer base:

- Expanded and improved its service station network in high-potential areas and constantly improved the settings of service stations. As of year-end 2014, the Company's network commanded 444 standard service stations together with 626 community service stations, for a total of 1,070 Bangchak-brand stations, recognized in "Brand of Choice survey" done by research agency since 2009 as the second top brand for a fifth consecutive year. Bangchak service stations also participated in Ministry of Commerce's project to improve proper sale volume measurement to ensure consumers that oil companies do not shortchange them. Bangchak service stations were duly certified under this project for accurate volumetric measurement, standard



quality, good services, and hygienic settings. Compared with service stations of other brands, Bangchak won the highest number of awards for quality and excellence in services.

- “Best Service Station Toilets 2014” by Bangkok Metropolis Administration: The Bangchak Service Station Udomsuk 45 Branch won the unique distinction of being the sole service station chosen for the award, with the clean standard, equipped with amenities and available around the clock. The station’s nice-smelling toilets, located in safe and secure areas, can accommodate the handicapped, the elderly, and pregnant women. Bangchak won this award of the Bangkok Metropolitan Administration for the second successive year, in 2013 taking the accolade with the Vibhavadi Rangsit Branch.
- Constantly improved product quality. This year the Company launched “Bangchak Hi-Diesel”, a high-quality new product with better performance due to the Hi Clean additive, which promotes complete combustion, clean engines, and full-strength performance. As a result, consumers save fuels, while the Hi Power additive gives more power to engines.
- Continually promoted and expanded sales of Gasohol E20, and Gasohol E85. The Company raised the number of service stations selling Gasohol E20 by 22, and selling Gasohol E85 by 98. Service stations selling E20 and E85 nationwide currently number 700 and 200 respectively.

Bangchak Service Stations selling Gasohol E20 and E85

	As of year-end 2014	
	Stations	Increment
Gasohol E20	700	+22
Gasohol E85	200	+98

- Executed CRM (Customer Relationship Management) through the Bangchak Gasohol Club Card and Bangchak Diesel Club Card to establish long-term engagement and maintain customer bases. Cardholders accrue points from fuel, food, and service purchases at service stations. In addition, Bangchak developed the “Bangchak Card Connects Thais” for customers of community service stations to expedite their refueling and allow the stations to launch sales promotional activities or customer relationship activities suiting individual locations. As of year-end 2014, Bangchak Gasohol Club cardholders numbered 993,491; Bangchak Diesel Club cardholders, 296,815; and Bangchak Card Connects Thais cardholders, 191,750.



- Promoted and improved the image of service station's non-oil businesses to generate income and offer complete services serving the need of modern customers. Bangchak joined renowned food & beverage allies like McDonald's, Black Canyon, and KFC in serving customers at service stations located on main roads. It also expanded and launched Big C Mini convenience stores by 29 branches in 2014, bringing the total to 91. Finally, the Inthanin Coffee outlets, both in and outside Bangchak service stations, grew by 24 during the year to 320 outlets.
- Bangchak lubricants received ISO 9001 (quality management standard) certification and ISO/TS16949 (automotive industry quality management standard) certification, which the latter is the first for a Thai company. Bangchak regularly improves its products. This year the Company issued GE ECO, a lubricant designed for eco-cars and hybrid cars, as well as newer models. To popularize and lead them to greater acceptance of quality, it also staged sales promotional activities for products. A case in point was the "Bangchak Lubricants for Engine Fitting, Fitting You" project, which the Company supported and launched sales booth at Thai Fight boxing matches. Bangchak also constantly focused on lubricant market expansion to the industrial sector and markets in neighboring countries.

The Company has conducted fair marketing business in tandem with environmental stewardship and social services all along, including its cooperation with agricultural cooperatives in buying farmers' products for giveaway items as sales promotional goods to create jobs and decentralize income to rural areas, thus supporting efforts to strengthen community economies. This year Bangchak service stations organized three sales giveaway promotions in support of community goods: seedless velvet tamarind (*dialium cochinchinensis*), roast rice tea/roast rice green tea, and organic brown rice.

Besides the Bangchak Card Project, the Gasohol Club card is part of the Company's environmental stewardship showing data on carbon dioxide reduction each time Bangchak's customers vehicles get a tank refill. The Gasohol and Diesel Club Card holders can donate points of fuel refill into cash to the charity for public interest. With Bangchak's policy to establish a Green Society, the Company launched a Green Partnership Project to enable service stations to be part of fair business practices together with the stewardship of the environment and society, and in line with the Sufficiency Economy principles. This is to be achieved through CSR in



Process, striving for stewardship of consumers, the environment, society, and employees. In addition, Bangchak extended its support to the “Thai Golfers’ Development toward Excellence” project to develop professional golfers into world-class ones, including “Pro Waen” Pornanong Phatlum, who has continually received Bangchak’s support.

Renewable energy business

The biodiesel business: this year posted an average capacity of 360,000 liters per day, 100% in utilization rate, which met the current biodiesel demand for Bangchak and then more for sale to external business partners to generate income. Bangchak Biofuel Co., Ltd., secured approval from its board of directors to construct a second phase B100 unit with an additional capacity of 450,000 liters per day under an investment outlay of Baht 1.8 billion. An EPC contract was signed in December 2014, with construction underway. Production and commercial sales are expected by the third quarter of 2016.

The solar power business: In 2014, Bangchak fulfilled its 118-MW PPA. Phase 3 of the project, with a 48-MW capacity, consists of 16 MW at Amphoe Kabin Buri, Prachin Buri; 8 MW at Amphoe Dan Khun Thot, Nakhon Ratchasima; 8 MW at Amphoe Prakhon Chai, Buri Ram; 8 MW at Amphoe Nong Ki, Buri Ram, and 8 MW at Tambon Hua Tha-le, Amphoe Bamnet Narong, Chaiyaphum. All projects have been completed and started commercial operation since April 2014.

Ethanol business: Bangchak acquired 583,000 common shares in Ubon Bio Ethanol Co., Ltd., equivalent to 21.28% of total common shares. Its ethanol plant located in Amphoe Na Yia, Ubon Ratchathani, is capable of producing 400,000 liters a day of ethanol from fresh cassava, cassava chips, and molasses. The plant began commercial production in January 2013, and produced ethanol for sale to Bangchak and major business partners. This year’s output averaged 250,000 liters per day, roughly 62% in utilization rate. Bangchak plans to acquire a 150,000-liter-per-day ethanol plant in Chachoengsao province, which is expected to produce and realize commercial sales in 2015.

Petroleum Exploration and Production business: In 2014, Bangchak moved into the oversea investment. BCP Energy International Pte. Ltd. (BCP Energy) was set up in Singapore to engage in businesses concerning energy, petrochemical, and natural resources abroad. BCP



Energy has acquired 402,951,875 common shares (81.4%) in Nido Petroleum Ltd., which is listed on the Australian securities exchange and engages in oil and gas exploration and production with a focus on Southeast Asian resources. Nido has expanded its investment by signing a share purchase agreement with Otto Energy Ltd. (Otto) to acquire all shares of Galoc Production Company WLL (GPC), a subsidiary of Otto. GPC is a 33% shareholder in the Galoc oil field in the Philippines. If the shareholders' meeting of Otto endorses such transaction, Nido will see its shareholding in the Galoc field rise from 22.88% to 55.88% and assume the operatorship of the field.

Organizational capability development

Bangchak has adopted the Thailand Quality Award (TQA) criteria in developing its organizational capability in conjunction with business development to strive for sustainability in human resource development as well as business growth. These guidelines include effective work structural architecture supporting current and future businesses, work process efficiency improvement suitable for all situations, information system and technological modernization, and support of innovations for all employees, aiming to become a knowledge-based organization.

Human resource quality and innovation improvement

With a strong commitment to the continuous development of its workforce, Bangchak has defined a clear policy on job rotation to broaden staff skills in preparation for career path development and for current job requirements and expected knowledge and competency in line with the Company vision and business goals. The Competency Base Management System has been adopted to develop human resources systematically. As for personnel development, the Company set the preparation of a successor pool and systemization of career management plans, and continuous learning through various channels. In addition, a jointly developed Knowledge Management Portal with PTT Group of companies was initiated for the sharing of valuable information resources of skills, technologies, financial knowledge, and lessons learned. Moreover, the Company promoted innovation projects in the organization, including employee group activities and cross-functional teams, including the Cascade Project for Innovation, Community of Practice (CoP), and Kaizen activities to promote sharing of knowledge and experiences among them. It also launched innovation projects for



summer intern students. The ultimate aim of all these activities and projects is to drive Bangchak toward an entity of innovation.

To upgrade its assessment standard for personnel caliber and administration system, Bangchak applied for participation in the Best Employer Project for Thailand, which helped it detect aspects for further improvement. The exercise added assessment of other aspects besides employee engagement, namely employer brand, leadership, and high-performance culture. The first year's assessment score for Bangchak was 66, versus the goal of 60. A roadmap was prepared to constantly close the gaps.

Organizational restructuring in response to strategic directions

In response to the need for sustainable growth and the need to meet customers' demand more effectively, organizational restructuring was undertaken with the creation of a Business Development and Strategy Group, directly responsible for defining the business strategies and plans coherently with business development plans. Additional work units were integrated at service stations, with a focus on more development of food, snacks, and drinks. More emphasis on work process improvement and innovations was added to materialize physical values in the near future.

Preparedness of work process efficiency improvement

To assess, identify, and mitigate risks at all levels impacting business goals, an Enterprise Risk Management (ERM) system was launched. This year the Company introduced Scenario Planning for assessing changing circumstances that are likely to produce risks and wield long-term impacts on the organization's goals. Scenario planning is regularly presented for the review and monitoring of risk management plans at ERM (Enterprise Risk Management Committee) and PRMC (Price Risk Management Committee) meetings. Bangchak also achieved ISO 22301:2012 certification for BCM for a second consecutive year. Furthermore, this year the Company organized a review of enterprise work processes for greater flexibility and efficiency, as well as a workshop to review knowledge about Lean Process for executives and supervisors across the board.

Information system and technological modernization

To meet the requirements of instant information and technologies to operate all work processes safely, effectively, and smoothly,



modernization of information system and technology is a prerequisite. Today's common is the perception of fast technological changes, which could wield strong impacts—positive and negative ones. Recognizing the value of IT systems, which lead to convenience, safety, and effectiveness, Bangchak has applied its systems of customers' opinion-sharing and data collection, and more service provision through the IT system and mobile applications. Cases in point were customers' complaint and feedback input through the SAP Call Center and the communication and direct inputting of goods and service-related data through the social media. Besides, data can find rapid applications to efficiently meet the highly dynamic needs of consumers.

In addition, the Company has internationalized IT systems in support of work within the organization. For instance, it adjusted SAP SRM (Supplier Relationship Management) to link its databases to the SAP ERP system for greater efficiency. The Company also modified the BCP Knowledge Management System to accommodate modern, diverse functions to support knowledge-sharing within the organization, including experts and employees of PTT Group. Consequently, knowledge can be linked and extended within the same group of companies and become increasingly efficient.

Awards of 2014

- SET Award of Honor from the 'SET Awards 2014' event, organized by the Stock Exchange of Thailand (SET) in conjunction with the Money and Banking magazine:
 - Top Corporate Governance Report Award for nine consecutive years, in recognition of listed companies with outstanding corporate governance reports
 - Best Corporate Social Responsibility Award for eight consecutive years, in recognition of listed companies with outstanding social responsibility in business conduct.

Bangchak also won the Outstanding Investor Relations Award and the Outstanding Corporate Social Responsibility Award.

- Awards won at the 'Asia Pacific Entrepreneurship Awards 2014' event, organized by Enterprise Asia, a non-governmental



organization in pursuit of entrepreneurship development across the region:

- Outstanding Entrepreneurship Award for two consecutive years, presented to business leaders who have shown outstanding performances and tenacity in developing successful businesses with due regard for social and environmental responsibility.
- Green Leadership Award in recognition of Bangchak's outstanding environmental responsibility in its production and distribution processes of 'green' renewable energy, as well as production of biodiesel derived from used vegetable oil, in Singapore.
- Awards won at the 'Corporate Governance Asia Recognition Awards 2014 - THE BEST OF ASIA' event, organized by the Corporate Governance Asia magazine (Hong Kong-based):
 - Corporate Governance Asia Recognition Award 2014: Asia's Icon on Corporate Governance, presented to companies with outstanding performances and tenacity in developing corporate governance in the region. Bangchak has won this award for four consecutive years.
 - Asian Corporate Director Recognition Award 2014 for four consecutive years. The award is presented to business leaders who create business growth with due regard for social and environmental responsibility as well as elevating domestic corporate governance.
- Awards won at the '4th Asian Excellence Recognition Awards 2014' event, organized by the Corporate Governance Asia magazine (Hong Kong-based):
 - Asia's Best CEO Award (Investor Relations) for two consecutive years, in recognition of outstanding leaders in investor relations



- and based on votes and surveys among readers, investors, analysts, etc.
- Best Investor Relations Award for three consecutive years, presented to companies with outstanding investor relations and based on votes and surveys among readers, investors, analysts, etc.
 - Platinum Award from 'The Asset Corporate Awards 2014' event, organized by The Asset magazine (Hong Kong-based), in recognition of Bangchak's overall outstanding performance (financial, management, corporate governance, social and environmental responsibility, and investor relations), for the fourth consecutive year.
 - Bangchak is ranked among the 17 companies with the top scores of over 90 based on corporate governance surveys of Thai publicly listed companies under the ASEAN CG Scorecard 2013/2014 program. ASEAN CG Scorecard is a mean benchmark in assessing and ranking corporate governance performances of listed companies in the six participating ASEAN member countries (Indonesia, Malaysia, Philippines, Singapore, Vietnam and Thailand) to ascertain the improving corporate governance standard in the region. ASEAN CG Scorecard Thailand was organized by the Office of the Securities and Exchange Commission (SEC) in conjunction with SET and the Thai Institute of Directors (IOD).
 - Bangchak is among the 19 listed companies which have attained Level 4 (the top level) and are certified by the Collective Action Coalition (CAC) from the Anti-Corruption Progress Indicator Assessment for Thai Listed Companies 2014, organized by SEC in conjunction with Thaipat Institute.



- CSR Recognition Award 2014, presented by SET in recognition of listed companies with outstanding performances in integrating CSR with their business processes.
- Best Sustainability Report Award 2014, organized by CSR Club, Thai Listed Companies Association, SEC, and Thaipat Institute. The award went to companies with outstanding information disclosure and reporting policies with an emphasis on social responsibility and CSR-in-Process for business conduct. Bangchak has won the award for two consecutive years.
- Best Green Office Award (Gold Level), awarded to organizations which have passed the 'green office' mean standard indicators at the Thailand Environment Day and the National Natural Resources and Environmental Conservation Volunteering Day 2014: "Clean City, People Happy", held in honor of HM the King's 87th Birthday Anniversary by the Ministry of Natural Resources and Environment and the Ministry of Interior.
- Asian Company Secretary of the Year Award 2014, presented to Asian company secretaries who have demonstrated strong perseverance in overseeing companies and directors in strict compliance with applicable laws and regulations, as well as in continually developing corporate governance. The award was conferred at the '2nd Asian Company Secretary and Compliance Officer of the Year Recognition Awards 2014' event, organized by the Corporate Governance Asia magazine (Hong Kong-based)
- Based on the assessment outcomes of a survey on CG report of listed companies for 2014, organized by IOD, Bangchak earned an overall 'Excellent' score for eight consecutive years.



- Bangchak scored an ‘Excellent’ 100% in all AGM criteria for six consecutive years under the ‘2014 Annual General Meeting Assessment Project’, organized by the Thai Investors Association.
- Certificate from the “Full-Liter Gas Station Development Project” for meter accuracy, good quality service, and hygiene of service stations. From a total 253 service stations in Bangkok and its vicinity, Bangchak’s 68 stations have been certified, and its Vibhavadi Rangsit branch was the first to receive the award. The event was organized by the Department of Internal Trade, Ministry of Commerce.
- Certificate for Asia’s Best Companies 2014, presented by the Finance Asia magazine. Bangchak has been honored as Thailand’s Best Mid-Cap company and a top-10 company with the best dividend payment, based on an opinion survey among over 330 Asia’s investors, fund managers, and analysts.
- Certificate for Outstanding Call Center 2014, presented by the Office of the Consumer Protection Board (OCPB) to companies with social responsibility awareness, standard service quality, timely solution handling, and customers’ satisfaction.
- Carbon Neutral Certificate in recognition of its efforts to cut greenhouse gas emission, presented at the “Together We Fight Global Warming” event by Thailand Greenhouse Gas Management Organization (Public Organization) (TGO).
- CSR Plaque, presented to organizations with outstanding corporate social responsibility performances in community economic programs, producing youths of virtues, citizen awareness, and environmental and energy conservation, etc., by the Ministry of Social Development and Human Security, on its 12th founding anniversary.



- Outstanding Enterprise Plaque, presented by the Social Security Office (SSO) in recognition of its outstanding discipline and responsibility in the payment of provident fund in strict compliance with the prescribed time and conditions.
- Plaque for Quality Activities Support, presented by the Department of Industrial Promotion at the '28th QCC Thailand' event.
- ISO22301:2012: Business Continuity Management System (BCMS), which covers procurement, production, distribution, storage, and delivery of petroleum products, presented by the ISO Management System Certification Institute (Thailand).
- ISO/IEC27001:2005: Information Security Standard for the Management of Distributed Control System (DCS), in recognition of Bangchak's awareness of documented information security and easy access to information for all parties.
- ISO500001:2001: International-standard energy management systems, presented by the American National Accreditation Board (ANAB) for Bangchak's success in the development of energy management systems in its refinery's production processes and distribution centers with efficiency comparable with that of leading international refineries.

2013

- Bangchak hired internationally accepted experts to review the operating safety of the overall refinery system and equipment with a HAZOP (Hazard and Operability Study) and it was completed, with a continuous improvement plan defined to push Bangchak's refining safety to a higher standard than those of other international refineries.
- In addition, a tail gas treating unit, a treatment unit at the end of the process, was completely installed and commissioned within the



government's timeframe, thus sharply reducing sulfur dioxide emission from the sulfurization unit by 90%.

- Bangchak values the stewardship of Safety Health Environmental and Energy (SHEE). In 2013, the Ministry of Industry awarded to Bangchak a CSR-DIW Level 5 award of its achievement to operate responsibly to society through its community social network toward sustainable development. This achievement, combined with the already awarded Green Industry 4, will lead Bangchak toward Green Industry 5. Moreover, Bangchak is introducing ISO 50001, the international standard for energy management, to help manage its entire energy management system.
- The Company increased its retail volume by expanding distribution channels. Full-scale service stations located in high-potential areas were selected for such expansion. In 2013, there were two main truck service stations, located at SuperK, Chonburi province and Suratthani airport.
- Bangchak is determined to improve its service station image: clean, modern, and catering more to customers' needs. Focusing on continuous improvement of quality, Bangchak service stations earned the following awards:
 - Quality, Safe, and Attractive Service Stations: Department of Energy Business, for the fourth consecutive year, covering 178 stations
 - Trusted Brands Gold Awards (Service Stations): Reader's Digest Magazine, for the third year, following a survey of brands and services in which consumer confidence is high for quality, catering to consumers' needs, social responsibility, and innovative ideas for products
 - Brand of Choice: Based on a survey by a third-party research company in 2013, Bangchak service stations ranked second most popular among domestic service stations for the fifth consecutive year.
- Bangchak continually promoted and expanded sales of Gasohol E20, and Gasohol E85. The Company raised the number of service stations selling Gasohol E20 by 97, and selling Gasohol E85 by 51. To accommodate newer car models, service stations selling E20 and E85 nationwide currently number 678 and 102 respectively.
- In April 2013 Bangchak entered an Exclusive Partnership, a long-term business joint venture agreement with Big-C Supercenter PCL, which calls for development and installation of 500 Big C-Mini stores in Bangchak's service stations nationwide. Meanwhile, 55 new Big C-Mini stores were added, bringing the total chain to 62.



- The Company has constantly stressed expansion of its lubricant market to the industrial sector and markets in neighboring countries, staged sales promotional activities, improved quality products further, and improved lubricant containers to ease application while being green.
- **Renewable energy business:** Bangchak has been focusing on the development of new businesses to increase its business value and diversify its revenue portfolio to reduce risk exposure in certain business areas under uncertain, dynamic market and volatile oil price situations. It strictly adheres, however, to its business principles in focusing its production and marketing in parallel with environmental stewardship and social contribution to sustainable growth and financial integrity of the organization. Below are the business moves made by Bangchak.
 - **Biodiesel Business:** Since 2009, the company has invested in a biodiesel plant on its property in Bang Pa-in, known as Bangchak Biofuel Co., Ltd. The company was set up in support of the public policy on alternative-energy promotion while generating income for farmers. In 2013, total biodiesel production averaged 343,000 liters per day, equivalent to a 97% capacity utilization rate.
 - **Solar Power Business:** “Sunny Bangchak” entered a 118-MW power purchase agreement (PPA) with the Electricity Generating Authority of Thailand (EGAT) and Provincial Electricity Authority (PEA), with an incentive adder rate of Baht 8 per unit. Bangchak Solar Energy Co., Ltd., was founded to manage and operate solar power generation. Bangchak’s first phase of 38-MW PPA has been commercially operated since 2012, at Bang Pa-In district, Ayutthaya. Phase 2 consists of 32-MW PPA solar power generation including two solar power generating units of 16 MW PPA each at Amphoe Bamnet Narong, Chaiyaphum, and Amphoe Bang Pa-Han, Ayutthaya, commissioned in 2013.
 - **Ethanol business:** Bangchak acquired 583,000 common shares in Ubon Bio Ethanol Co., Ltd., equivalent to 21.28% of the total common shares. Its ethanol plant located in Amphoe Na Yia, Ubon Ratchathani, is capable of producing 400,000 liters a day of ethanol from fresh cassava, cassava chips, and molasses. The plant began commercial production in January 2013 and supplied ethanol to Bangchak and major oil customers. In 2013, the plant was operating at a 62% capacity utilization rate.
- **Organizational capability development:** Bangchak has adopted the Thailand Quality Award (TQA) criteria in developing its organizational capability in conjunction with business development to



strive for sustainability in human resource development as well as business growth. In 2013, Bangchak won the Thailand Quality Class (TQC) for the second year.

- **Human resource quality improvement:** With a strong commitment to the continuous development of its workforce, Bangchak has defined a clear policy on job rotation to broaden staff skills in preparation for career path development and for current job requirements and expected knowledge and competency in line with the Company vision and business goals. The Competency Base Management System has been adopted to develop human resources systematically. Continuous learning through various channels, including Knowledge Management (KM), cross-functional and cross-divisional group activities such as QCC Kaizen, Community of Practice (COP), and BCP Blog Award exemplified the systems and tools in promoting knowledge and work experience sharing and leading it to an innovation organization. In addition, a jointly developed Knowledge Management Portal with PTT Group of companies was initiated for the sharing of valuable information resources of skills, technologies, financial knowledge, and lessons learned. The Employee Engagement program was introduced to support effective performance appraisals, a system to ensure high standard organizational capability development. Several activities have been organized to assess employee satisfaction and employee loyalty to the organization. Their outcomes have been increasingly positive. Bangchak and its employees continue to strictly adhere to good governance and its corporate culture on social contribution.
- **Organizational restructuring in response to strategic directions and innovation development :** In response to the need for sustainable growth and the need to meet customers' demand more effectively, organizational restructuring was undertaken with the creation of a Business Development and Strategy Business Unit, directly responsible for defining the business strategies and plans coherently with business development plans. Additional divisions were set up to focus on development of food, snacks, and drinks at service stations. More emphasis on work process improvement and innovations was added to materialize physical values in the near future.
- **Preparedness of work process efficiency improvement:** To assess, identify, and mitigate risks at all levels impacting business goals, an Enterprise Risk Management (ERM) system was launched and integrated with a Business Continuity Management (BCM) system to minimize and prevent disruptions to critical work processes, as part of emergency preparedness. The system has responded favorably and



effectively to Bangchak as well as stakeholders, leading Bangchak to comply with the ISO22301 Business Continuity Management Award. Moreover, a continual review of work processes throughout the organization under the Lean Concept operations management continues to improve Bangchak's overall efficiency.

- **Information system and technological modernization:** To meet the requirements of instant information and technologies to operate all work processes safely, effectively, and smoothly, modernization of information system and technology is a prerequisite. Bangchak has installed an enterprise resource planning system, SAP ERP Version 6.0, through an enterprise network to provide 24/7 access to all employees under ISO27001, a reliable system standard for network and data center. An additional system, Digital Control System (DCS), was implemented at distillation unit control rooms to ensure the utmost reliability of refining operations.

Awards of 2013

- Board of the Year Award for Distinction Practices in Good Corporate Governance in the “Board of the Year Awards 2013” contest, awarded by the Thai Institute of Directors (IOD). The contest was organized in conjunction with the Stock Exchange of Thailand, The Thai Chamber of Commerce and Board of Trade of Thailand, Federation of Thai Industries, Thai Bankers’ Association, Thai Listed Companies Association (TLCA), and the Federation of Thai Capital Market Organizations.
- SET Awards of Honor, presented at the SET Awards 2013 event, organized by the Stock Exchange of Thailand (SET) and Finance and Banking Magazine:
 - Top Corporate Governance Report Award, in its eighth straight year. This award honors listed companies with outstanding reports on compliance with corporate governance
 - Best Corporate Social Responsibilities Award, in its seventh straight year. This award honors listed companies with outstanding social responsibility practices.In addition, the Company won an Outstanding Investor Relations Award.
- Membership Certificate of the Private Sector Collective Action Coalition Against Corruption (CAC). Among CAC’s 249 signatory companies, Bangchak was one of the 22 certified founding members during Thailand's 4th National Conference on Collective Action Against Corruption in 2013. CAC was initiated through the cooperation of eight leading organizations, with IOD as its secretary.



- Thailand Quality Class (TQC) Award of 2013, organized by the National Quality Award Office. This award honors entities with integrated organizational management systems under the National Quality Award guidelines, as well as world-standard quality.
- Recognition Awards 2013 “THE BEST OF ASIA”, organized by Corporate Governance Asia Magazine:
 - Asian Corporate Director Recognition Award 2013, in its third consecutive year, this award honors the Company leader with his contributions in growing the business, social responsibility, environmental protection and also efforts in raising the standards of corporate governance practice in the country.
 - Corporate Governance Asia Recognition Award 2013, in its third consecutive year, this award is given in recognition to the Company’s continuing commitment to the development of Corporate Governance in the region.
- Gold Award, presented at The Asset Corporate Awards 2013, in its third year, organized by The Asset Magazine. This award honors based on the magazine’s consideration of corporate governance, social responsibility, environment responsibility, financial, and investor relations aspects.
- The assessment outcome of a survey on corporate governance reports of listed companies of 2013, given by Thai Institute of Directors (IOD), showed that the Company commanded ‘excellent’ rating.
- A perfect score of 100 under a project to assess the quality of organizations for the Annual General Meeting of Shareholders (AGM) 2013, organized by the Thai Investor Association.
- Best Investor Relations Award, in its second year, honors companies with outstanding investor relation, given by votes from the readers of magazine, investors, analysts, etc., presented at 3rd Asian Excellence Recognition Awards 2013 event, organized by Corporate Governance Asia Magazine.
- CSRI Recognition 2013 Award (General Category), presented by the Corporate Social Responsibility Institute in honor of Bangchak’s committed and successful development of social responsibility implementation.
- Exemplary Sustainability Report Award 2013 for Bangchak’s information disclosure, reporting policy with emphasis on social responsibility, and CSR in process for business conduct, organized by the CSR Club, TLCA, Office of the Securities and Exchange Commission (SEC), and Thaipat Institute.



- CSR-DIW Advanced Award Level 5 (the top level), CSR-DIW Continuous Award, and CSR-DIW Supply Chain Award, recognized by the Department of Industrial Works, for Bangchak's plant operation with social responsibility and community networking in performing public service activities for sustainable development.
- Trusted Brands Gold Awards 2013 in the Service Station Category for the third year in a row, voted by the readers of Reader's Digest Magazine for consumers' trust, quality, value, understanding of consumers' needs, social responsibility, and creativity in marketing new products.
- Distinction Winner Awards on Website Branding and Website Corporate Communication at the Communicator Awards 2013 event, in recognition of Bangchak's creativity in marketing and communication, organized by International Academy of The Visual Arts.
- ICT Excellence Awards (under the category of Core Process Improvement Project) in recognition of entities with excellence in IT and communication management for the Audit Management System, presented at the Thailand ICT Excellence Awards 2013, sponsored by the Thailand Management Association and the National Electronics and Computer Technology Center.
- Carbon Offset Certification for Organization – Bangchak was Thailand's first entity to win this certificate from the Thailand Greenhouse Gas Management Organization (Public Organization)
- Certification for Bangchak's river terminal, Thailand's first Chao Phraya River oil terminal issued by Marine Department to win this acclaim, formally known as the Statement of Compliance of a Port Facility under The International Code for the Security of Ships and Port Facilities (ISPS Code).
- The Quality and Safety Service Stations Award, presented by the Department of Energy Business and designed to raise the quality of service stations nationwide. Bangchak won this award for the fourth consecutive year, totaling 178 stations: 68 gold, 64 silver, and 46 bronze medals.

2012

- **Solar power plant:** "Sunny Bangchak" Bangchak signed a power purchase agreement with the Electricity Generating Authority of Thailand and the Provincial Electricity Authority. The first phase operated in Bang Pa-in, Ayutthaya province. The first set of power generators of 8 megawatts was completed, with the commercial sales date beginning on April 2nd, 2012; the second set of 30



megawatts, on July 16th, 2012. The company launched a public learning center for alternative energy through many exhibits and activities, including solar energy, wind energy, wave energy, and oil-bearing algae, in addition to the 4D “Greenenergy the Adventure” film.

- **Biodiesel production:** Since 2009, the Company has invested in a biodiesel plant on its property in Bang Pa-in, known as Bangchak Biofuel Co., Ltd. The company was set up in support of the public policy on alternative-energy promotion while generating income for farmers. In 2012, Bangchak Biofuel underwent de-bottlenecking to raise its capacity from 300,000 to 360,000 liters per day to accommodate the rising biodiesel demand.
- **Ethanol production:** The Company acquired 583,000 common shares (or 21.28% of the total shares) in Ubon Bio Ethanol Co., Ltd., located in Amphoe Na Yia, Ubon Ratchathani, with a 400,000 liters per day capacity. The plant can run on fresh cassava, cassava chips, and molasses.
- Raised the sales volume by expanding the number of service stations in areas with high potential. It launched the maiden flagship “Green Station” on Vibhavadi Rangsit Road, a sizeable station featuring modern looks and environmental friendliness complete with amenities and non-oil businesses.
- The first Bangchak service station in Myanmar was launched in Myawaddy, with quality fuel products on sale.
- Bangchak continually promoted and expanded sales of Gasohol E20, and Gasohol E85. In 2012, the Company raised the number of service stations selling Gasohol E20 by 127, and selling Gasohol E85 by 21, making total number selling E20 and E85 nationwide 581 and 51 respectively.
- The Company continued to stress the quality of service and the image of Bangchak service stations of cleanliness, modern looks, and responsiveness to more customers’ needs. In 2012, Bangchak service stations came in second in a Brand of Choice survey (fourth consecutive year) by research company. Due to the advancement and popularity of communication technologies, the Company has developed iPhone and Android smartphone applications to inform users of immediate retail price movement of Bangchak’s products and location of Bangchak service stations nationwide.
- Bangchak promoted and improved the image of non-oil businesses at service stations to grow income and embrace comprehensive



services, including sales of consumer products at Baichak and Lemon Green outlets. In 2012, the Company in conjunction with Big C Supercenter PLC launched “Big C-Mini” convenience stores at seven sizeable service stations, designed to ease customers’ needs, with a plan to expand these to other service stations nationwide. In addition, the Company has introduced a new car-care service called Green Series.

- The Company continued to manage Inthanin coffee shops, among others. They are now found in educational institutions nationwide, office buildings, and department stores to make the name better known. The Company has also undertaken a project to promote well-behaved youths for society by showing recent, attractive short films about alternative energy, environmental stewardship, and energy conservation. Meant to stress living one’s life under the Sufficiency Economy and volunteering for public services, the films were screened at 12 Inthanin coffee shops in 12 educational institutions from 232 Inthanin coffee shops nationwide (as of December 2012).
- Bangchak has constantly stressed expansion of its lubricant market to the industrial sector and markets in neighboring countries, staged sales promotional activities, improved quality products further, and improved lubricant containers to ease application while being green. The total sales turnover of lubricants for the year grew a healthy 23% to about 2.9 million liters per month.
- Employee engagement was Bangchak’s focus, as evident in such engagement for the year exceeding that of the year before, with a promising outlook, according to a world-class consultant company
- Information technology was promoted as a tool to enhance the efficiency and transparency of work processes, including the development of SAP ERP 6.0 and Auto Desk Plant Design, improvement of IT Disaster Recovery to accommodate BCM, and improvement of the Storage Expansion System.

Awards of 2012

- SET Awards of Honor, presented at the SET Awards 2012 event, organized by the Stock Exchange of Thailand (SET) and Finance and Banking Magazine:
 - Top Corporate Governance Report Award, in its seventh straight year. This award honored listed companies with outstanding reports on compliance with corporate governance



- Best Corporate Social Responsibilities Award, in its sixth straight year. This award honored listed companies with outstanding social responsibility practices.

In addition, the Company won an Outstanding Corporate Social Responsibility Award and Outstanding Investor Relations Award.

- Recognition Awards 2012 “THE BEST OF ASIA”, organized by Corporate Governance Asia Magazine:
 - Asian Corporate Director Recognition Award 2012, this award honored Dr. Anusorn Sangnimnuan as the Company’s leader with his contributions in growing the business, social responsibility, environmental protection and also efforts in raising the standards of corporate governance practice in the country.
 - Corporate Governance Asia Recognition Award 2012, this award was given in recognition to the Company’s continuing commitment to the development of Corporate Governance in the region.
- Outstanding Entrepreneur Award honors Dr. Anusorn Sangnimnuan with his contributions in growing the business, corporate governance, and social & environmental responsibility., presented at ASIA PACIFIC ENTREPRENEURSHIP AWARDS 2012 THAILAND” , organized by Enterprise Asia, a leading NGO for entrepreneurship development in Asia.
- Gold Award, presented at The Asset Asian Awards 2012, organized by The Asset Magazine. This award honors based on the magazine’s consideration of management, corporate governance, financial, social responsibility, and investor relations aspects.
- Best Investor Relations Award honors companies with outstanding investor relation, given by votes from the readers of magazine, investors, analysts, etc., presented at 2nd Asian Excellence Recognition Awards 2012 event, organized by Corporate Governance Asia Magazine.
- IP Champion 2012, in recognition of successful creative entrepreneurs that effectively applied intellectual properties in commercial senses and were commercially outstanding, sponsored by the Department of Intellectual Property, Ministry of Commerce.
- ICT Excellence Awards (under the category of Thai software application) in recognition of entities with excellence in IT and communication management for the e-Legal System, presented at the Thailand ICT Excellence Awards 2011, sponsored by the Thailand Management Association and the National Electronics and Computer Technology Center.

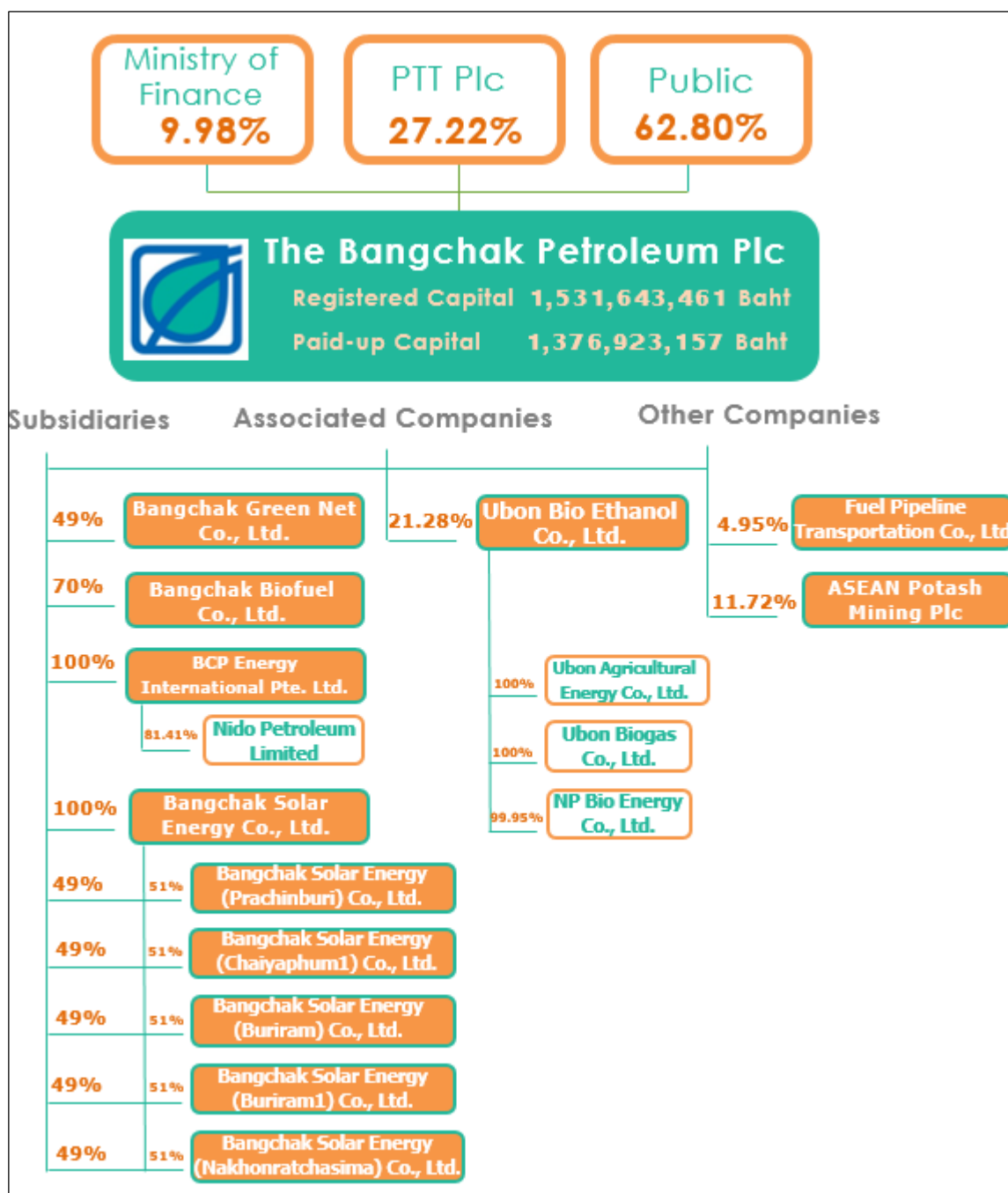


- The assessment outcome of a survey on corporate governance reports of listed companies of 2012, given by Thai Institute of Directors (IOD), showed that the Company commanded 'excellent' ratings in over all categories.
- An excellent score for its quality under the Annual General Meeting (AGM) for 2012 project, given by the Thai Investors Association.
- First prize in the category of clean and pleasant service stations under the Clean and Pleasant Bangkok Project 2012, and clean toilets in compliance with the standard of Department of Health, Ministry of Public Health, in recognition of Bangchak's Vibhavadi Rangsit service station (Thailand's first green station), sponsored by Bangkok Metropolitan Administration. The prizes promoted and upgraded the environmental standards of buildings and public places.
- ISO/IEC 27001:2005 standard certification, under the category of information security management, presented by Bureau Veritas (Thailand) Co., Ltd.
- The Certificate of Green Industry Level 4 (Green Culture), given by Ministry of Industry, which certified that the Company had a systematic environmental management, including the monitoring and continuing development.



1.2 Shareholding Structure

Equity Chart of Bangchak Petroleum Plc and Other Companies



Bangchak Green Net Co., Ltd. (BGN)

Bangchak Green Net Co., Ltd. was set up to manage service stations and *Inthanin* coffee shops, and sell consumer products in *Lemon Green* and *Bai Chak* convenience stores to support the continued expansion of its retail business.



Bangchak Biofuel Co., Ltd. (BBF)

Bangchak Biofuel Co., Ltd. is located in Amphoe Bang Pa-in, Ayutthaya. It was set up to develop and produce domestic alternative fuels, with a 360,000-liter per day biodiesel plant running mainly on crude palm oil, with management philosophy is centered on environmental care. The design and construction of its wastewater treatment system yield high water quality that meets the standard of the Department of Industrial Works. In addition, the company's artificial pond leverages natural re-treating of wastewater before recycling it to plants and processes. This closed system is an extremely effective consumption of water. Today, BBF is constructing its second biodiesel unit with a capacity of 450,000 liters per day, which will raise its B100 capacity to 810,000 liters per day.

Bangchak Solar Energy Co., Ltd. (BSE)

Bangchak operates a photovoltaic (PV) power generation plant, known as Sunny Bangchak, in its first phase with a capacity of 38-MW PPA in Bang Pa-in District, Phra Nakhon Si Ayutthaya, with the first commercial sales date in April 2012. Promoting the solar power plant at Bang Pa-in as Thailand's first integrated learning center and alternative-energy tourist attraction, it founded Bangchak Solar Energy Co., Ltd. (BSE), a wholly owned subsidiary, to manage the project. The second phase, with a capacity of 32-MW PPA (16 MW PPA at Bamnet Narong District, Chaiyaphum, and 16-MW PPA at Bang Pahan, Phra Nakhon Si Ayutthaya), had their first commercial sales dates on March 6th and April 5th, 2013 respectively. Phase three, with a capacity of 48-MW PPA, is in five locations: Kabin Buri District, Prachin Buri; Dan Khun Thot, Nakhon Ratchasima; Prakhon Chai District, Buri Ram; Nong Ki District, Buri Ram; and Bamnet Narong, Chaiyaphum. The entire project having been completed and commercially operated in April 2014. Hence, the company has fulfilled the production and sale of power from its solar farm under its PPA (power purchase agreement) of 118 MW.

BCP Energy International Pte.Ltd. (BCPE)

BCP Energy International Pte. Ltd. (BCP Energy) was set up in Singapore to engage in businesses concerning energy, petrochemical, and natural resources abroad. BCP Energy has acquired 402,951,875 common shares (81.4%) in Nido Petroleum Ltd., which is listed on the Australian Securities Exchange and engages in oil and gas exploration and production with a focus on Southeast Asian resources. Nido Petroleum has produced oil from the Galoc field and the Nido & Mantilloc Block A and Block B in the Philippines, totaling 8,000 barrels per day. Its shareholding in such resources are 22.88%, 22.49%, and 28.28%. In



addition, it is in the process of developing the West Linapacan oil field in the Philippines and exploring for crude oil in the Baronang, Cakalang PSC, and Gurita PSC fields in Indonesia.

Ubon Bio Ethanol Co., Ltd. (UBE)

Ubon Bio Ethanol Co., Ltd. manufactures ethanol from fresh cassava roots and cassava chips, with a capacity of 400,000 liters per day or 132 million liters per year. UBE also has few subsidiaries which were set up to transmute cassava, and own the biogas power plant which use the water that comes out from the production processing.

Fuel Pipeline Transportation Co., Ltd. (FPT)

Fuel Pipeline Transportation Co., Ltd. was set up to manage fuel transportation through a network of underground, multi-product pipelines starting from the Bangchak Refinery in parallel with the railway leading to the Chongnonsri and Don Muang depots, and finally to the Company's Bang Pa-in Depot and FPT. This route was extended near the Makkasan area to Suvarnabhumi Airport to transport aviation fuel by JP-One Asset Co., Ltd.

ASEAN Potash Mining Public Co., Ltd. (APMC)

ASEAN Potash Mining Public Co., Ltd. was set up to explore and produce potash around Amphoe Bamnet Narong, Chaiyaphum, for the manufacturing and the retailing of potassium chloride fertilizers. This project arose from collaboration among ASEAN member countries to capitalize on the natural resources of member countries.



2. Business Description

A leading Thai petroleum company that imports crude oil from the Middle East, the Far East and indigenous sources and refining it into products with a maximum crude-processing capacity of 120,000 barrels per day, Bangchak Petroleum Plc operates more than 1,000 service stations under the  trademark and has grown its businesses to solar power plant and biofuel business. To grow its business base, in 2014, Bangchak moves into the petroleum exploration and production (E&P) business to secure national energy and grow sustainable value.

The company's complex refinery produces high-value gasoline and diesel products. Gasoline, gasohol, and diesel supplied by Bangchak's refinery all meet the EURO IV quality specifications set by the public sector. Bangchak was the first Asian company to come up with EURO 5-standard E20 gasohol with less than 10 ppm in sulphur content, a five-fold reduction from that under the Euro 4 standard. In addition, the refinery is highly energy-efficient with the purchase of power and steam from a cogeneration power plant (invested by PTT) and the use of clean-burning natural gas to power its processes in place of low-sulfur fuel oil.

In 2014, more than 70% of the refined products are sold directly to consumers through the company's own nationwide network of service stations. **The retail network consisted of 444 standard service stations and 626 community service stations (as of December 2014)** with direct distribution to users in the transportation, aviation, shipping, construction, industrial and agricultural sectors. Bangchak service stations focus on selling green alternative fuels, including Gasohol 91, 95, E20, and E85 and Hi-Diesel with biodiesel meet the criteria set by Ministry of Energy, and serves customers with supplementary businesses on their compounds. These businesses include the sale of consumer products at **Bai Chak and Lemon Green shops, and cooperation with Big C Supercenter Plc in launching Mini Big C convenience stores** at large service stations located close to communities, with a variety of goods. Bangchak service stations also house a service center for maintaining and changing lubricating oil and for car wash, collectively known as **the Green Series, namely Green Serve, Green Wash, Green Wash the Premium, Green Wash Auto Care, and Green Tyre**. Finally, they house over 320 **Inthanin Coffee** shops, which is now found at service stations and leading educational institutions, and are expanding to various key commercial locations. Currently, 17 Bangchak service stations sell NGV as an option for



consumers. In addition to fuel products, **the company produces and sells “Bangchak” lubricants oil and special lubricant products (transmission fluid, brake fluid, grease and others)**. Apart from sales to domestic markets through the network of Bangchak service stations, shops, factories and OEM (original equipment manufacturer) market, the company exports its products under BCP LUBRICANTS brand.

Recognizing the significance of alternative energy, which benefits national energy security and lowers trade imbalances resulting from fuel imports, the company promoted alternative energy by blending ethanol with gasoline and biodiesel with diesel to obtain 91-octane and 95-octane gasohols together with E20 and E85, as well as Hi-Diesel. In order to ensure continued support to this effort, **the company set up Bangchak Biofuel Co., Ltd.**, to centralize biodiesel production. The 360,000-litre/day plant, worth over Baht 1,000 million, is located next to Bang Pa-in Depot in Amphoe Bang Pa-in, Ayutthaya province, and runs primarily on crude palm oil. To lower risks from uncertain supply of crude palm oil, the company initiated a project to turn deserted orange groves into oil palm plantations. At present, it has rented 1,200 rai of land in Nakhon Nayok province as an experiment site for the concept. It acquired common shares in Ubon Bio-Ethanol Co., Ltd. (UBE), located in Amphoe Na Yia, Ubon Ratchathani province, with a capacity of 400,000 litres per day. Another purpose is to enhance the security of ethanol supply to accommodate the company's expansion plan for E20 and E85 gasohol sales. In addition, Bangchak has expanded the scope of its business to solar power plant project (through Sunny Bangchak) and signed a power purchase agreement with Electricity Generating Authority of Thailand (EGAT) and Provincial Electricity Authority (PEA) for an 8 baht/unit adder under a 118-megawatt (MW) power purchase agreement (PPA). In 2014, Bangchak invested overseas by forming BCP Energy International Pte. Ltd. in Singapore to engage in international energy, petrochemical, and natural resource businesses, which include branching investment into the upstream business. This company acquired common shares of Nido Petroleum Limited, which is listed on the Australian securities exchange and engages in oil and gas E&P with a focus on Southeast Asian resources.

**Revenue Structure**

In 2014, revenue from sale of goods and rendering of services from the consolidated financial statements of the company and its subsidiaries totaled Baht 183,016 million, consisting of Baht 178,300 million from the company and the following from its subsidiaries, Baht 32,697 million from BGN. (where the Company holds 49% equity), Baht 5,317 million from BBF (where the Company holds 70% equity), Baht 1,879 million from BSE (where the Company holds 100% equity), and Baht 325 million from Nido Petroleum Limited (where the company's subsidiary holds 81.41% equity). Of this income, Baht 35,502 million was accounted for by connected transaction items, most of which came from selling refined products to Bangchak Green Net. Below is the revenue structure by product and service from all companies in 2012-2014.

Product/Service	Operated by	2014		2013		2012	
		Revenue (Baht Mill.)	%	Revenue (Baht Mill.)	%	Revenue (Baht Mill.)	%
Refined products ^{1/}	BCP and subsidiary	179,957	97.0	184,444	97.4	164,482	97.8
Consumer products	Subsidiary	361	0.2	578	0.3	764	0.5
Others ^{2/}	BCP and subsidiary	5,157	2.8	4,367	2.3	2,916	1.7
Total		185,475	100.0	189,389	100.0	168,162	100.0

Note: 1/ The proportions of earnings from sales of products in the domestic in 2014, 2013 and 2012 is 90.2%, 86.6% and 91.5% respectively.

2/ Other earnings, namely interest receivable, earnings from solar power plant revenue, hedging gain, profit from exchange rates, loss adjustment from impairment assets, earnings from sales promotions, land lease, service station lease, equipment lease etc.

2.1 Products and Services Bangchak sells four product groups, namely:**1) Fuels** : comprising of**1.1) LPG**

LPG is a mixture of hydrocarbons, that is, propane and butane, bottled in the form of liquid in high-pressured iron cylinders. LPG is mostly used as cooking gas in households and can also be used in the industrial sector, such as for refrigerator-paint heating, tobacco heating, glass cutting, iron welding, and iron sheet cutting. Besides, it is used to fuel gasoline-engine vehicles.



1.2) Gasoline

Gasoline is for gasoline-fuelled vehicles. The quality of gasoline is classified by its octane number, which indicates resistance to engine knocking. Earlier, Bangchak sold 95-octane and 91-octane gasoline under the Gasoline Greenplus 95 and Gasoline Greenplus 91 as the marketing names. Then, in 2001, the company started to sell gasohol, a blend of gasoline and ethanol (ethyl alcohol) or 99.5% pure alcohol produced from sugar cane and tapioca (cassava) at the ratio of 10%, launching under the marketing names of Gasohol Super Fast 95 and Gasohol Super Fast 91. The new products are compatible with gasoline vehicles and have been confirmed by a number of motorists that no engine modification is needed.

Gasohol offers benefit in many areas, for instance, reduction of air pollution, financial savings for import avoidance of MTBE (Methyl Tertiary Butyl Ether), reduction of impacts from high oil price, and shoring up of crop prices – which draw investment and employment to rural areas. In December 2007, Bangchak discontinued the sale of gasoline Greenplus 95 following the government's alternative energy policy to promote biofuels and improve the environment.

In January 2008, Bangchak started marketing E20 gasohol, a blend of gasoline and ethanol at the ratio of 80:20, offering an octane rating of 95 under the Ministry of Energy's standards. The fuel is compatible with vehicles designed for E20.

In November 2008, Bangchak introduced E85 gasohol to the market. A mixture of gasoline and ethanol at the ratio of 15:85, with an octane rating higher than 100. The fuel follows the standards of E85 in the US and Europe and is compatible with vehicles designed for E85. It cleans the engine and can best reduce pollution from engine combustion compared with other fuels.

In November 2011, Bangchak was successful in producing and marketing gasohol under the Euro4 standard with a tenfold reduction of sulphur and 2.5-fold reduction of benzene. The fuel completes combustion and reduces toxic vapor, thus benefiting the environment and clean air. The product was launched even earlier than the official enforcement on January 1, 2012.

In March 2013, Bangchak became the first in Asia to sell E20 gasohol of the Euro 5 standard, under which the sulphur content is lower than 10 ppm or a fivefold reduction from that of Euro 4 standard. It can thus better reduce pollution caused by engine combustion. Moreover, the new fuel is produced with the Supertech formula, which contains two



additives, namely Boost up Cleaner, a detergent that benefits complete combustion.

1.3) Aviation fuels

Intended for commercial jets, Jet fuels must be clean and absolutely pure. They have extremely low freezing points with specified gravities and heat values. Jet fuels produce clean combustion with its properties remaining constant throughout the operation.

1.4) High-speed diesel

High-speed diesel is for vehicles with diesel engine, such as cars, trucks, fishing trawlers, passenger boats, and tractors.

In 2004, Bangchak took part in the Department of Alternative Energy Development and Efficiency's research on the production and use of biodiesel, a kind of alternative energy produced from crops that is comparable in quality to diesel. Biodiesel lowers air pollution while offering savings from oil imports. As a result of continuous development, Bangchak's diesel is a blend of 5% of biodiesel with the conventional diesel, with a commercial name of Biodiesel PowerD B5. It can be used with diesel vehicles without engine modification. (The mixing ratio of biodiesel is subject to the government's directive.)

In April 2010, Bangchak started selling a new type of diesel, Bangchak Super Power D of the Euro 4 standard, in which two US-certified additives were blended. One is Super Power, which enhances complete combustion. The other is Super Clean, which cleans the injection device, thus making the engine work at its full capacity. With Bangchak's emphasis on being the leader in fuel quality and environmental friendliness, the new Bangchak Super Power D lessens pollution from combustion and reduces the sulphur content by sevenfold, while also reducing carbon monoxide, hydrocarbon, nitrogen oxide, and dust particles. The fuel was launched one year and a half ahead of the government's enforcement (which forced on January 1st, 2013).

In March 2014, the company launched "Bangchak Hi-Diesel", a high-quality new product with better performance due to the Hi Clean additive, which promotes complete combustion, clean engines, and full-strength performance. As a result, consumers save fuels, while the Hi Power additive gives more power to engines.



1.5) Fuel oil

Fuel oil is part of the crude with a high boiling point. It is largely used in the industrial and transport sectors. It also powers marine vessels and power generation. Produced fuel oil is low sulfur with high quality and environment friendly.

2) Lubricants: Lubricants are used to coat engine surfaces to reduce friction so as to slow down the engine's wear and tear while helping in cooling, power transmitting, and cleaning of soot and metal dirt caused by friction. Bangchak sells three types of lubricant products:

2.1 Auto lubes

Bangchak's auto lubes comprise the GE Series for gasoline vehicles and the D3 Series for diesel vehicles, lubricant for two-stroke engines, transmission oil, and brake fluid, and so forth.

2.2 Industrial lubricants

Lubricants in this category include hydraulic oil, industrial gear oil, heat transfer oil, turbine oil, air compressor oil, and cutting fluid.

2.3 Grease

Grease products comprise of multi-purpose grease, heavy-duty and heat-resistant grease, and food-grade grease.

Bangchak lubricants meet API standards, European standards, and standards set by major car manufacturers. In 2008, Bangchak was awarded ISO 9001 : 2008 from The United Kingdom Accreditation Service (UKAS) and Thailand's National Accreditation Council (NAC) for its integrated lubricant business (ranging from procurement, product development, and marketing), and ISO/TS 16949 : 2009 International Automotive Task Force (IATF) for its product development and for being the first in Thailand entrusted for producing lubricants for the automotive industry.

3) Feedstock for refineries and petrochemical plants: comprising

3.1 Straight Run Fuel oil (Long Residue)

This is an intermediate raw material for feeding the refining process with a cracking unit.

3.2 Reformate

Reformate is petrochemical feedstock. It is extracted to produce aromatics or gasoline.



3.3 Isomerate

Isomerate is feedstock for petroleum refining processes in the production of gasoline.

4) By-product: Sulphur, which is naturally associated with oil, is considered a by-product. Sulphur can be extracted for several direct uses, such as for blending in the production of sulphur acid, car tires, pesticides, fertilizer, bleaching, sugar, and shampoo, and for production of sulphur compounds.

2.2 Marketing and Competition

Refining Business

- Bangchak is determined to develop products to satisfy the market and customers with an emphasis on environment-friendliness ('green'). The company, moreover, expanded its logistics cooperation with business partners to achieve cost-effectiveness and reduce manufacturing and marketing limitations. Regarding refining process upgrading and production efficiency control, the implementation of the Product Quality Improvement Project has rendered Bangchak's crude sourcing more flexible, while creating more added value to products in the long run.
- The company maintained new crude oil supply which yields low-sulfur fuel oil for exports and is thus more financially attractive than domestic consumption.
- Bangchak established operational excellence enhancement, strived for plant reliability, and prevented unplanned shutdowns through plans encompassing personnel and process safety excellence. To this end, it focused on managing high-risk processes and formalized its process safety management system. For efficiency and reliability excellence, it constantly managed business risks through SIL (Safety Integrity Level), RCM (Reliability-Centered Maintenance), and RBI (Risk-Based Inspection) for all processes and equipment. For environmental protection excellence, the company commissioned experts to upgrade the standards for refinery environmental practices, safety, and work processes, thus garnering recognition worldwide. Besides valuing refinery safety, environment, and process equipment, the company minimized risks of oil leaks in the transport system by requiring that all crude oil and petroleum product vessels are to be double-hulled.
- The company regularly improved refining efficiency by executing the 3E (Efficiency, Energy, and Environment) Project to add value to products by installing a catalytic reforming unit in place of the



obsolete one with efficient CCR (continuous catalyst regeneration), improved consumption of energy, lengthening of turnaround cycles, construction plan of cogeneration power plants for greater energy stability, and striving to raise its safety level and environmental stewardship.

- Bangchak achieved ISO 50001:2011 certification for energy management under the ANAB (American National Accreditation Board), echoing the success in developing and upgrading the standards for energy management systems at Bangchak Refinery and Oil Distribution Centers on a par with world-class refineries.

Marketing Business comprises of two sectors, namely the retail market and industrial market.

- Retail market – Bangchak embarked on its retail network restructuring with an emphasis on investment in strategic locations to generate higher income and sell higher volumes. As the leader in alternative energy is still the highlight, Bangchak also undertook its station rebranding, particularly along major roads, with a focus on service upgrading to impress customers by providing training and knowledge to station operators and workers. The Mystery Shopper project was also initiated to ensure service standards. Bangchak, in addition, joined PTT in launching NGV refueling stations while continuously expanding its non-oil businesses, namely Inthanin Coffee shop; the Green Series backyard services, which are Green Wash, Green Serve, and Green Auto Service; and Big C-Mini, in cooperation with Big C Supercenter Plc. In 2014, the company emphasized on rebranding community service stations in order to build confidence to new cooperatives which interested and ready to operate new service stations. It is good opportunity to expand network and marketing channel through cooperatives, and it could generate income to the community.
- Industrial Market – Products in the industrial market mostly involve aviation fuel, diesel, fuel oil, and lubricants. Bangchak's Jet A-1 is sold to Thai Airways International Plc. In the diesel market, where price competition has become fiercer due to the need to release refined volumes that exceed domestic demand, Bangchak turned to exports to neighboring countries. For the fuel oil, price competition was still strong, following a sharp fall in demand. Bangchak, therefore, maintains its sales standard by focusing on quality products and services while keeping close ties with major customers. In the lubricant market, Bangchak managed to expand exports to neighboring countries.



Industry and competition

The refining business faces tough competition in the regional market because prices are dictated by the location of the refinery. Therefore, refineries are found scattered around the locations where demand exists. Unlike the crude oil industry, the competition at the global level depends on the quality of crude oil and the field's geographical conditions.

In the refining industry, there are two main types of refinery, namely:

- **Hydroskimming** is **Simple Refinery** with distillation processes. The simple process separates components of crude into light oil (gasoline), middle distillates (aviation fuel and diesel), and heavy oil (fuel oil), the proportions of which depend on the properties of crude.
- **Conversion Cracking** is **Complex Refinery** with a cracking unit, a process added to the distillation process. Conversion cracking turns some heavy oil into lighter products of higher value. However, this type of refinery requires some additional investment in the cracker and bears higher operating costs.

In general, yields from a Simple Refinery vary from those from a Complex Refinery, depending on the following factors:

- (1) The desired products, such as gasoline, diesel, and fuel oil
- (2) The type of crude, such as sweet crude, sour crude, light crude, and heavy crude
- (3) Some special specifications of the desired products, such as the sulphur content.

Thailand experienced slow growth throughout 2014 with economic expansion of 0.7%. Even though political tensions have eased, the overall economy still featured declining private investment and higher household debts. The former was caused by the relocation of manufacturing bases of various businesses to neighboring countries due to Thailand's higher labor costs and low production technology that could not keep up with modern market's demand. The agricultural sector encountered falling prices, while the export sector was hampered by the slow recovery of Thailand's trading partners. Even worse, budget disbursement could not be much expedited despite the government's short-term economic stimulus package. The tourism sector managed to pick up toward the end of the year. In addition to negative impacts from Thailand's own economic structure, the country was hurt by the US's QE lifting and the stronger dollar, as well as the sluggish economies of trading partners. The situation, as a result, hindered fund flows into Thailand, while the Thai Baht became weaker than in the previous year.



The value of the Thai currency averaged Baht 32.62 to the dollar, moving between Baht 31.92 and 33.24 per dollar. In 2015, the Baht is to be closely watched. Positive factors would be a situation in European countries, China, Japan, and Russia, which would still have to struggle with their economies with the need to maintain QE measures to feed more funds into the market. On the other hand, the Baht could weaken with the US's improved economy. The Fed, meanwhile, is expected to increase the interest rate. Even though the lower oil price has been favorable for the public's cost of living and the cost of manufacturing sector, the Thai economy would still have to struggle with household debts, falling prices of agricultural products, and the shrinking export and manufacturing sectors. The situation may prompt the Bank of Thailand to lower the interest rate to shore up the economy. Investors would still be worried about Thailand's general elections following enactment of the new constitution. These would, not surprisingly, discourage economic expansion. The Office of National Economic and Social Development Board (NESDB) on February 16, 2015, predicted that the Thai economy in 2015 would expand slowly between 3.5% and 4.5%

Domestic oil business

In 2014, Thailand recorded 1,222 million barrels per day of total refining capacity with a daily average of 1,020 million barrels, a decrease of 2.9% from that of 2013. In 2015, domestic refining capacity is bound to reise from the previous year, since there is no plan for turnaround maintenance shutdown among local refineries.

Refining Capacities and Average Crude Run of Domestic Refineries 2014

Refinery	Type	Capacity (thousand barrels/day)	Average crude run (thousand barrels/day)	Capacity utilization (%)
Thaioil	Complex	275	282.8	102.84
IRPC	Complex	215	174.0	80.93
Esso	Complex	177	134.1	75.76
SPRC	Complex	155	162.7	104.97
PTTGlobal Chemical	Complex	280	188.5	67.32
Bangchak	Complex	120	86.1	71.75
Total		1,222	1,028.2	84.1

Source: Department of Energy Business



Marketing business

Domestic demand for fuels during 2014 rose from last year by 0.8%, representing total demand of 878,300 barrels (139.6 million liters per day). Amid the more relaxed political climate, the Thai economy still moved slowly under the country's economic structure. Demand for products in the gasohol group increased by 5.9% in response to NEPC's decision to discontinue the sale of 91-octane gasoline on January 1st, 2013, to promote domestic renewable/alternative energy. Demand for aviation fuels, on the contrary, declined as a result of domestic political turbulence, as well as the slow economies in Europe, Japan, and China, which deterred tourists.

Domestic demand for fuels (million liters per day)

Product	2014	2013	2012
Gasoline	1.5	2.1	8.9
Gasohol	21.9	20.5	12.2
Gasoline group	23.4	22.6	21.1
Diesel group	57.7	57.2	56.2
Aviation fuel	15.1	15.2	14.0
Fuel oil	5.9	5.9	6.5
LPG	37.6	37.6	36.8
Total	139.6	138.5	134.6
(KBD)	878	871	846

Source: Department of Energy Business

It is expected that domestic fuel demand in 2015 would grow after receiving a push from the decreasing world oil price and foreign investors' interest in ASEAN. The inauguration of Asean Economic Community (AEC) at the end of 2015 should drive fuel demand up. Demand for gasohol, meanwhile, is expected to rise further in line with the higher number of vehicles and the government's policy to promote renewable/alternative energy. Yet, Thailand's economy is still fragile and lacks confidence from foreign investors. Oil demand in the industrial sector, therefore, will not soar, while the household sector will still struggle with debts, which limits individuals' daily spending.

As for the number of service stations, at the end of 2014, a total of 24,213 stations were registered, an increase of 5.3% from 23,004



stations last year. Among major oil companies, PTT and Esso stations have increased by 2.9% and 1.0%. On the contrary, the number of Shell and Bangchak stations has declined by 5.0% and 0.4%.

As a result of the government's promotion of alternative energy through the discontinued sale of 91-octane gasoline as of January 1st, 2013, onward, the number of service stations selling E20 and E85 gasohol has increased. As of December 31st, 2014, E20 and E85 were available at 2,665 and 596 stations, an increase of 620 and 316. Domestic oil traders revealed their plans to continuously expand their sale of renewable/alternative energy in response to the government's Alternative Energy Development Plan (AEDP) and the larger number of vehicles. Oil retailers have now improved their stations' features and appearances with supplementary services and facilities to provide consumers with more choices while enhancing their competitiveness. Some domestic oil retailers are trying to stretch their networks into neighboring countries to capitalize on the imminent AEC.

Number of service stations

Unit : station

Oil trader	2014 ^{1/}	2013	2012
PTT	1,505	1,462	1,404
Shell	489	515	533
Esso	511	516	512
Bangchak	1,070	1,074	1,067
Chevron	359	366	371
PTTRM	147	148	146
Others	20,132	18,923	17,373
Total	24,213	23,004	21,406

Source: Department of Energy Business

Remarks: ^{1/} number of stations as of December 31st, 2014

During the year, the average sales volume of oil products through service stations around the country was 1,655.2 million liters per month, an increase of 4.0% from last year, in which 1,591.8 million liters per month was recorded on average. Bangchak's sales volume through service stations increased by 6.2%, with a market share increase of 0.3% in this sector.



Sales volume of fuels through service stations for 2013 - 2014

Operator	Average Sales volume (million liters/month)			Market share (%)		
	2014	2013	Δ	2014	2013	Δ
PTT	610.1	608.2	0.3%	36.9	38.6	-1.3
Bangchak	250.5	235.9	6.2%	15.1	14.8	0.3
Esso	240.8	239.8	0.4%	14.5	15.1	-0.5
Shell	211.9	201.6	5.1%	12.8	12.7	0.1
Thai Oil	105.4	74.0	42.4%	6.4	4.7	1.7
PTTRM	102.1	103.0	-0.9%	6.2	6.5	-0.3
Chevron	85.9	87.3	-1.6%	5.2	5.5	-0.3
Susco Group	24.6	25.9	-5.0%	1.5	1.6	-0.1
PTG Energy	18.4	12.1	52.0%	1.1	0.8	0.4
Others	4.6	3.2	45.3%	0.3	0.2	0.1
IRPC	0.9	0.7	23.5%	0.1	0.04	0.01
Total	1,655.2	1,591.8	4.0%	100	100	

Source: Department of Energy Business and Bangchak Petroleum PLC.

In lubricant market, the sluggish economy impacted business with the industrial group, depressing sales (exclusive of lube base oil) for the year to 3.4 million liters per month, a 4.6% drop from 3.5 million liters per month last year. In view of domestic sales volumes through Article 7 traders, however, Bangchak's sales were up by 2.3%, reaching 2.5 million liters per month, versus 2.4 million liters per month last year—which topped the percentage recorded by domestic sales volumes nationwide through Article 7 traders (a negative 3.2%).

Product distribution and distribution channels: Bangchak products are distributed through:

1.1) Service stations – This is the usual retail channel, which is, through service stations scattered around the country. Also in this category are community service stations, intended for sale to members. All products are delivered via road tankers.

Bangchak's retail stations are operated in five formats, namely :

Station Format		Number (station)	Share (%)
1.	Company-Owned, Company-Operated stations (COCO): Bangchak is the investor and operates the station through Bangchak Green Net Co., Ltd. Bangchak takes control of the policy and business model. COCO stations are mostly large stations	182	17.01



Station Format		Number (station)	Share (%)
	located on major roads, and, under Bangchak's direct supervision, serve as prototype stations.		
2.	Company-Owned, Dealer-Operated stations (CODO): Bangchak is the investor and land owner, while the station management is carried out by experienced operators, who rent the stations.	63	5.89
3.	Joint Venture stations (JV): This is a joint investment between Bangchak and operators interested in running the service station business.	75	7.01
4.	Dealer-Owned, Dealer-Operated stations (DODO): The operator is the station owner, land owner, and sole investor, as well as a distribution agent.	124	11.59
5.	Co-Operative stations (CO-OP): These stations are invested by the community. In most cases, the community is the land owner and investor.	626	58.50
Total		1,070	100.00

Remarks: Bangchak Petroleum PLC, as of December 31, 2014.

1.2) Industrial sale – This sales channel serves industrial plants and businesses with fuel demand for heating and producing products and services, such as food, textiles, paper, chemical, iron, and metal industries. Customers deal direct with the company, and deliveries are arranged by road tankers, except for some factories with their own piers.

1.3) B2B – This channel serves businesses with large purchase volumes like airlines, cargo/passenger, land and marine transport companies, as well as construction companies. These customers deal direct with the company, and deliveries are carried out by pipeline (for airlines), boat, and truck.

1.4) Sale to other oil companies – This is the sales channel among large and medium-sized oil traders who own oil depots. Purchased products are distributed through customers' own networks to end-customers. Deliveries are normally carried out by pipeline or customers' trucks.

1.5) Sale to refineries and petrochemical plants – This is the sale of refined products in the form of feedstock to petroleum or petrochemical production process, such as naphtha for the aromatics unit. Deliveries are normally carried out by boat.

1.6) Export sale – Deliveries are normally carried out by marine vessel to overseas oil traders.



Types of customer – Bangchak's customers can be classified by purchasing method:

1) Outlet & End-User Customers – This group of customers are those buying Bangchak brand oil products through stations operated by either the company, dealers, or communities. Also in this group are corporate customers like factories, construction companies, airlines, cargo and passenger boats, and government agencies and state enterprises.

2) Supply Sales Customers – These customers are small and large agents, such as PTT, who order finished products from Bangchak for further distribution. Deliveries are made direct to customers' sites or outlets in their networks.

3) Sale to domestic refineries and petrochemical plants – Oil refineries and petrochemical plants normally order finished products from Bangchak for feedstock.

4) Export Customers – These customers are overseas oil traders who buy Bangchak oil to feed their production process, such as Low Sulphur Waxy Residue (LSWR) sold to customers in Singapore, Malaysia, and China to fuel power generators and feed their cracking units for producing higher-value gasoline and diesel for further distribution.

Bangchak's sales volume, categorized by type of customer

Unit: thousand barrels/day

Type	2014		2013		2012	
	Volume	%	Volume	%	Volume	%
1. Outlet & End-User Customers	82.3	68.2	83.7	69.4	77.0	76.7
2. Supply Sales Customers	-	-	0.1	0.1	0.1	0.1
3. Sale to domestic refineries and petrochemical plants	16.5	13.7	16.4	13.6	12.7	12.6
4. Export Customers	19.6	16.3	20.4	16.9	10.6	10.6
Total	118.4	100.0	120.6	100.0	100.4	100.0

Source : Bangchak Petroleum PLC.



Sales value of Bangchak's products and services

Products	2014		2013		2012	
	million baht	%	million baht	%	million baht	%
<u>Domestic Sale</u>						
1. High-speed diesel	81,991	44.7	86,663	53.2	78,492	48.2
2. Fuel oil	3,467	1.9	4,098	2.5	6,449	4.0
3. Gasoline	49,591	27.0	47,744	29.3	43,341	26.6
4. Other products and services	17,240	9.4	20,625	12.7	20,556	12.6
Total domestic sale	152,289	86.9	159,130	86.8	148,838	91.4
<u>Export sale</u>						
1. High-speed diesel	3,237	1.8	2,126	1.3	1,341	0.8
2. Fuel oil	15,966	8.7	19,014	11.7	10,542	6.6
3. Gasoline	2,422	1.3	1,314	0.8	1,196	0.7
4. Other products and services	1,345	0.7	1,777	1.1	812	0.5
Total export sale	22,970	13.1	24,231	13.2	13,961	8.6
<u>Combined sales value</u>						
1. High-speed diesel	85,228	46.5	88,789	54.5	79,833	49.0
2. Fuel oil	19,433	10.6	23,112	14.2	16,991	10.6
3. Gasoline	52,013	28.4	49,058	30.1	44,537	27.3
4. Other products and services	18,585	10.1	22,402	13.8	21,438	13.1
Total sales value	175,259	100.0	183,361	100.0	162,799	100.0
% increase/decrease	-4.42		12.63		3.74	

Source : Bangchak Petroleum PLC.

2.3 Supplies of products and services

1) Production capacity and production volume

Bangchak's complex refinery, located on 210 Sukhumvit 64, Phra Khanong, Bangkok, boasts a refining capacity of 120,000 barrels per day and performs a 24-hour operation.

Production capacity (measured in 'barrels per day') means the refining system, piping system, and storage system that receive crude for turning into finished products at the maximum volume per day through the quality improvement system, piping system, blending system, storage system, and product distribution system. Every 24 months, Bangchak shuts down the system for maintenance, which normally lasts about 30 days, to keep up or upgrade the system's performance. The shutdown schedule depends on operational and economic circumstances.



Bangchak has, over time, upgraded and expanded its refining unit, while increasing storage tanks. Today's operation is considered efficient with high safety standards and environment management, which exceed standards.

Bangchak's refining capacity and refining volume

Unit: thousand barrels/day

	2014	2013	2012
Nameplate capacity			
: thousand barrels per refining day	120	120	120
: thousand barrels per calendar day (A)	113.4	113.4	113.4
Output volume (by product)			
1. Diesel	42.4	48.5	39.9
2. Fuel oil	14.9	16.8	9.3
3. Gasoline	17.5	20.0	14.9
4. Aviation fuel, kerosene	8.6	10.8	7.7
5. LPG	2.9	2.5	0.8
6. Products for internal use and product loss during operation	0.0	0.7	0.9
Total output volume (B)	86.5	99.3	73.4
% increase of output volume	-12.9	35.4	-14.4
% of capacity utilization (B/A)	76.2	87.6	64.7

Source: Bangchak Petroleum PLC.

Remarks: 1/ Bangchak runs refining operation with three shifts of staff working eight hours per shift. Maintenance shutdowns are regularly scheduled to keep up or upgrade the refining process.

2/ The crude run does not equal the refining capacity because additives are excluded.

3/ The gasoline output excludes the amount of MTBE and ETOH in the production of GSH and ULR.

- In August 2003, Bangchak hired Universal Oil Products (UOP) to assess the refinery's efficiency, with the following findings:

1. Inspection: At all times, Bangchak has kept its refining machinery in good operating conditions. All materials in the refinery are tidily kept, which supports easy work flow. Similarly, work tools are kept in good conditions. According to staff interviews, UOP found no negative comments about the conditions of tools and machines in the refining process.

Regarding the life of Bangchak Refinery, in UOP's view, a lot of refineries in North America, which have been running for over 50 years, possess similar refining technology to that of Bangchak. Therefore, there is no limitation for Bangchak Refinery, which



conducts regular inspection and maintenance, in carrying on its operation for a comparable period.

- 2. Reliability:** Overall, Bangchak Refinery is highly reliable as a result of preventive maintenance and equipment condition monitoring. By UOP's inspection experience, Bangchak Refinery is better managed than many other refineries in North America.
- 3. Process Control:** UOP found that Bangchak Refinery is equipped with good control and safety systems, and conforms to the government's regulations.
- 4. Offsites, Utilities and Refinery Oil Loss:** Utilities and the various supporting systems were able to support the output volume. These systems are steam and power generation, water supply, waste management, air and nitrogen system, and the crude and product storage system. UOP also discovered that Bangchak's production system was well managed and did not harm the environment. The refinery should, therefore, maintain these standards.
- 5. Process Technologies:** Overall, existing technologies were found capable of responding to refining demand. However, new technology may be required to cope with the expected change in demand.

- In 2004, Bangchak hired UOP LLC and Foster Wheeler Corporation, which are the proprietors of world-class refining technologies from the US, to conduct a technological inspection and provide investment options for upgrading the refining efficiency and reducing the production of fuel oil. They recommended that Bangchak install a vacuum distillation unit and hydrocracking unit, together with other supporting units, to reduce the production of fuel oil from 30% to 10% of the total production. This became Bangchak's Product Quality Improvement Project (PQI).
- On August 29, 2005, the Board of Directors agreed on an investment in a hydrocracking unit to facelift Bangchak Refinery from a simple refinery into a complex one, capable of producing products of higher values.
- On April 21, 2006, Bangchak hired CTCI Overseas Corporation Limited and CTCI (Thailand) Co., Ltd., to construct a hydrocracking unit. Starting in May 2006, the entire project required 30 months for construction and a test run.
- In 2009, the Product Quality Improvement Project (PQI) was brought on stream and its commercial operation started in December, turning Bangchak Refinery into a complex refinery with higher capability. The



refinery can take on a wider variety of crude oil and produce finished products of higher values.

- In 2013, realizing the need to upgrade the refinery's efficiency and reliability, particularly its safety and environmental conservation, Bangchak initiated projects gearing towards world-class excellence, namely:

1. Safety

- Commissioning outside safety experts, that is, from DuPont, to assess the management system and provide recommendations on improvement of the refinery's process safety management
- Commissioning outside safety experts, that is, from Foster Wheeler, to help in risk analysis, as well as analytical and assessment techniques to identify risks and find out obstacles in the production process through HAZOP (Hazard and Operability Study)
- Being continuously successful in the reassessment of TIS 18001 / OHSAS 18001 standards

2. Reliability & Engineering

- Commissioning outside safety experts, this is, from DuPont, to assess the management system and provide recommendations for improvement of the refinery's asset integrity management
- Commissioning engineering experts, that is, from Quest Integrity Service, to assess the management system and provide recommendations on improvement of the refinery's inspection management, and arranging for more stringent equipment inspection, that is, Risk Based Inspection (RBI), to ensure that vital refining equipment, especially those subjected to high pressure, are always ready for operation
- Improving the reliability of controlling equipment using the Safety Integrity Level (SIL) technique together with installation of highly reliable equipment
- Improving reliability of the power system
- Improving the machinery maintenance system, that is, the Reliability Centered Maintenance (RCM)

3. Process Technologies

- The start-up of Tail Gas Treating Unit (TGTU) helped reduce contaminants from the stack emissions of the sulphur recovery unit.

4. Process Control

- Some software was upgraded and the number of monitoring screens for the Distributed Control System (DCS) was increased.



5. Utilities

- The raw water production unit was upgraded by using the reverse osmosis technology.
- The wastewater management unit was upgraded and installed with a filter press unit and a reverse osmosis system.

2) Refining process

- **Fractional Distillation** – The refining process starts from breaking up crude oil into fractions in the refining unit by heating it at 370 degrees Celsius. Then, 60% - 70% of the crude will vaporize to the top of the refining column, where it finds the lowest temperature. When that vapor cools down, it condenses into a liquid and flow onto layers of trays, depending on their boiling points, as detailed below:
 1. The top layer, with the lowest temperature, is LPG.
 2. The second layer is Light Virgin Naphtha (LVN).
 3. The third layer is Heavy Virgin Naphtha (HVN) (both LVN and HVN will be blended with some additives to produce gasoline).
 4. The fourth layer is kerosene and aviation fuel.
 5. The fifth layer is diesel.
 6. The remaining liquid crude stays at the bottom of the distillation column, where the temperature is the highest. The liquid is known as the “Atmospheric Residue”.

Vaporization and condensation of crude oil from one tray to another is an ongoing steady-state process in a separate pipe placed beside the distillation column. This separate part is known as a ‘straight run’. Yields from the straight run process, including diesel, contain high cetane and ignite easily, thus easing complete combustion and making engines clean. The resulting fuel oil still has some blend of light yields, making it easy to ignite, thus giving complete combustion. While the excess air can be reduced, resulting in lower fuel and maintenance costs in the long run.

- **Treating:** Treating is to make quality improvement to crude and products by removing unwanted contents, such as sulphur. Treating units include the gas treating unit, naphtha production unit, low-sulphur diesel production unit of Euro 4 standard, and fuel oil treating unit, as well as gasoline production unit of Euro 4 standard.
- **Conversion:** Conversion is the process of changing oil molecule structures to achieve an oil product of higher quality and value. Conversion units include the gasoline production unit (isomerization, reforming) and fuel oil conversion unit.



- **Blending:** Blending is to mix at least two products together or to mix some additives into a product to achieve a product of higher quality.

Fuel oil upgrading unit: Since demand for fuel oil has been falling over time while Bangchak realizes the optimal use of resource, fuel oil produced in the straight run process is treated to achieve cleaner products of higher value, for example, fuel gas, cooking gas (LPG), light naphtha, heavy naphtha, aviation fuel, and diesel.

The above-mentioned treating method starts from moving the fuel oil from the distillation column to the vacuum distillation unit to remove Vacuum Gas Oil. The fuel oil molecules will then be broken up into fractions to produce the desired products. Here, hydrogen from the hydrogen production unit is fed in to help molecule fractioning complete. At the bottom of the vacuum distillation column, heavy fuel oil will be further treated for sale.

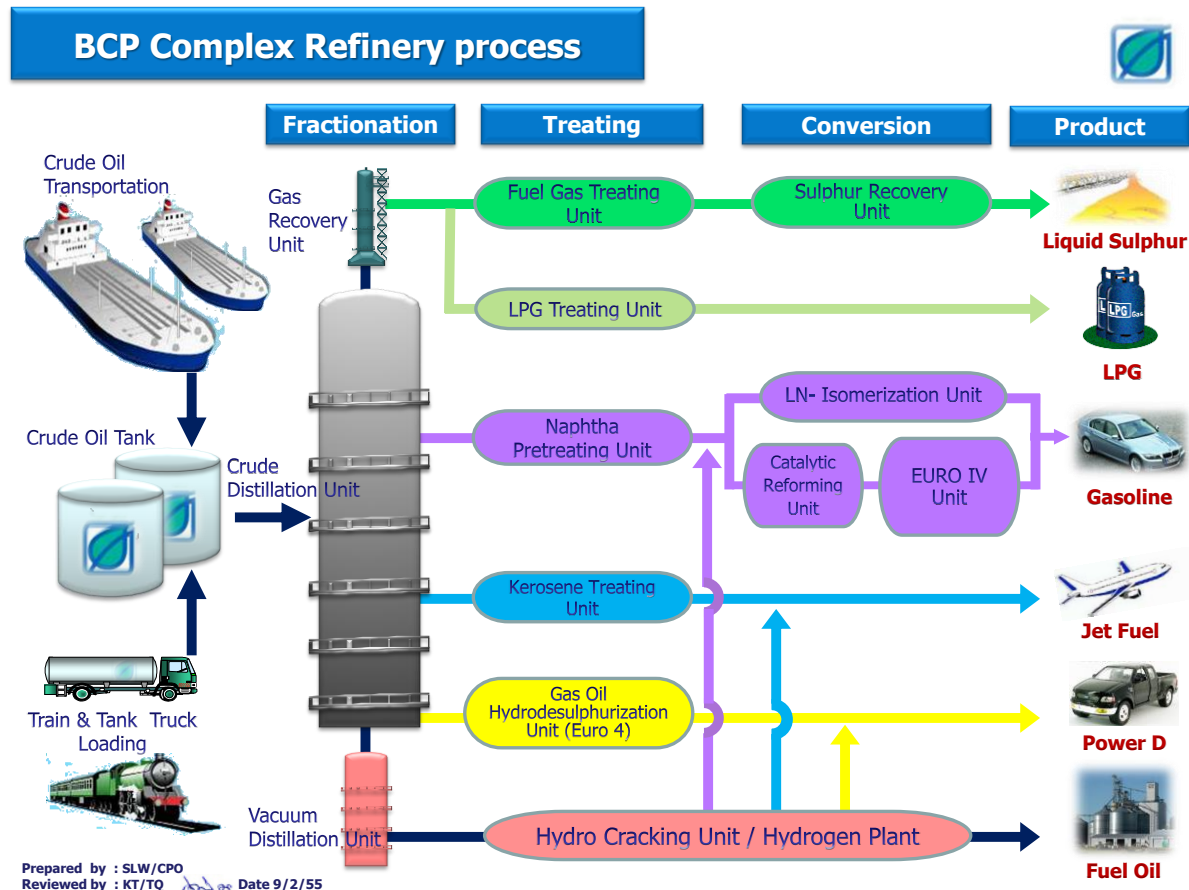
Products derived from molecule fractioning, comprising fuel gas, cooking gas (LPG), light naphtha, heavy naphtha, aviation fuel, and diesel, will be sent to the product separation unit.

Fuel gas obtained from the process will be refined by removing the sulphur content. Treated fuel oil, diesel after sulphur content removal under the Euro 4 standard, aviation fuel, and cooking gas are kept in storage tanks for sale.

Low-sulphur diesel production unit of Euro 4 standard – This is quality improvement for diesel, using hydrogen in combination with a catalyst under specified pressure. By the Euro 4 standard, sulphur content in diesel will be reduced sevenfold to achieve a highly pure product, which will be kept in storage tanks for sale.

Light naphtha and heavy naphtha will be sent to the naphtha production unit to reduce the sulphur content by tenfold under the Euro 4 standard. The product will then be sent to the gasoline production unit (reforming) to raise the octane number before flowing further to the production unit of Euro 4 standard gasoline.

Production unit of gasoline / gasohol of Euro 4 standard – This is the quality improvement for gasoline by using hydrogen, in combination with a catalyst under specified pressure, to reduce the benzene content under the Euro 4 standard. The product will be highly pure with ten times less sulphur content and 3.5 times less benzene. The product is kept in the storage tanks for sale.



3) Raw materials and suppliers

The main raw material of the refining business is 'crude oil', natural hydrocarbons created by compression of organic materials, that is, animals and plants, over millions of years under the earth's surface. Thailand holds its own crude sources at various places, such as the along the seams of Phitsanulok and Kamphaeng Phet provinces, in Suphan Buri province, Sukhothai, Fang district in Chiang Mai, and in the Gulf of Thailand. However, the volume of crude oil produced indigenously is not enough to satisfy the demand posed by the seven domestic refineries. Thus, most of the crude needs to be imported. The major import sources of crude are countries in the Middle East like the UAE, Qatar, Saudi Arabia, Iran, and Dubai, as well as those in Southeast Asia, such as Malaysia, Indonesia, Brunei, the Philippines, and Australia. Crude imports from the Middle East require 15 – 20 days for transport and those from the Far East require 3-7 days. Normally, Bangchak keeps a crude stock of around 33 days in running its refinery.


Indigenous sources of crude oil (unit: thousand barrels/day)

	Production Capacity					
	2014 ^{1/}		2013		2012	
Crude Field	Volume	%	Volume	%	Volume	%
Sirikit	28,035	20.4	32,889	22.0	28,423	19.1
Tantawan	1,597	1.2	2,754	1.8	3,748	2.5
Benchamas	22,691	16.5	20,652	13.8	25,439	17.1
Vichienburi	3,426	2.5	1,186	0.8	1,375	0.9
Jasmine	9,756	7.1	10,478	7.0	10,408	7.0
Big Oil Project	24,141	17.5	29,816	19.9	28,281	19.0
Others	48,091	34.9	51,706	34.6	51,303	34.4
Total	137,737	100	149,481	100	148,977	100

Source: Energy Policy and Planning Office, Ministry of Energy

Remark 1/ As of November 30, 2014

To achieve its goal on crude procurement security at the lowest cost and desired quality, Bangchak sources crude oil from both indigenous and overseas sources at suitable proportions, taking into consideration refining economics. Also, there are times when Bangchak orders petroleum products for sale, known as physical swaps with other producers.

In 2014, Bangchak procured indigenous crude oil from many fields, 24.3% of which is crude from Benchamas Field, 20.3% from Sirikit (Phet), 17.0% from Pattani Field, and 13.0% from Songkhla, as details below:

Indigenous sources of crude oil (unit: thousand barrels)

Crude Field	2014		2013		2012	
	Volume	%	Volume	%	Volume	%
1. Sirikit (Phet)	3,341	20.3	5,150	29.9	6,618	47.6
2. Pattani	2,797	17.0	1,938	11.2	1,729	12.4
3. Jasmine	1,426	8.7	1,597	9.3	1,131	8.1
4. Benchamas	4,011	24.3	4,080	23.7	1,927	13.9
5. Tantawan	-	0.0	489	2.8	208	1.5
6. Na Sanun East	1,214	7.4	277	1.6	344	2.5
7. Arthit Condensate	542	3.3	0	0.0	-	-
8. Type 2	-	0.0	86	0.5	34	0.2
9. North Central	-	0.0	618	3.6	597	4.3
10. Songkhla	2,143	13.0	2,050	11.9	295	2.1



11. BP (U-Thong / Kamphaeng Saen)	59	0.4	75	0.4	92	0.7
12. Arunothai	214	1.3	218	1.3	222	1.6
13. Sang Kajai	39	0.2	45	0.3	44	0.3
14. Phu Horm Condensate	100	0.6	101	0.6	115	0.8
15. POE Night	16	0.1	20	0.1	21	0.2
16. Wichian Buri	46	0.3	69	0.4	99	0.7
17. L 33	16	0.1	17	0.1	26	0.2
18. L53/48	38	0.2	87	0.5	268	1.9
19. Bung krathiem	0	0.0	1	0.0	1	0.0
20. Jakkawan Condensate	0	0.0	0	0.0	-	-
21. Bongkhot Condensate	0	0.0	0	0.0	-	-
22. Nang Nuan	0	0.0	0	0.0	-	-
23. Nong Phak Chee	44	0.3	65	0.4	4	0.0
24. L 53 type 3	139	0.8	170	1.0	18	0.1
25. L 53/48 type 4	63	0.4	67	0.4	-	-
26. L53-2	28	0.2	1	0.0	61	0.4
27. NSE-F6	0	0.0	6	0.0	47	0.3
28. Bua Luang	95	0.6	0	0.0	-	-
29. Manorah	104	0.6	0	0.0	-	-
30. Others	0	0.0	0	0.0	-	-
Total	16,475	100	17,227	100	13,901	100

Source: Bangchak Petroleum PLC.

This year, imported crude is detailed below: Crude from the Far East fields are Labuan, Bunga Orkid, and Bunga Kekwa from Malaysia; Seria Light Export Blend from Brunei; Pangkah from Indonesia; while Murban was imported from the UAE in the Middle East. Details of imported crude appear in the following table:

**Overseas sources of crude oil (unit: thousand barrels)**

Type of crude	Country	2014		2013		2012	
		Volume	%	Volume	%	Volume	%
Far East							
La buan	Malaysia	1,867	12.5	2,652	14.6	4,220	32.6
Bu-nga Orkid	Malaysia	1,402	9.4	4,500	24.7	3,045	23.5
Bu-nga Kekwa	Malaysia	1,078	7.2	1,604	8.8	1,285	9.9
Dulang	Malaysia	0	0.0	191	1.0	-	-
Seria Light Export E	Brunei	2,005	13.4	3,815	21.0	1,070	8.3
Champion	Brunei	625	4.2	0	0.0	-	-
Buck-ho	Vietnam	366	2.4	0	0.0	-	-
Tapis	Malaysia	0	0.0	0	0.0	607	4.7
Dai Hung	Vietnam	0	0.0	0	0.0	288	2.2
Tapis	Malaysia	0	0.0	287	1.6	-	-
Geragai	Indonesia	0	0.0	806	4.4	-	-
Masa	Malaysia	0	0.0	512	2.8	-	-
Miri	Malaysia	0	0.0	285	1.6	-	-
Pangkah	Indonesia	1,030	6.9	175	1.0	-	-
Kapal	Malaysia	198	1.3	0	0.0	-	-
Bentara	Malaysia	96	0.6	0	0.0	-	-
T Jai-ack Trenk	Vietnam	310	2.1	0	0.0	-	-
Uncanny	Australia	71	0.5	0	0.0	-	-
Total from Far East source		9,048	60.5	14,826	81.5	10,515	81.2
Middle East							
Murban	U.A.E.	560	3.7	1,385	7.6	1,888	14.57
Marib Light	Yemen	217	1.5		0.0	-	-
Macila	Yemen	329	2.2		0.0	-	0.0
Total from Middle East source		1,106	7.4	1,385	7.6	1,888	14.6
Other sources							
Sty Barrow	Australia	539	3.6		0.0	-	-
Enfield	Australia	0	0.0	1,150	6.3	551	4.3
Pyrenees	Australia	0	0.0	554	3.0	-	-
Montara	Australia	3,957	26.5	281	1.5	-	-
Koebo	Nigeria	300	2.0		0.0	-	-
Total from other sources		4,796	32.1	1,985	10.9	551	4.3
Grand Total		14,950	100	18,195	100	12,954	100

Source: Bangchak Petroleum PLC.

In addition to crude oil, Bangchak procures semi-finished products to make finished products, while some finished products are also procured for sale.

**Bangchak's Cost of Feedstock**

Crude Type	2014		2013		2012	
	Million Baht	%	Million Baht	%	Million Baht	%
<u><i>Cost of indigenous feedstock</i></u>						
1. Crude and semi-finished products	64,870	43.4	65,925	44.1	52,499	37.4
2. Finished products	29,602	19.8	17,626	11.8	35,002	24.9
Total	94,472	63.1	83,551	55.8	87,501	62.3
<u><i>Cost of imported feedstock</i></u>						
1. Crude and semi-finished products	50,889	34.0	64,078	42.8	49,906	35.5
2. Finished products	4,892	3.3	1,977	1.3	3,045	2.2
Total	55,781	37.3	66,055	44.2	52,951	37.7
<u><i>Combined costs of indigenous and imported feedstock</i></u>						
1. Crude and semi-finished products	115,759	77.4	130,003	86.9	102,405	72.9
2. Finished products	34,494	23.1	19,603	13.1	38,047	27.1
Total feedstock cost	150,253	100	149,606	100	140,452	100

Source: Bangchak Petroleum PLC.



3. Risk Factors

Since 2004, Bangchak has established risk management processes, valuing management practices to avert risks impacting its businesses. In addition, it has applied risk management processes under COSO ERM and ISO 31000 to ensure goal achievement and readiness to constantly face evolving circumstances. The company has defined a companywide risk management policy, to which all executives and employees must adhere, while keeping risks manageable. The company's Enterprisewide Risk Management Committee (ERMC) steers risk management practices for efficiency.

This year, high volatility marked economic and political circumstances, as well as it did the crude oil price, in turn affecting the supply-demand of consumers and the oil business. However, Bangchak has successfully applied risk management tools to operational risks, new project risks, and business continuity management risks to complete all planned tasks, as described below.

1. Economic risks

This year, severe oil-price volatility ruled as the world oil price plummeted as a result of the emerging crude oil glut and the stagnant world economy. Bangchak had engaged in crude oil and petroleum product price hedging, which enabled it to ease losses. In addition, it expanded its solar farm capacity to 118 MW, since this business can generate a steady stream of revenue. It also expanded the biofuel investment in a biodiesel plant based on crude palm oil, going from 360,000 to 810,000 liters per day in 2016. The company also acquired shares in another ethanol plant based on cassava and molasses, with a capacity of 150,000 liters per day. This added to Bangchak's ethanol capacity in another company of 400,000 liters per day to 550,000 liters per day, thus lowering Bangchak's risk of raw-material shortage for alternative energy products while accommodating the spiraling domestic demand.

2. Social risks

The company is committed to running its businesses with primary regard for the safety of communities and society, with constant assessment of risks and potential impacts of evolving external and internal circumstances. It applies lessons learned to the improvement of processes and preparation of additional plans. In addition, the company hired world-class experts to refine, revise, develop, and upgrade the audit



of safety standards and bolster confidence in operation through these actions:

- Revision of Hazard and Operability Study, means the study incorporation views in order to redesign safety standards inclusively, equipped with the prevention of undesirable events to keep machinery operating at a higher standard and with safety. This ensures that design work incorporates various aspects of world-class operation and safety.
- Upgrading of the safety standard from TIS/OHSAS 18001 to process safety management, for which international experts from Du Pont Company served as consultants for the systematization of safety management related to refining processes and high-risk process management.
- Preparedness under Bangchak's emergency response system and an adequate firefighting system for all sites to put out internal fire incidents and aid communities around the refinery, including the number of fire engines, CCTVs, and safety officers.

To show its concerns for community and society safety, Bangchak regularly staged activities to not only promote knowledge and understanding, but also cultivate safety awareness for surrounding communities, including schools, temples, condominiums, and residences. Activities included basic firefighting, thorough installation of communication systems and community alarms, and community observation at the company's stage 3 emergency plan drills.

3. Environmental risks

Environmental impacts tend to be sensitive and attract considerable social interest, easily wreaking havoc on business, particularly when Bangchak is the guilty party. Therefore, the company is determined to take care of and pay great attention to environmental matters by implementing proactive policies of prevention and work efficiency improvement to cover as many business risks as possible, including the following actions.

- Requiring double-hull crude oil and petroleum product transport vessels
- Installing additional reverse-osmosis water treatment systems for an improved quality of effluents for reuse, while cutting the volumes of effluents and raw-water consumption. As a result, Bangchak successfully lowered effluents by 25% and plans to achieve 80% by 2020.
- Investigating construction of an enclosed ground flare to ease the impacts of flaring on communities by 2015.



4. Business continuity management risks

In 2014, Bangchak achieved certification of ISO 22301-2012 (business continuity management) for its head office, Bangchak Refinery, Bangchak Oil Distribution Center, Central Region Business Office, and Bang Pa-in Oil Distribution Center, as assessed by MASCI (Management System Certification Institute (Thailand)). This certification promotes stakeholders' confidence that the company can continue its business uninterrupted during crises.

This year the company staged drills under this plan in case of oil leaks during offloading to lower the impacts on the public, working with IESG (Oil Industry Environmental Safety Group) and government agencies like the Department of Energy Business, Marine Department, Port Authority of Thailand, Phra Khanong District Office, Phra Khanong Metropolitan Police Station, Bureau of Disaster Prevention and Mitigation of Bangkok Metropolitan Administration, and stakeholders in the vicinity. The outcomes of the drill will find their way to the improvement of plan procedures.



4. Review of business assets

Asset	Ownership	Book value Baht million ^{1/}	Obligation
Refinery land	Long-term lease	402	None
Other properties	Ownership	970	None
Buildings	Ownership	269	None
Machinery & distillation tower equipment	Ownership	21,037	None
Power generators	Ownership	3,135	None
Sales and office equipment	Ownership	1,255	None
Platinum catalysts ^{2/}	Ownership	239	None
Vehicles	Ownership	50	None
Works in progress	Ownership	991	None
Total	-	27,320	-

Note:

- 1/ This year Bangchak set aside Baht 64 million in allowance (reversal of) for impairment of land property, machinery, and equipment, consisting of Baht 16 million in property, Baht 15 million in machinery and distillation tower equipment, and Baht 33 million in sales and office equipment.
- 2/ "Platinum catalysts": platinum-based catalysts (found in the octane enhancement unit's reactor), the contents of which are set by their producers.

Trademarks

Trademark	Number of registered trademarks	Goods/services under trademark	Expiry ¹
<u>Copyrights</u>			
1. Bangchak leaf	11	All fuels, cold tissue paper, pure drinking water, plastic polymers, pens, pencils, notebooks, folders, asphalt, activated carbon	Aug. 30, 2019 Oct.15, 2019 Aug. 20, 2016
2. GRENA ZENITH SJ	1	Lubricant	Nov. 5, 2016
3. ISO GREEN	1	Gasoline	Jun. 10, 2024
4. GE GOLD	6	Synthetic gasoline-engine lubricant	Jan. 13, 2023 Feb. 12, 2022 Nov. 20, 2021 Dec. 25, 2021 Jan. 15, 2017



Trademark	Number of registered trademarks	Goods/services under trademark	Expiry ¹
5. GE GOLD SM	1	Synthetic gasoline-engine lubricant	Jan. 15, 2017
6. GE PLUS	4	Gasoline-engine lubricant	Jan. 13, 2023 Nov. 20, 2021 Dec. 25, 2021 Jan. 15, 2017
7. GE SILVER	3	Semi-synthetic gasoline-engine lubricant	Nov. 4, 2024 Dec. 25, 2021 Jan. 15, 2017
8. Green Plus	1	Gasoline	Sep. 14, 2024
9. Green Plus 91	1	Gasoline	Sep. 14, 2024
10. Green Plus 95	1	Gasoline	Sep. 14, 2024
11. LOWCOST	1	All fuels	Jun. 23, 2015
12. BANGCHAK MAXDRIVE	1	Gasoline additive	Dec. 25, 2016
13. D3 GOLD	1	Synthetic diesel-engine lubricant	Oct. 9, 2023
14. D3 TURBO	1	Diesel-engine lubricant	Jan. 25, 2021
15. D3 TURBO PLUS	1	Semi-synthetic diesel-engine lubricant	Jan. 15, 2017
16. D3 EXTRA	1	Diesel-engine lubricant	Jan. 25, 2021
17. D3 EXTRA PLUS	1	Diesel-engine lubricant	Jan. 15, 2017
18. D3 PICK UP	1	Diesel-engine lubricant	Jan. 25, 2021
19. D3 PICK UP PLUS	1	Diesel-engine lubricant	Jan. 15, 2017
20. D3 MAX	1	Diesel-engine lubricant	May 14, 2017
21. D3 COMMONRAIL	1	Diesel-engine lubricant	Oct. 30, 2018
22. D3 COMMONRAIL TURBO	1	Diesel-engine lubricant	Oct. 30, 2018
23. SUPER HDX	1	Diesel-engine lubricant	Jan. 15, 2017
24. POWER D B5	1	High-speed diesel	May 20, 2019
25. BANGCHAK POWER D	1	High-speed diesel	Jul. 10, 2018
26. LEMON GREEN TM	1	Drinking water	Feb. 23, 2019
27. SUPER POWER D B5 (EURO 4)	2	Diesel-engine lubricant Diesel	Nov. 3, 2020 May 2, 2022
28. SUPER POWER D (EURO 4)	2	Diesel-engine lubricant Diesel	Nov. 3, 2020 May 2, 2022
29. INTHANIN COFFEE	2	Coffee drinks, biscuits, bakery products, juices	Sep. 29, 2015
30. PREMIO INTHANIN	5	Drinks, biscuits, cups, plates, tokens, water bottles, pens	Feb. 13, 2021



Trademark	Number of registered trademarks	Goods/services under trademark	Expiry ¹
31. INTHANIN PREMIO BY BANGCHAK	3	Water bottles, water containers, cups, plates, food, bowls, pens	Feb.13, 2021
32. INTHANIN PREMIO COFFEE BY BANGCHAK	5	Drinks, biscuits, tokens, shirts, caps, umbrellas, sunshades	Feb.13, 2021
33. GE NGV	1	Semi-synthetic gasoline-engine lubricant	Dec. 25, 2021
34. GE PLATINUM	1	Synthetic gasoline-engine lubricant	Dec. 25, 2021

Service Marks

Service logo	Number of registered logos	Goods/service under logo	Expiry ¹
<u>Copyrights</u>			
1. Bangchak leaf	3	Goods sales management	Dec. 20, 2018
2. Bangchak colored strips, Bangchak characters, and Bangchak leaf	1	Vehicle service station	Aug. 6, 2023
3. Colored strips and Bangchak leaf	1	Vehicle service station	Aug. 6, 2023
4. Colored strips	1	Vehicle service station	Nov. 3, 2023
5. Bangchak colored strips	1	Vehicle service station	Aug. 6, 2023
6. Hornbill photo	1	Goods sales management	Oct. 10, 2016
7. GRENA CARCARE	1	Vehicle cleaning, maintenance & repair	Feb. 23, 2019
8. Gold food plate (black & white)	1	Sale of goods, foods, and drinks	Sep. 4, 2023
9. Gold food plate (colored)	1	Sale of goods, foods, and drinks	Sep. 4, 2023
10.LEMON GREEN [®]	2	Goods sales management	Feb. 23, 2019 Nov. 18, 2023
11. GREEN AUTO SERVICE	1	Automotive maintenance & repair	Jul. 24, 2015
12.GREEN SERVE	1	Vehicle maintenance	Sep. 1, 2015
13.Green Wash	1	Vehicle cleaning & lubrication	Sep. 1, 2015
14.GREEN WASH AUTOCARE	2	Vehicle cleaning	Jul. 25, 2016
15.GREEN WASH EXPRESS	1	Vehicle cleaning	Jul. 25, 2016
16.GREEN BIKE EXPRESS	1	Motorbike maintenance	Jul. 25, 2016



Service logo	Number of registered logos	Goods/service under logo	Expiry ¹
17. GREEN TYRE EXPRESS	2	Tyre sale & mending	Aug. 15, 2016
18. GREEN WASH THE PREMIUM	1	Vehicle cleaning	May 20, 2019
19. INTHANIN COFFEE	3	Food & fresh coffee business management	Sep. 29, 2015 Nov. 10, 2015
20. INTHANIN PREMIO COFFEE BY BANGCHAK	2	Food & fresh coffee business management	Feb. 13, 2021
21. PREMIO INTHANIN	2	Food & fresh coffee business management	Feb. 13, 2021
22. Baichak	1	Food & drink sale	Mar. 15, 2021
23. Baichak Mart	2	Food & drink sale	Jan. 18, 2022 Apr. 1, 2023

Trademarks and Service Marks advertised abroad

Trademark	Number of registered trademarks	Goods/services under trademark	Expiry
1. Bangchak leaf and Chinese characters (registered in PRC (China))	1	Gasoline, diesel, and lubricants	Dec. 27, 2020
2. Bangchak leaf and BANGCHAK LUBRICANTS - Registered in Myanmar [®] - Registered in LPDR (Laos)	2	Fuel products	- Mar. 20, 2023
3. Bangchak leaf and BCP LUBRICANTS (Registered in Myanmar [®])	1	Fuel products	-
4. Bangchak leaf and BANGCHAK (Registered in Myanmar [®])	2	Fuel products, service stations	-
5. Bangchak leaf and characters (Registered in Laos)	2	Fuel products, service stations	Mar. 20, 2023
6. Bangchak leaf and BCP LUBRICANTS (Registered in Vietnam)	1	Fuel products	Jul. 13, 2022
7. Bangchak leaf and BCP LUBRICANTS (Registered in Cambodia)	1	Fuel products	Jul. 5, 2022



Trademark	Number of registered trademarks	Goods/services under trademark	Expiry
8. Bangchak leaf and BCP LUBRICANTS (Registered in Lebanon)	1	Fuel products	Feb. 26, 2029
9. INTHANIN COFFEE (Registered in Burma)	2	Food & fresh coffee business management	-
10. BAICHAK MART (Registered in Burma)	1	Food & drink sale	-
11. GREEN SERVE (Registered in Burma)	1	Vehicle maintenance	-
12. Bangchak leaf and BANGCHAK (Registered in Burma)	2	Fuel products & Vehicle service station	-
13. Bangchak leaf and BCP (Registered in Burma)	2	Fuel products & Vehicle service station	-
14. Bangchak leaf and BANGCHAK (Registered in Cambodia)	2	Fuel products & Vehicle service station	Nov. 23, 2023
15. Bangchak leaf (Registered in PRC (China))	1	Fuel products	Jan. 6, 2021

Trademarks and Service Marks under deliberation in Thailand

Trademark	Number of registered trademarks	Goods/services under trademark	Remarks
1. GE SYNTECH	1	Semi-synthetic gasoline engine lubricant	Filed Jun. 17, 2013
2. Colored strips, Bangchak leaf, and three leaves	1	Vehicle service stations	Filed Sep. 25, 2013
3. BUBBLY TEA	1	Food & drink sale	Filed Jun. 5, 2014
4. HURRICANE ICE	1	Food & drink sale	Filed Jun. 5, 2014
5. Nom Pang Milk and Bread	1	Food & drink sale	Filed Jun. 5, 2014
6. Moo Yim	1	Food & drink sale	Filed Aug. 4, 2014
7. WASH PRO	1	Vehicle cleaning, maintenance & repair	Filed Nov. 19, 2014

**Trademarks and Service Marks under deliberation abroad**

Trademark	Number of registered trademarks	Goods/services under trademark	Remarks
1. Bangchak leaf BCP LUBRICANTS registered in - PRC - LPDR - Jordan - Kenya - OAPI countries	5	Fuel products	Filed on: Aug. 7, 2012 Nov. 20, 2013 Nov. 24, 2013 Nov. 26, 2013 Dec. 6, 2013
2. INTHANIN COFFEE registered in PRC, Vietnam, LPDR, and Cambodia	4	Food & fresh coffee business management	Filed on Sep. 2, 3, 4 and 5, 2013
3. BAICHAK MART registered in PRC, Vietnam, LPDR, and Cambodia	4	Miscellaneous goods for consumers' convenience	Filed on Sep. 2, 3, 4 and 5, 2013
4. GREEN SERVE registered in PRC, Vietnam, LPDR, and Cambodia	4	Vehicle maintenance	Filed on Sep. 2, 3, 4 and 5, 2013
5. Bangchak leaf and BANGCHAK, registered in - PRC (China) - LPDR (Laos) - Vietnam	6	Fuel products & service stations	Filed on: Sep. 27, 2013 Sep. 30, 2013 Sep. 30, 2013
6. Bangchak leaf and BCP registered in - PRC (China) - LPDR (Laos) - Vietnam - Cambodia	8	Fuel products & service stations	Filed on: Sep. 27, 2013 Sep. 30, 2013 Sep. 30, 2013 Oct. 1, 2013



Trademarks under transfer process in PDRC

Trademark	Number of registered trademarks	Goods/services under trademark	Remarks
1. BCP	1	Fuel products	-

Note:

- Registered trademarks and service logos are in effect 10 years from registration dates and extendable every 10 years
- Belongs to Bangchak Green Net Co., Ltd., a subsidiary
- In registering trademarks in Myanmar, one must submit declaration(s) of trademark ownership and place advertisement(s) to that effect in local newspapers every 2-3 years

Policy of investment in subsidiaries

As of December 31, 2014, Bangchak Petroleum invested in the following subsidiaries:

1. Bangchak Green Net Co., Ltd., with a registered capital of Baht 1 million and 49% shareholding
2. Bangchak Biofuels Co., Ltd., with a registered capital of Baht 281.5 million and 70% shareholding
3. BCP Energy International Pte. Ltd., with a registered capital of US\$ 89.5 million and 100% shareholding
4. Nido Petroleum Limited, with a registered capital of AUS\$ 169.6 million and 81.4% shareholding
5. Bangchak Solar Energy Co., Ltd., with a registered capital of Baht 4,100 million and 100% shareholding
6. Bangchak Solar Energy (Prachinburi) Co., Ltd., with a registered capital of Baht 1,400 million and 49% shareholding. Bangchak Solar Energy holds the rest.
7. Bangchak Solar Energy (Chaiyaphum 1) Co., Ltd., with a registered capital of Baht 780 million and 49% shareholding. Bangchak Solar Energy holds the rest.
8. Bangchak Solar Energy (Buriram) Co., Ltd., with a registered capital of Baht 755 million and 49% shareholding. Bangchak Solar Energy holds the rest.
9. Bangchak Solar Energy (Buriram 1) Co., Ltd., with a registered capital of Baht 765 million and 49% shareholding. Bangchak Solar Energy holds the rest.



10. Bangchak Solar Energy (Nakhon Ratchasima) Co., Ltd., with a registered capital of Baht 760 million and 49% shareholding. Bangchak Solar Energy holds the rest.

Supervision of subsidiaries

In charge of managing Bangchak's service stations, Bangchak Green Net coordinates and defines a core policy under which management of all stations may follow the same direction as Bangchak's marketing policy. Effective from October 1, 2003, Bangchak delegated its representatives to replace resigning directors of the subsidiary, thus increasing the number of Bangchak representatives on Bangchak Green Net's board of directors to a majority. As a result, Bangchak has since controlled the operating and finance policies of Bangchak Green Net.

Set up to produce biodiesel for sale to Bangchak and other customers, Bangchak Biofuel coordinates and defines a core policy to forge a uniform business direction. To this end, Bangchak delegated four senior executives to serve as directors out of six on the board of the joint venture. In the first five years of the company's founding, the manager or managing director of this company came from Bangchak's nomination, thus enabling Bangchak to control the operating and financial policies of Bangchak Biofuels.

Set up to operate solar power generation and sell it to the Electricity Generating Authority of Thailand and the Provincial Electricity Authority, Bangchak Solar Energy was wholly owned by Bangchak. Its five wholly owned subsidiaries were founded to operate solar power projects in different regions. Bangchak delegated senior executives to serve as directors of each of these companies, thus enabling it to control the operating and financial policies of Bangchak Solar Energy.

The operating approaches and the preparation of financial statements for these three subsidiaries follow Bangchak's directions. All their financial statements, including the five subsidiaries of Bangchak Solar Energy, have been consolidated and reported in Bangchak's financial statements since 2003, 2008, 2011, and 2012 respectively to allow efficient consolidated performance measurement.



5. Legal disputes

Below are details as of December 31, 2014, about Bangchak's ongoing legal dispute(s) to which the company is a party; which could significantly affect its business; and which did not result from routine business conduct.

- Bangchak was sued as a joint defendant (defendant No. 5) together with the Ministry of Finance (defendant No. 1) in a tort on the eviction of plaintiff from state property around the Bangchak Refinery pier, rented from the Ministry of Finance. The damages demanded amounted to Baht 1,055 million. On June 3, 2009, the Civil Court read the verdict of the Appeal Court dismissing the case, against which the plaintiff filed an appeal to the Supreme Court, which is considering the case.



6. General information and other key information

Bangchak Petroleum Plc was founded in response to a Cabinet resolution of June 19, 1984. Its structure allows unity, with freedom of administration and business flexibility as in private companies. Registered as a private company limited under the Civil and Commercial Code, Bangchak began operating as a limited company on November 8th, 1984.

Bangchak began its business on April 1st, 1985. It transformed into a public company limited on April 23rd, 1993, and securitized its stocks on the Stock Exchange of Thailand (SET) on August 2nd, 1994. Currently, its registered capital amounts to Baht 1,531 million, of which Baht 1,377 million was paid up.

Bangchak's petroleum business ranges from crude oil procurement from abroad and domestic sources. At its complex refinery with a nameplate capacity of 120,000 barrels per day, the oil is refined into petroleum products. It also sells products to consumers through its nationwide network of service stations and to oil-trading companies by pipeline, boat, or land transport for subsequent sale to consumers through other networks of service stations and other channels. Bangchak also exports its petroleum products. In addition, it operates a solar power generation plant (the Sunny Bangchak Project), the first phase of which (located at Bang Pa-in District, Phra Nakhon Si Ayutthaya) has a capacity of 38 MW; electricity was first commercialized in April 2012.

General information

- Company Name : The Bangchak Petroleum Public Company Limited
- Head Office : 555/1 Energy Complex Building A, Floor 10th Vibhavadi Rangsit Rd., Chatuchak, Bangkok 10900
- Nature of business : Nature of business: An oil refinery with a nameplate capacity of 120,000 barrels per day, a petroleum business covering retail and wholesale, and solar power generation with a capacity of 38-MW PPA.



- Registration No. : 0107536000269
- Telephone : 0-2140-8999
- Fax : 0-2140-8900
- Website : <http://www.bangchak.co.th>
- Company establishment: November 8, 1984
- Commercial operation : April 1, 1985
- Registered capital (as of December 31, 2014) 1,531,643,461 Baht, of which Baht 1,376,923,157 was paid up, dividing into 1,531,643,461 shares, at 1 Baht per share.
- Shareholders of BCP (as of December 31, 2013)
 - PTT Plc 375 Million shares 27.22%
 - Ministry of Finance 137 Million shares 9.98%
 - Minor Shareholders 865 Million shares 62.80%
 - Total 1,377 Million shares 100.00%
- Customers
 - The public, via Bangchak service stations and those of dealers nationwide
 - Industrial sector, including industrial plants
 - Transport and service sectors, including airliners, ocean-going vessels, hotels, trucks, and construction work
 - Agricultural sector, via Bangchak community service stations
 - Overseas export markets.
 - Electricity Generating Authority of Thailand (EGAT) and Provincial Electricity Authority (PEA)
- Office and Terminals
 - Head Office: 555/1 Energy Complex, 10th Floor, Building A, Vibhavadi Rangsit Road, Chatuchak, Bangkok 10900
Tel. 0-2140-8999, Fax 0-2140-8900
 - Bangchak Refinery and Terminal: 210 Sukhumwit 64 Road, Bangchak, Phra Khanong, Bangkok 10260
Tel. 0-2335-4999, 0-2331-0047, Fax 0-2335-4009



- Central Region Business Office and Bang Pa-In Terminal: 99 Moo 9, Tambon Bang Krasan, Amphoe Bang Pa-in, Ayutthaya 13160
Tel. 0-3535-0260, 0-3527-6999, Fax (Central Region Business Office) 0-3535-0290, Fax (Bang Pa-In Terminal) 0-3527-6920
- Northern Region Business Office: 87/9 Yee-wan Building, 3rd Floor, Thung Hotel Road, Tambon Wat Ket, Amphoe Muang, Chiang Mai 50000
Tel. 0-5330-0484, Fax 0-5330-0485
- Northeastern Region Business Office: 499 Moo 3, Mitraphab Road, Tambon Muang Kao, Amphoe Muang, Khon Kaen 40000
Tel. 0-4326-1789-92, 0-4326-1751-3, Fax 0-4326-1750
- Southern Region Business Office: Room 402, 4th Floor, P.C. Tower, 91/1 Moo 1, Kanchanawithi Road, Tambon Bang Kung, Amphoe Muang, Surat Thani 84000
Tel. 0-7722-4790-2, Fax 0-7722-4793
- Samut Sakhon Oil Distribution Center: 100/149 Moo 1, Tambon Tha Chin, Amphoe Muang, Samut Sakhon 74000
Tel. 0-3482-0974, Fax –none-
- Si Racha Oil Distribution Center: 115/14 Moo 10, Tambon Thung Sukhla, Amphoe Si Racha, Chon Buri 20230, Tel. 0-3849-3179, Fax 0-3849-3129
- Rayong Oil Distribution Center: 1, 3B Road, Tambon Map Ta Phut, Amphoe Muang, Rayong 21150, Tel. 0-3860-9389, Fax 0-3860-9413
- Surat Thani Oil Distribution Center: 104/1 Moo 2, Surat-Pak Nam Road, Tambon Bang Kung, Amphoe Muang, Surat Thani 84000
Tel. 0-7727-5056-8, Fax 0-7728-2943
- Song Kla Oil Distribution Center: 13/1 Moo 6, Tambon Sa Ting Mor, Amphoe Singha Nakorn, Song Kla 90280
Tel. 0-7433-2782, Fax 0-7433-2783
- Suksawat Lubricant Oil Distribution Center: 196 Moo 1, Suksawat Road, Tambon Pak Khlong Bang Pla Kot, Amphoe Phra Samut Chedi, Samut Prakan 10290
Tel. 0-2815-6997-8, Fax 0-2815-6996
- Subsidiaries
 - Bangchak Green Net Co., Ltd.
223/94 Country Complex, Building A, 19th Floor, Sanpahwut Rd., Bangna, Bangna, Bangkok 10260
Tel. 02-3672-699
Fax. 02-7457-9452



- Bangchak Biofuel Co., Ltd.
28 Moo 9 (Highway No. 3048), Tambon Bang Krasan, Bang Pa-in District, Ayudthaya 13160
Tel. 035-276-500
Fax. 035-276-549
Website: <http://www.bangchakbiofuel.co.th>
- Bangchak Solar Energy Co., Ltd.
99/1 Moo (Highway No. 3048), Tambon Bang Krasan, Bang Pa-in District, Ayudthaya 13160
Tel. 035-276-000
Fax. 035-276-014
E-mail: info-sunny@bangchak.co.th
- Bangchak Solar Energy (Prachinburi) Co., Ltd.
99/1 Moo (Highway No. 3048), Tambon Bang Krasan, Bang Pa-in District, Ayudthaya 13160
Tel. 035-276-000
Fax. 035-276-014
E-mail: info-sunny@bangchak.co.th
- Bangchak Solar Energy (Chaiyaphum 1) Co., Ltd.
99/1 Moo (Highway No. 3048), Tambon Bang Krasan, Bang Pa-in District, Ayudthaya 13160
Tel. 035-276-000
Fax. 035-276-014
E-mail: info-sunny@bangchak.co.th
- Bangchak Solar Energy (Buriram) Co., Ltd.
99/1 Moo (Highway No. 3048), Tambon Bang Krasan, Bang Pa-in District, Ayudthaya 13160
Tel. 035-276-000
Fax. 035-276-014
E-mail: info-sunny@bangchak.co.th
- Bangchak Solar Energy (Buriram 1) Co., Ltd.
99/1 Moo (Highway No. 3048), Tambon Bang Krasan, Bang Pa-in District, Ayudthaya 13160
Tel. 035-276-000
Fax. 035-276-014
E-mail: info-sunny@bangchak.co.th
- Bangchak Solar Energy (Nakhonratchasima) Co., Ltd.
99/1 Moo (Highway No. 3048), Tambon Bang Krasan, Bang Pa-in District, Ayudthaya 13160
Tel. 035-276-000
Fax. 035-276-014
E-mail: info-sunny@bangchak.co.th



- BCP Energy International Pte. Ltd.
8 Marina Boulevard # 05-02, Marina Bay Financial Centre,
Singapore 018981
- Nido Petroleum Limited
Aquila Centre, Level 3, 1 Preston Street, COMO WA 6152,
Australia
Tel. +61 8 9474 0000
Fax. +61 8 9474 0099
E-mail: reception@nido.com.au
Website: www.nido.com.au