



# Renewable Energy

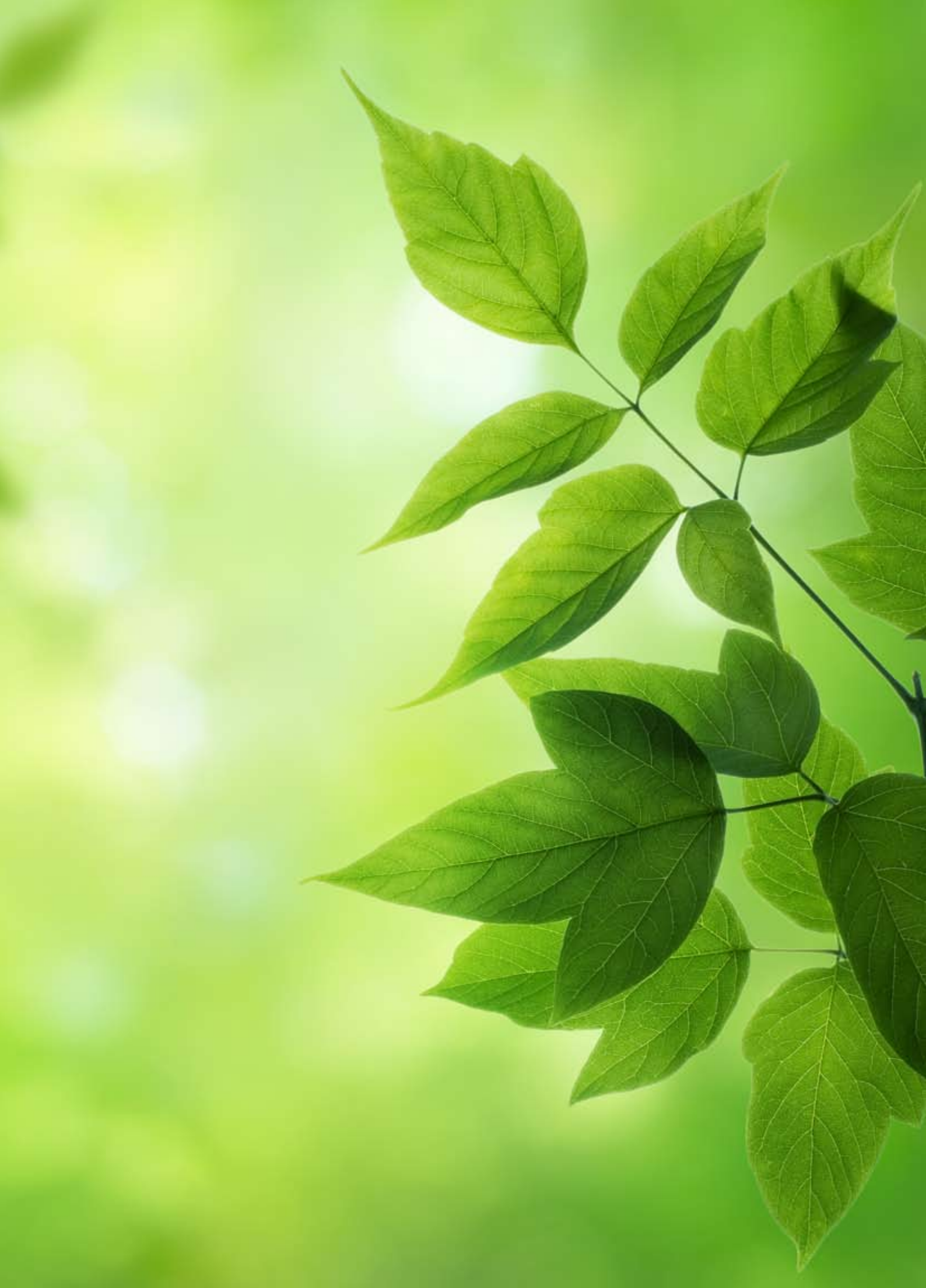


# LEADER

**Sustainability Report 2011**

The Bangchak Petroleum Public Company Limited





# Greenenergy Excellence

Creating an energy business that is environmentally friendly for sustainable development.

We've remained true to our philosophy for the past 27 years: balancing business value and environmental and social merit. To attain sustainability, for Bangchak, this is the way to go.





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## Message from the President



Since 2010, extending through much of 2011, Mother Nature has delivered stern warnings to us. The fact that we experienced three seasons within one day speaks volumes for unpredictable climate change in the not-too-distant future. This year, Bangchak Petroleum Plc organized a seminar on "Thailand's Natural Disasters, World's Natural Disasters: Our State of Unreadiness," featuring experts and people experienced on the matter. In addition, it has developed a handbook on how to deal with natural disasters for the public to recognize potential problems and properly prepare themselves. The Great Floods of late 2011 has reiterated Thailand's lack of readiness for natural disasters, which could bring sorrow to those having to endure prolonged floods and tremendous economic havoc. To help the public, Bangchak extended help early on and provided a mobile service station selling cheap fuels to flooded areas; supplied boats for soldiers and civil servants to provide relief, clean water and survival bags to those without access to food; and restored flooded homes to normal conditions by taking volunteers and employee volunteers to homes that could not manage restoration work by themselves, including homes for women and the elderly, temples and schools.

If we do not want such radical changes, we must reduce our greenhouse gas emission. We can take a simple, yet significant, step by cutting down on our energy consumption and using resources to the full while consuming conscientiously in all quarters of society. As a member of the private sector and a leading Thai company that has abided by the Greenergy principles (sustainable business development together with environment and society), Bangchak Petroleum therefore defined in 2010 its goal of being a carbon-neutral company to ensure environmentally friendly business growth by the year 2014. This past year has seen completion of our solar farm with a 118-megawatt capacity. It is our aim to halve our carbon dioxide emission while achieving business security.

Furthermore, we have humbly applied His Majesty the King's Sufficiency Economy philosophy to our business management in parallel with corporate governance so that our execution may become transparent and be open to scrutiny while being committed to our "Be virtuous, knowledgeable and contributive to society" Bangchak culture. These have enabled us to constantly strike a balance between business value and virtue, as we strive to become a sustainable business entity.

On September 1 this year, Bangchak joined the network associates of the United Nations Global Compact, consisting of 10 rules for dealing with human rights, labor, the environment and anti-corruption. This will become our cornerstone business principle that will be part of our strategies, culture and day-to-day precept.

(Signed) *Anusorn Sangnimnuan*  
(Dr. Anusorn Sangnimnuan)  
President

10 principles		Implementation
Human rights	<div>1. Business should support and respect the protection of internationally proclaimed human rights; and</div> <div>2. Make sure that they are not complicit in human rights abuses.</div>	<div>• Define equitable respect for human rights in the corporate governance policy</div> <div>• Establish channels for whistle-blowing and complaints about violations of laws or ethics, together with protective mechanisms for whistle-blowers</div>
Labor	<div>3. Business should uphold the freedom of association and the effective recognition of the right to collective bargaining;</div> <div>4. The elimination of all forms of forced and compulsory labour;</div> <div>5. The effective abolition of child labour; and</div> <div>6. The elimination of discrimination in respect of employment and occupation.</div>	<div>• Support and establish a Bangchak Labor Union to</div> <div>(1) Seek and safeguard benefits concerning hiring conditions</div> <div>(2) Promote cordial relations between the employer and employees, as well as among employees them selves, to ensure peaceful and proper co-existence</div> <div>• Hire no involuntary labor, forced labor or child labor</div> <div>• Support competency development at the professional level; put the right man on the right job; treat employees fairly; establish decent and safe welfare and workplace environment; and provide compensation comparable to business peers</div>
The environment	<div>7. Business should support a precautionary approach to environmental challenges;</div> <div>8. Undertake initiatives to promote greater environmental responsibility; and</div> <div>9. Encourage the development and diffusion of environmentally friendly technologies.</div>	<div>• Define “Greenergy Excellence” as the Company’s vision (that is, striving for an environmentally friendly energy business for sustainable development)</div> <div>• Define “Greenergy Excellence” as the Company’s business culture</div> <div>• Provide accurate data, strive for understanding and listen to potential problems and impacts so that they may be promptly resolved, a basis for co-existence between plants and communities</div> <div>• Support public service activities through paying due regard for suitability and sustainable benefits</div> <div>• Be a leader in alternative-energy development, focusing on businesses that cut carbon dioxide emission</div>
Anti-corruption	<div>10. Businesses should work against corruption in all its forms, including extortion and bribery.</div>	<div>• In the corporate governance policy, require directors, executives and the rank-and-file to serve with integrity, legality and adherence to the guidelines</div> <div>• Establish channels for whistle-blowing and complaints about violations of laws or ethics.</div>

## Bangchak's House Opening

The Bangchak Petroleum Public company limited

# Organization Structure

- Leading Thai petroleum company importing crude oil from the indigenous sources, operating an oil refinery and marketing the finished products
- Pursuant to a resolution passed by the Prem Tinsulanonda-led Cabinet since June 19, 1984
- Incorporated as a limited company under the Civil and Commercial Code on November 8, 1984
- Changed status to a Public Company Limited under the Public Company Limited Act on April 23, 1993, and listed on the Stock Exchange of Thailand (SET) on August 2, 1994
- The Company's registered capital as of December 31, 2011 is amounting to Baht 1,531 million, of which Baht 1,377 million was paid up.
- The address of the head office is 555/1 Energy Complex, 10th Floor, Building A, Vibhavadi Rangsit Road, Chatuchak, Bangkok



as of December 31, 2011

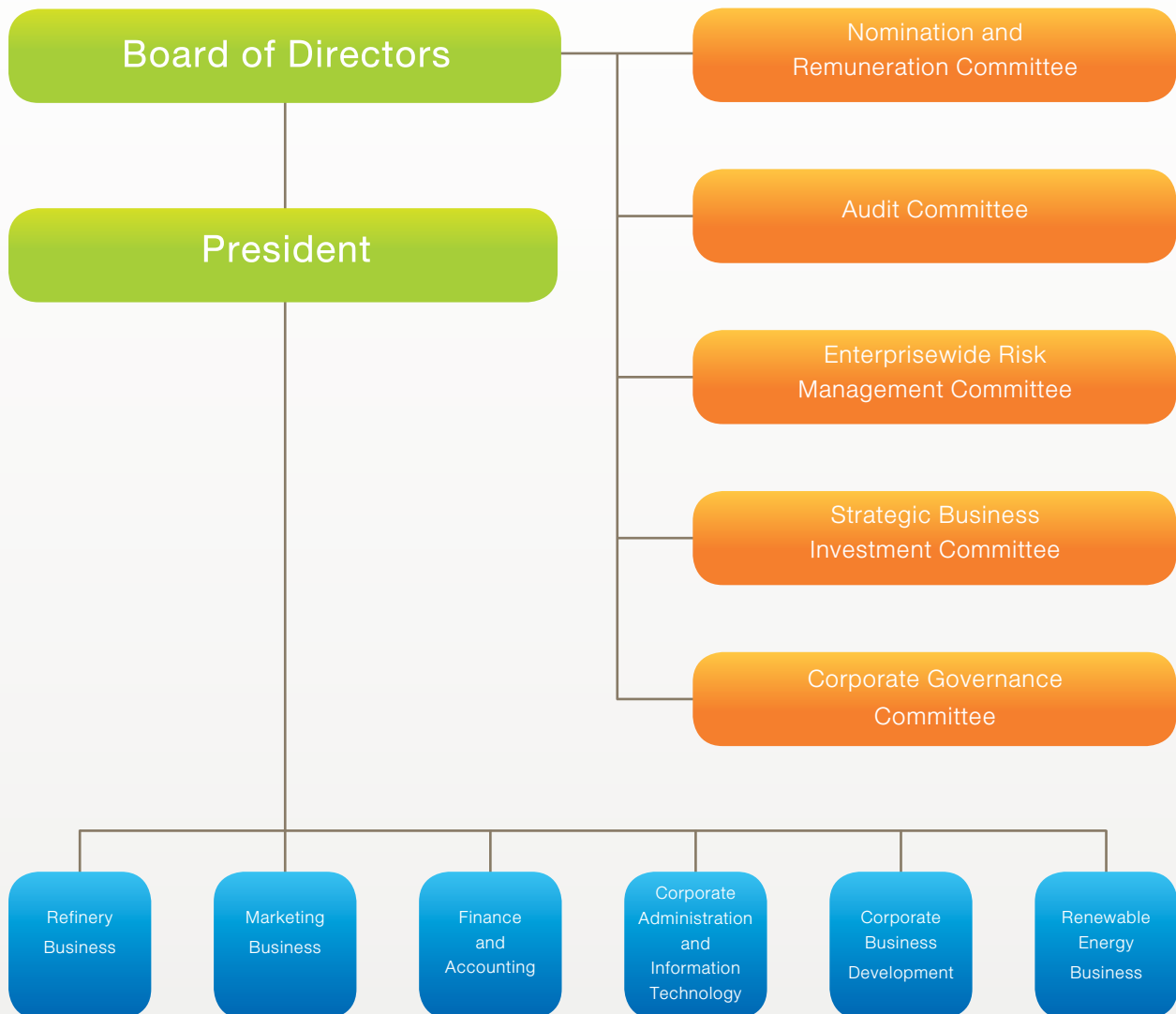
**1,031** employees



as of December 31, 2011,  
total revenue baht

**158,610** million

# BUSINESS STRUCTURE



# INVESTMENT STRUCTURE

70%

## Refinery Business



28%

## Marketing Business



497 Standard Service Stations  
as of December 2011



571 Community Service Stations  
as of December 2011



Airlines



Industrial Sectors



Engine Oil



Bai Chak/Lemon Green Outlets



Inthanin Coffee Shop



Green Series



NGV Service Stations

## New Business Development



Bio Diesel



Sunny Bangchak Solar Power Plant



Palm Planting



Ethanol Plant



Potash Mining



## The Bangchak Petroleum Plc

Registered Capital 1,531 Million Bath Paid-up Capital 1,327 Million Bath  
Note : as of December 31, 2011



Bangchak Green Net Co., Ltd.  
Registered Capital, Paid-up Capital  
1 Million Baht  
Subsidiary



Bangchak Biofuel Co., Ltd.  
Registered Capital, Paid-up Capital  
281.5 Million Baht  
Subsidiary



Bangchak Solar Energy Co., Ltd.  
Registered Capital, Paid-up Capital  
150 Million Baht  
Subsidiary



Ubon Bio Ethanol Co., Ltd.  
Registered Capital, Paid-up Capital  
2,740 Million Baht  
Affiliate



Fuel Pipeline Transportation Co., Ltd.  
Registered Capital, Paid-up Capital  
1,592 Million Baht  
Related Company



ASEAN Potash Mining Public Company Limited  
Registered Capital 2,227 MB  
Paid-up Capital 1,208 MB  
Related Company

# Vision Strategies for Conducting Sustainable Business



## Vision:

“Greenergy Excellence” Creating an energy business that is environmentally friendly for sustainable development

## Business Culture

Develop sustainable business, while safeguarding environment and society

## Employee Culture

To be respectable, knowledgeable, and helpful to others

## Value Statement

B - Beyond Expectation

C - Continuing Development

P - Pursuing Sustainability

## Mission

Shareholders/Business Partners/Customers/Creditors	: Conduct business to steadily grow its returns in a fair manner
Society/Community/Environment	: Promote a business culture that is responsible to the environment and society
Employees	: Grow employees into professionals

For the last 27 years since the start of its energy business in 1985, the Company has always been committed to the corporate culture of “sustainable business development in harmony with the environment and society.” It will continue to do so with an aim to strike a balance between business values and those of the environment and society through the consistent application of a self-sufficient economy, good governance and social responsibility to its operations and goal achievement.

Besides managing its business to generate steady and continuous value through good governance principles and strict risk management for its business, the Company has applied the concept of sustainable management as an essential element of its strategic planning. To illustrate, it has included a social and environmental indicator among its performance indicators in addition to other indicators, namely financial, customer, process and personnel. This would enable the company to properly cascade social and environmental goals down to the operation levels (departments and sections). This way, action plans are interconnected or at least do not contradict the social and environmental indicator. At the operating level, besides the above-mentioned cascading of goals, all employees who observed the employee culture of “Be virtuous, be knowledgeable and contributive to society” also contribute to the driving of various action plans, which will be directly and indirectly beneficial and lead to true success.

## Core strategies for sustainable business operation

1

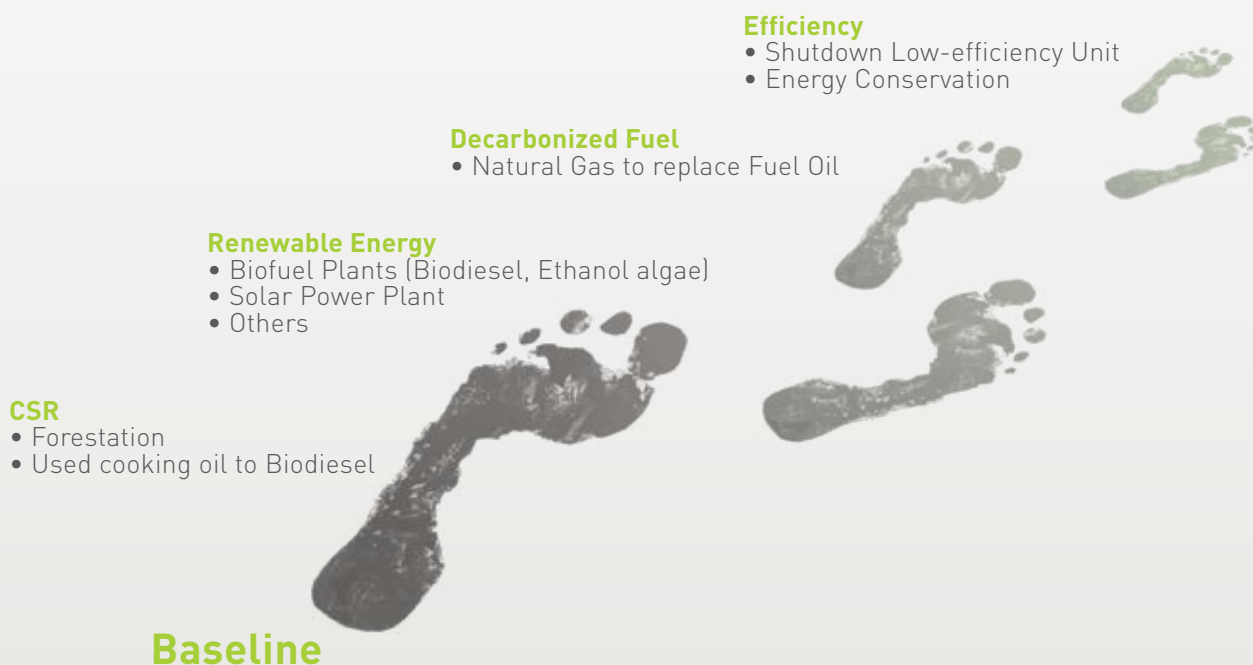
### Grow the business and diversify risks to businesses with secure income

The Company has defined business growth goals to grow sustainable value for its business by restructuring its revenue from 70% (refining business), 30% (marketing business) today, which is highly volatile by nature of the refining business-whether world market prices or refining margins that are subject to global and regional economic conditions-which could in turn result in the Company's performance being also volatile. The Company has now restructured its revenue to 50% (refining business), 20% (marketing business), and 30% (clean-energy business) in 2015. This new element, featuring a constant stream of revenue with low volatility caused by external factors, includes solar-energy power generation, biodiesel production from palm oil (including palm planting) and wind-energy power generation. This move grows business value while diversifying risks associated with its future revenue.

2

### Carbon Neutral Company

Aware that the refining business consumes a large amount of energy and emits considerable carbon dioxide, the Company has set a target to become a carbon neutral company.



### 3 Socially and Environmentally Friendly Business Models (In-process)

Aware that business operations that lack social and environmental activities are unsustainable, 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 of retail stations and agricultural cooperatives. The Company buys agricultural products from cooperatives in different communities and uses them for retail stations' sales promotion to create jobs and revenue in support of the economic and social development of the communities. In the future, the Company, in cooperation with the Ministry of Agriculture and Cooperatives, the Ministry of Energy and the Bank for Agriculture and Agricultural Cooperatives, will initiate a conversion of abandoned orange farms to palm plantations for orange farmers in Rangsit. The palm produce will be their new source of income and promote the use of alternative energy, which has been the Company initiative for more than a decade as in gasohol and biodiesel promotion. In all, this business model benefits the environment and provides higher income to support social development in agricultural communities.

### 4 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 SET rules. Applying proactive environmental management, it discloses the actual data on quality of air and effluents around the refinery by posting such information at the entrance to the refinery and in surrounding communities.

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

## Updates on development of sustainable business operation

### Strategy 1

Grow the business and diversify risks to businesses with secure income (economic aspect)

Plan and goal	Progress made and performance in 2011	2012 goal
1.1 Develop the solar-energy power-generating business by 118 MW	1.1 Generated and sold 8 MW since August 2011, but currently under suspension due to floods	1.1 Generate and sell 54 MW by 2012 (with 38 MW coming from Bang Pa-in and 16 MW from Chaiphaphum)
1.2 Develop the ethanol business with a capacity of 500,000 liters/day	1.2 Invested with Ubon Bio-Ethanol Co., Ltd. (UBE)	1.2 Complete the construction of the UBE plant
1.3 Develop the biodiesel business with a capacity of 600,000 liters/day	1.3 Started up and sold nearly 70% of the capacity because of palm oil shortage earlier and floods later in the year	1.3 Investigate biodiesel capacity debottlenecking to meet rising biodiesel demand

### Strategy 2

Become a carbon-neutral company (environmental aspect)

Plan and goal	Progress made and performance in 2011	2012 goal
2.1 Use clean natural gas instead of fuel oil	2.1 Replaced 80% of fuel oil consumption with natural gas	2.1 Replace all fuel oil consumption with natural gas
2.2 Generate power and steam from an efficient co-generator	2.2 Generated 80% of the power and steam capacity of the co-generator	2.2 Maximize power and steam generation from the co-generator
2.3 Improve the refinery's energy efficiency	2.3 6 efficiency improvement projects saved 0.9% in energy consumption	2.3 Invest in five additional efficiency improvement projects to gain 0.3% in energy saving
2.4 Develop clean-energy businesses (as in (1))	2.4 Details as in (1)	2.4 Details as in (1)

### Strategy 3

Develop business formats for in-processes (social & environmental aspects)

Plan and goal	Progress made and performance in 2011	2012 goal
3.1 Develop business formats leading to national benefits to society and the environment	<p>3.1.1 Developed an additional 21 service stations with agricultural cooperatives, taking the total to 571. This added jobs and income to communities under the cooperatives while developing society from the bottom up to the macro-level. Agricultural goods found their way as sales promotional items to Bangchak service stations, including brown rice made into khao klong taen with black sesames and Doi Kham dried baked mangoes.</p> <p>3.1.2 Operated the Thailand Go Green project for the fifth straight year under the "Solar Energy for Future" theme to cultivate awareness and knowledge of solar energy among students nationwide. The year saw more than 700 participating schools, with over 2.5 million participating students since the first year.</p>	<p>3.1.1 Develop an additional 50 service stations with agricultural cooperatives</p> <p>3.1.2 Maintain the Thailand Go Green project to truly educate students on the benefits and necessity of alternative energy forms while focusing on public communication for disaster preparedness</p>
3.2 Develop business formats leading to social and environmental benefits at the community level	3.2 Developed project formats to meet the needs of target groups and align with the ISO 26000 community development approach with a focus on the environment and alternative energy forms	3.2 Develop project/activity formats on sufficiency economy

## Strategy 4

Be open, transparent and auditable (social aspect)

Plan and goal	Progress made and performance in 2011	2012 goal
4.1 Disclose business information transparently to allow public scrutiny	4.1 After the Company had linked its air and effluent quality tests for display in front of the refinery, at the Piyaom shopping center and at three refinery communities, the year saw further link-ups with the Department of Industrial Works. This fostered confidence and allowed participation by the public and government agencies in transparent scrutiny	4.1 Continue such operation with a plan to add display points and coverage
4.2 Prepare sustainable development reports to disclose economic, environmental and social information	4.2 Developed formats and contents to encompass the approach of GRI : GRI Check (in the process of quality of the GRI report assessment)	4.2 Maintained the quality of the report to disclose Economic, environmental and social information

# Corporate Governance



The Company has had a written corporate governance policy since 2003 for its executives and employees to adhere to. In 2011, the policy has been deliberately improved (revision 8) based on six principles, they are;

**A**ccountability  
**R**esponsibility  
**T**ransparency  
**E**quitable Treatment  
**V**ision to Create Long Term Value  
**E**thics

## Structure of Corporate Governance



The main responsibility of Corporate Governance Committee is to oversee the Company's business practice in order to ensure it complies with the Corporate Governance Principles. It currently comprises six board members composed of 2 independent directors, 3 non-executive directors, and 1 executive director, while the chairman of committee is an independent director, to prevent potential conflicts of interest.

In 2011, the committee held a total of four meetings to monitor performance under the plan for developing good corporate governance practices. Below are the essences of the meetings:

- Rights of Shareholders
- Equitable Treatment of Shareholders
- Role of Stakeholders
- Disclosure and Transparency
- Responsibilities of the Board
- Corporate Governance Policy
- Corporate Governance Distribution

Moreover, the Company is currently a participant of United Nations Global Compact; the largest corporate citizenship and sustainability initiative in the world. Its ten principles cover four core areas: human rights, labour standards, the environment, and anti-corruption. The Company also asked all employees (100%) to respond to and take a test on the 2011 policy through the knowledge management system, staged the "CG Day 2011: Bangchak Joins All Anti-corruption Moves, Commits Good Deeds in Honor of HM the King" activity, revised the policy (Revision 8) on the inclusion of anti-corruption of all forms.



# Risk Management

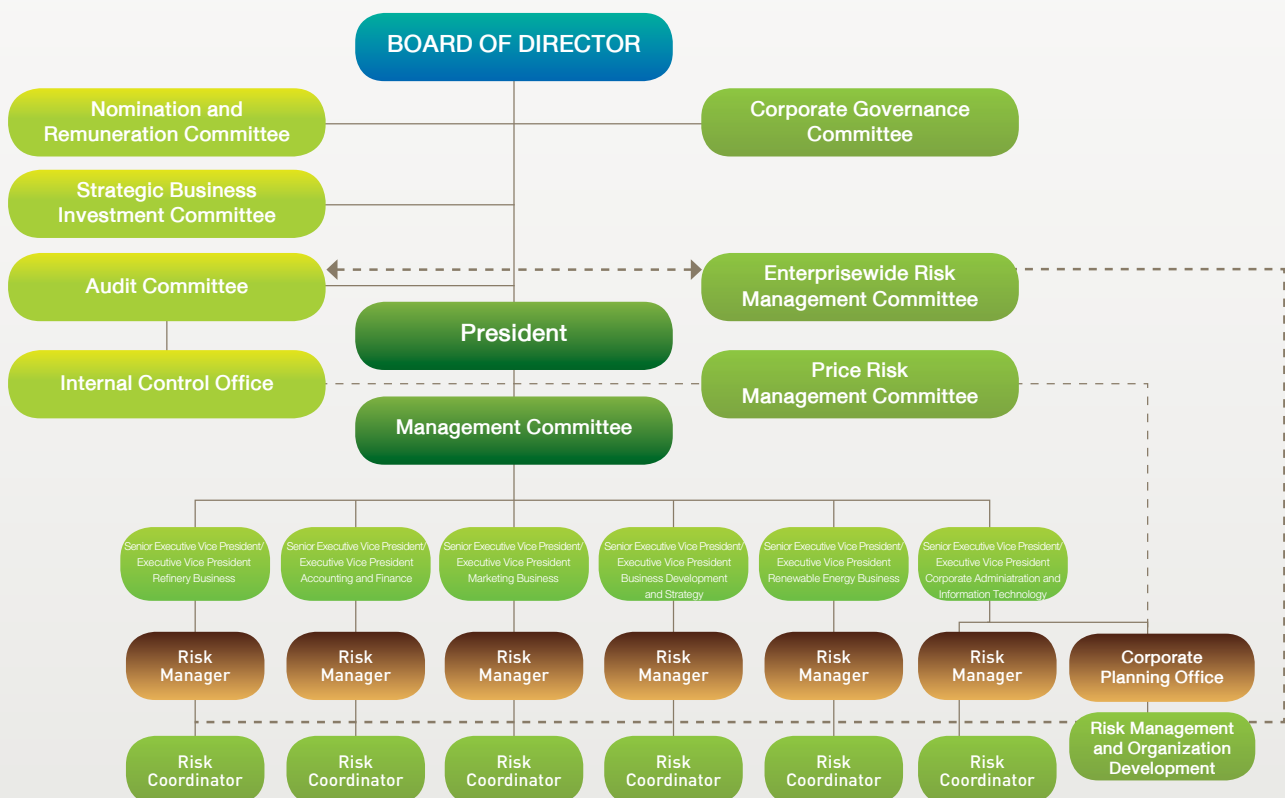


## Risk Management

The Bangchak Petroleum Plc has a continual enterprisewide risk management system (ERMS) in place to ensure goal achievement with greater success in corporate governance practices in the face of current dynamic, highly competitive business circumstances. The Enterprisewide Risk Management Committee (ERMC), consisting of Board directors and senior management, defines the management approach, develops an efficient ERMS, drives cooperation from all across the Company, and ensures manageable overall risk management covering strategic, operating, financial management, compliance, and other key risks dealing with the Company's business.

## Risk Management Structure

Risk Management Structure consists of all directors, executives and employees. The Enterprisewide Risk Management Committee (ERMC), appointed by the Board of Directors, is responsible for supervision in place to ensure the efficiency ERMS of the Company and realization of impact from risks has been ignited by all executives and employees. The Price Risk Management Committee especially defines and monitors the Company's risk management policy for price and exchange rate volatility. Moreover, The Risk Management and Organization Development Division is a center unit which coordinates and supports all executives, employees and other departments to efficiently continue ERMS management and the risk manager and risk coordinator are responsible for managing, coordinating, monitoring and reporting the progress of risk management plan from each department, as following figure.



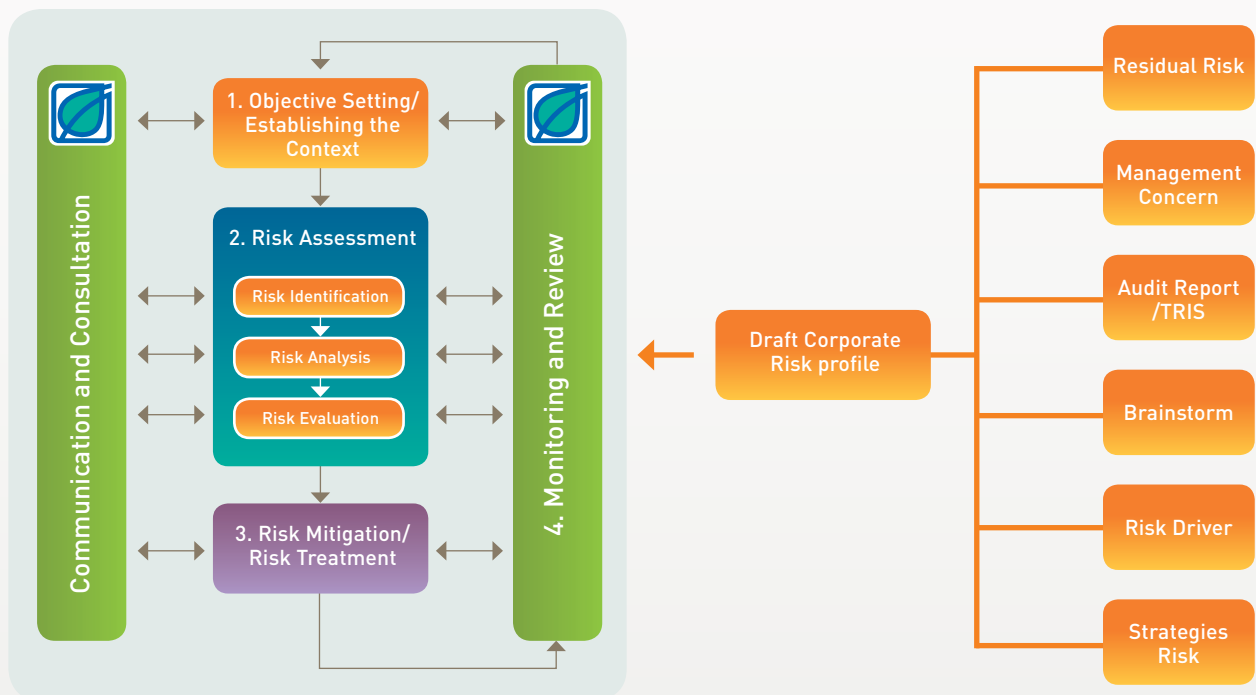
**Note:** Risk Manager - Vice President Position or whoever is assigned to  
Risk Coordinator - assigned by Senior Executive President / Executive Vice President

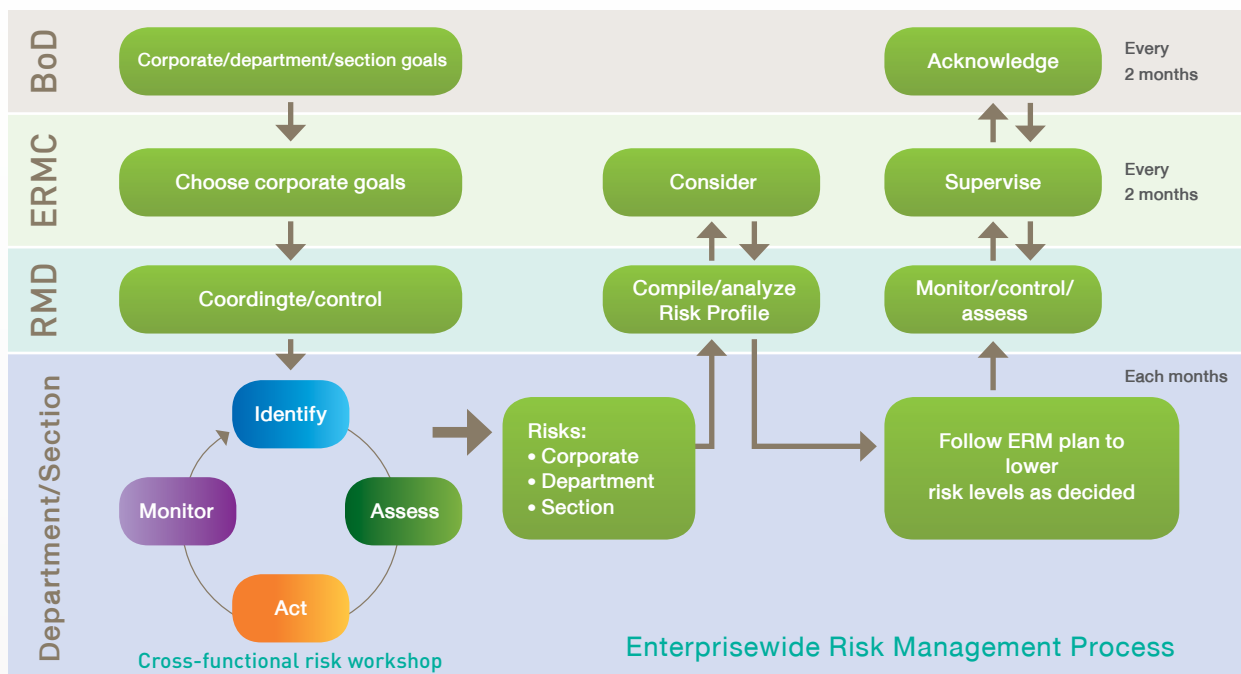
Reporting Lines — Functional  
----- Risk Communication

## Enterprisewide Risk Management Process

In developing its enterprisewide risk management process, the Company applied the COSO Enterprise Risk Management (COSO ERM) and ISO 31000 concept, with identification, analysis, assessment and ranking of risks affecting goal achievement for Company units. Each year, it analyzes and processes the outcomes of corporate business strategies (short-term and five-year); global and domestic economic outlooks for the upcoming year; external and internal risk factors; opinions of Board, Enterprisewide Risk Management Committee and Audit Committee meetings; recommendations of external auditors, including the State Enterprise Policy Office; and outcomes of risk management or residual risk factors from the previous year. Then approaches are defined, as are measures for risk management control and risk monitoring, to enable the Company to handle risks at manageable levels and bolster confidence in achieving its goals.

## BCP ERM Process





In 2011, the Company managed the risks affecting its key corporate strategic objectives - including financial management, customers, corporate reputation, social responsibility, participation in social improvement, environmental and safety, business process/operating and human resources - by portfolio view of risks and continued to manage each of risk factors so that they have been reached goal achievement successfully. This year's 26 key risks - included volatility in the oil price and exchange rates, operating risks for the refining unit, risk of marketing business and risks of investment in new business ventures, were implemented by the cost-benefit analysis of each measure as a decision-making tool for systematic choice of risk reduction measures.

The Company also updated its Risk Management Handbook for use as a guideline for creating a common understanding among all related parties; improved all stages of risk assessment in processes for internal controls; and constantly campaigned for risk management to accompany its business operation and become a company culture. This latter action was made possible through public relations and activities designed to promote mastery of and an atmosphere conducive to risk management among Company management and employees through training, internal broadcasting, the intranet and knowledge management.

Thanks to its consistent risk management practices, this past year saw the Company's practices achieve a moderate degree of risk management control. In view of emerging risks addressed by the upcoming year's risk management plan, the Company has upgraded its Risk Factors topic for investors. Key risk factors are grouped below.

## Economic risks

### 1. Risks from volatility in the oil price and value of the baht in the world market

The Company's costs of crude oil and refined-product prices are subject to rises and falls in the world market, along with fluctuation of the baht and currency exchange rates (which are highly volatile beyond control). As a result, gross refining margins (GRMs), which form the Company's

staple revenue, are unpredictable. To manage price risks, the Price Risk Management Committee therefore trades both short-term and long-term derivatives and is engaged in forward currency contracts and derivative instruments to convert foreign-denomination loans and set proper risk management goals in line with the Company's business plans. To manage the costs and sales prices of such transactions, each price risk management action must accompany physical volumes of raw-material and product trading. Besides, PTT Group features cooperation among its affiliates in oil price information exchange to widen perspectives and promote transport cooperation to cut transport costs from the Middle East, in addition to purchase of group insurance policies. Also, the Company focuses on sourcing additional volumes of indigenous crude oil to keep oil and transport costs low.

## 2. Risks from investment in emerging businesses

Thanks to its vision to forge environment-friendly energy businesses for sustainable development, the Company values investment in downstream ventures for the sake of its own sustainability-including biodiesel, solar power plants, ethanol plant shareholding and oil-palm planting project in deserted orange groves in Rangsit. In all feasibility studies of new ventures, the Company investigates the risk factors affecting each project's strategic objective achievement, assesses the severity of each such factor, defines a risk management plan to eliminate or ease the impacts, and monitors progress on the implementation of that plan. All these steps are under the consideration of ERMC to ensure that investment in new ventures achieves its goals.

## Social risks

### 1. Risks concerning corporate image and participation with communities and society

Taking business conduct with systematic social responsibility seriously from day one, the Company has constantly won awards and prestigious corporate ranking among those with best practices in corporate social responsibility (CSR). As part of its stewardship for energy security and participation in social improvement, it has put in place risk factor management concerning its social image (at national and community levels) under a clear, consistent direction for environmental, public service, community and social development to keep them sustainably strong, and reports its actions to the Enterprisewide Risk Management Committee. During the recent Great Floods of Central Thailand, the Company extended continual help to the public, neighboring Bang Pa-in communities, the Central Region and Bangkok-as well as the private sector and the public sector-to ease society's hardship as a social and community citizen.

### 2. Safety risks for communities and society

Taking the safety of employees and society very seriously because its business could harm surrounding communities, the Company values risk management by defining preventive measures for machinery, plant compounds, workplaces, procedures under its health, safety, environment and energy policies, as well as preparedness to act under emergency and crisis plans, which are continually and earnestly implemented. In addition, the Company joined PTT Group in internationalizing its vessel standards. In 2011, the Company upgraded some of its oil transport vessels to double-hull ones to minimize en-route oil spills.

### 3. Risks from public policy changes

In the past few years, Thailand's political uncertainty has wielded impacts on the Company and subjected it to risks from public policy changes in assorted energy-related measures, including the policy on the blending ratio of biodiesel (B100) in diesel; diesel price fixing; and the reduction in contribution to the Oil Fund of 91-octane and 95-octane gasoline and of diesel. As a result, the price gaps between these fuels and gasohol fuels-Bangchak's core products-have shrunk, directly hurting its sales volumes and revenue.

## Environmental Risks

### 1. Risks from the refinery's location, and environment

Since ours is the only refinery operating right in the heart of a Bangkok Metropolis community, it could create environmental and safety hazards unless properly controlled. The Company therefore continually values sound environmental and safety management while stressing strict compliance with relevant laws and regulations, as well as TIS 18001, OHSAS 18001, and ISO 14001. Since the Company also recognizes the need for vigilant measures for assorted safety and environmental impacts on communities and the residents of new condominiums around the refinery, it has set up a refinery environmental quality information center at the Piyarom Sports Club Department Store, containing environmental quality parameter as shown on several monitors installed around the refinery's surrounding community.

### 2. Risks and opportunities arising from environmental problems and global warming

In the light of continual problems stemming from global warming, the Company envisions the value of alternative-energy forms that benefit national energy security, cut trade imbalance due to fuel imports and cut greenhouse gas emissions-which aligns with its vision and desire to become a carbon-neutral company. To this end, the Company has focused on the development and sale of biodiesel and gasohol fuels, while initiating the development of and investment in alternative-energy projects, biodiesel plants, ethanol plant shareholding, an oil palm planting promotion project in deserted orange groves in Rangsit, oil production project from algae, and promotion of other alternative energy forms that are friendly to the environment, including a project on power generation from solar cells.

## Crisis business management

Continually, the Company has monitored, revised and conducted crisis management plan and emergency plan drills so as to remain prepared in personnel and resources. In 2011, it applied the Business Continuity Management process under the BS 25999 standard by appointing an Organizational Development Committee charged with system preparation to systematically handle risks and potential crises; defined strategies to keep the Company running even during emergencies; formed a task force to formulate business continuity management procedures to update plans to cover all situations, ring-fence crises and situations, and recall key business processes within set periods so as not to disrupt or wreck businesses, customers and stakeholders.

## Lessons learned in 2011

### Ignition of plant equipment

A piece of equipment caught fire at the fuel-oil-to-diesel quality improvement unit at the refinery on January 14, which came under control within about 30 minutes-which illustrated the Company's capability to manage and control such as incident swiftly and without casualties or impacts on air and environmental quality. A fact-finding committee was appointed to develop stringent measures, invest in essential equipment changes to avoid recurrence and bolster the confidence of all stakeholders. The committee periodically reported its findings to the Enterprisewide Risk Management Committee and the Board of Directors.

### Great Floods of 2011

The Great Floods of 2011 wreaked unprecedented havoc in the North, Northeast and Central Region, ravaging 65 provinces, including Ayutthaya and parts of Bangkok.

Thanks to its preparedness for handling various situations swiftly and systematically under crisis and information uncertainty, the Company has activated its crisis management plan constantly as analyzed, anticipated, devised and rehearsed since 2006 so as to minimize impacts from this disaster. As a result, proactive steps were taken at the refinery itself on Sukhumvit 64 and at Bang Pa-in. The Company set up a flood prevention operation center to define preventive measures, coordinate, publicize and rehabilitate areas around the refinery and Bang Pa-in areas with the support of Royal Thai Army troops and employees' cooperation in reinforcing flood barriers in all areas. The Company had taken out insurance policies for all properties owned by it and its subsidiaries; this eased impacts on its revenue and enabled the Bangchak refinery on Sukhumvit 64 to run uninterrupted without any impact from the floods. As for the Bang Pa-in Oil Distribution Center and the biodiesel (B100) plant, these were spared from the floods, but temporarily suspended operations from October 16 and October 11 (resumed in mid-November) because transport routes were submerged in deep water, causing trucks carrying biodiesel raw materials and oil tank trucks to stay away from the compounds. To compensate for this under the crisis management plans, oil products were distributed by other depots at Bangchak Refinery and Samut Sakhon. The project area for solar-energy power generation (phase 1), however, was inundated, for which the Company and its contractor had taken out property insurance policies. The project is expected to come on stream and distribute electricity in 2012.



Floods rise and fall..., but kindness is eternal

## About this report

This Sustainability Report illustrates Bangchak Petroleum Plc's (BCP) performance related to social, economic and environmental development. We first prepared this annual report for distribution in 2005, so this is our seventh issue, containing performance from January 1 to December 31, 2011, under an approach suggested by Global Reporting Initiatives (GSI G3) indices with applied United Nations Global Compact principles. In essence, it illustrates the Company's continuous development in executing its business with social and environmental responsibility on a path toward being Thailand's CSR role model. The report consists of an identification of key issues, namely vision, strategies, good corporate governance, key company risks, together with economic, environmental and social performance.

In 2011, the task force entrusted with preparation of this report defined additional contents and classification, and presented comprehensive details covering procurement processes and treatment of stakeholders. To this end, the Company ensured quality certification and assessment of the report's comprehensiveness by Global Reporting Initiatives.

## Scope of report

This report presents data related to the Company's performance in 2011 with comparisons of certain indices going back to 2009 for analytical and development purposes. The data encompass the activities of all its businesses, excluding those of its subsidiaries and associated companies. Comparisons of basic data dates back to 2009, because the Company has initiated significant process changes which is resumption the normal operations of the Hydrocracking Unit and completion of construction for the EURO IV quality improvement project for gasoline and gasohol. As for environmental cost accounting, only the findings related to the production group (in charge of refinery processes), which by and large concerns the environment and the Bangchak distribution center during 2010 - 2011, are included.

For any questions or recommendations,  
please e-mail [chongprode@bangchak.co.th](mailto:chongprode@bangchak.co.th)

# Performance



## Economic

### Revenues

The average price of Dubai crude oil this year was about US\$28 per barrel higher than that of last year, mostly because of the March earthquake and tsunami in Japan, forcing that country to turn to fossil fuels. In the latter half of the year, the price of crude still fluctuated because of negative factors resulting from the downgrading of the US by Standard & Poor's (a reputed rating agency) from AAA to AA.

As for the refinery business, the year saw BCP utilize 85.7 thousand barrels per day of its capacity, which proved lower than the year before (86 thousand barrels per day). Meanwhile, fuel sales prices rose by an average of 16.21%, combined with a 0.35% rise in sales volume, and US\$9.24 per barrel in refining margin (a substantial rise from US\$6.09 per barrel). BCP therefore grossed Baht 156,928 million in sales and service revenue, a rise of Baht 22,290 million from that of last year, while its net profit this year surged by 100.64% from that of last year. In addition, the Company profited from oil stocks, income from fines paid by a PQI Project contractor and insurance fines associated with the ignition of plant equipment at the fuel-oil-to-diesel quality improvement unit in January this year, altogether Baht 5,610 million, or Baht 4.24 in earnings per share.

### Expenses

Most of BCP's expenditure this year was for transportation and personnel expenses, at 29% higher than that of last year, but lower than the increment rate in net profit. Expenses for taking care of society at large, schools and refinery communities rose by Baht 20.17 million. For the year, however, the Company managed a saving of Baht 378 million in taxes paid to the government and local agencies, thanks to the exercising of benefits of environmental investment projects. It managed a Baht 94-million reduction in its cost of funds from the conversion of debentures into common shares early in the year, thus enabling it to avoid paying interests to debenture holders. Incidentally, BCP paid dividends comparably with those of last year.

### Revenues<sup>1/</sup>

Unit: Million Baht

	2009	2010	2011
Revenue from sale of goods and rendering of services	107,678.23	134,638.17	156,928.44
Other Revenues	229.07	705.18	1,629.06
Earnings before Interest and Taxes (EBIT)	11,193.39	4,460.90	6,997.82
Total Revenue	113,538.05	135,370.98	158,557.50
Net profit	7,474.89	2,633.87	5,642.58

### Expenditure for income distribution to stakeholders<sup>1/</sup>

Unit: Million Baht

	2009	2010	2011
Operations Expenditure	970.99	1,050.08	1,359.16
Interest paid to creditor institutions	553.81	841.81	748.17
Tax paid to government and local agencies	3,209.50	1,036.79	652.83
Community-social development	22.16	28.16	32.05
Donation to society and schools	18.18	15.06	31.34
Dividend for shareholders (Baht/Share)	1,754.75/(1.80)	1,529.87/(1.05)	1,520.71/(1.65)
Employee's Compensation and Welfare	1,062.85	1,157.78	1,285.01

Note : 1/ Data based on the Company Financial Statement

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## Safety, Health, Environment, and Energy Policy

The Company is committed to raising its management excellence by the approach of the Thailand Quality Awards, which values social responsibility; protection of health, safety and the environment; and business conduct and employees. In addition, the Company values resource conservation, which encompasses all activities, products and services-all with key business roles; loss prevention; and compliance with the law and public regulations. Viewing these regulations as opportunities for improvement over and beyond what need to be complied with, the Company devises the SHEE policy, and all executives and rank-and-file employees-including all contractors working on behalf of the Company-are held directly responsible for the following:

1. Complying with SHEE laws as well as company regulations as a minimum
2. Working safely without undue impacts on themselves, related parties, community or the environment
3. Preventing losses and illnesses potentially arising from accidents and minimizing impacts potentially leading to pollution, leaks and oil losses
4. Making the best use of resources (energy, water and chemicals) and continually raising the efficiency of company resource consumption, suiting the size of the business
5. Supporting reasonable procurement of products and services while taking into account safety, environmental conservation and energy-saving
6. Researching, developing and sourcing products and services that are safe, save energy and socially responsible to the environment and communities; developing modern and continual SHEE management systems.

Under this health, safety, environmental and energy policy, executives are to serve as role models for all employees, who must understand and obey it in all stages of work so as to achieve objectives and goals.

(Signed) *Anusorn Sangnimnuan*  
(Dr. Anusorn Sangnimnuan)  
**President**



# Environmental

## Environmental management

Bangchak was the first company in Southeast Asia to adopt ISO 14001 as a primary tool for its environmental management since 1997. The system has been constantly developed to include refining units, the Bangchak Oil Distribution Center and Bang Pa-In Oil Distribution Center. Currently, the Senior Executive Vice President, Refinery Business, chairs the Safety, Health, Environmental and Energy (SHEE) Management Committee, the highest authority in its environmental management hierarchy. The Company has maintained the ISO 14001 standard for the last 14 years, thanks to cooperation from employees and contractors working on its behalf to conform to the policy on SHEE management as well as the ISO 14001 requirements. This year, the Company has upgraded its document management system into an electronic one to increase efficiency, reduce paper use and is developing online-ISO Management System to further heighten its operating standards.

Furthermore, the Company won the Green Industry, Level 3 - Green certification from the Ministry of Industry for its systematic environmental management, monitoring, assessment and review for continual development. and won the Green Building from Thailand Environment Institute Foundation as well.

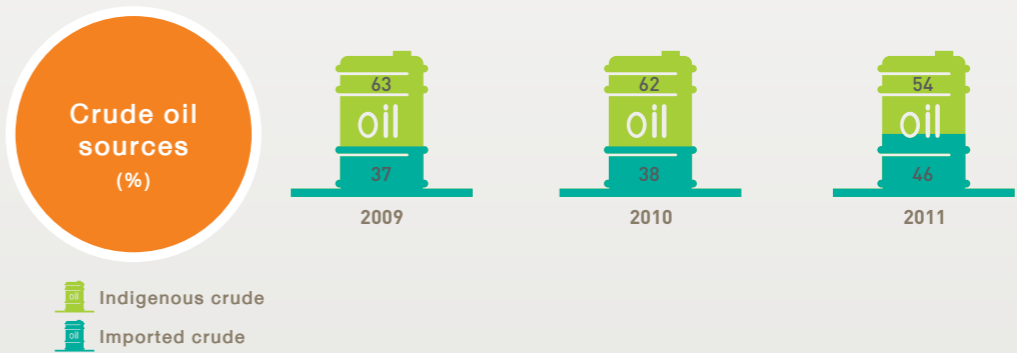
Finally, the Company has upgraded its personnel in environmental awareness through training for its lead auditors and pollution prevention system operators, air emissions, volatile organic compounds and air quality monitoring station to strive for Greenergy Excellence with its human resources as the main mechanism.

# Green Production and Carbon Footprint

## Raw materials

The Company refines imported and indigenous crude oil with modern and environmentally friendly technology. This year, indigenous crude amounted to nearly 2.7 million litres, or 54% of the total crude run, and 2.4 million litres of oil was importes. This lessened the currency outflow and the emissions of greenhouse gases due to crude oil transport.

To minimize losses, slop oils and oils separated and physically recovered from the wastewater treatment system, which account for 2% of the total crude run, are stored in slop tanks for recycling, representing a way to prevent oil losses.





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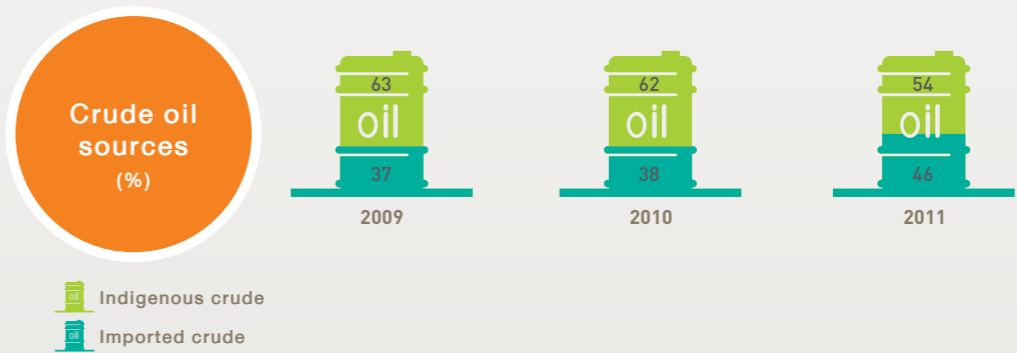
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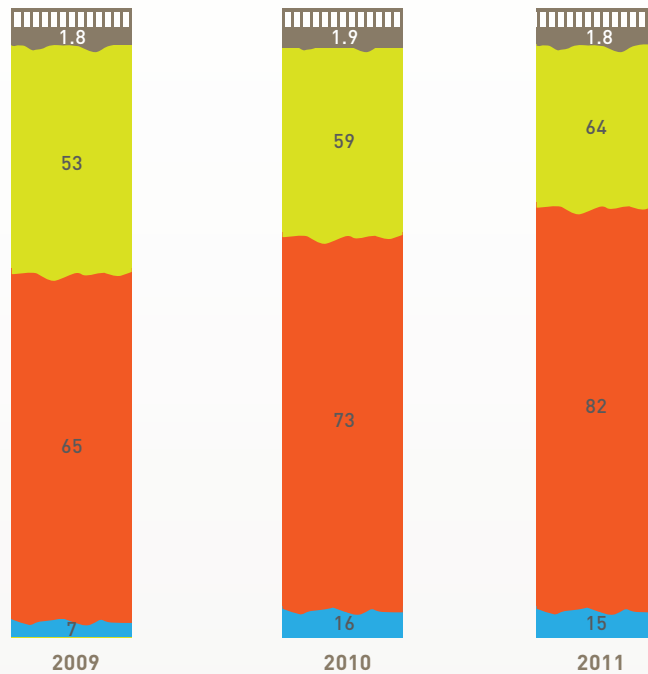
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## Other Raw Materials /Crude Run (Million liters)

- Used Vegetable Oil
- Blodiesel Ester (B100)
- Ethanol
- MTBE

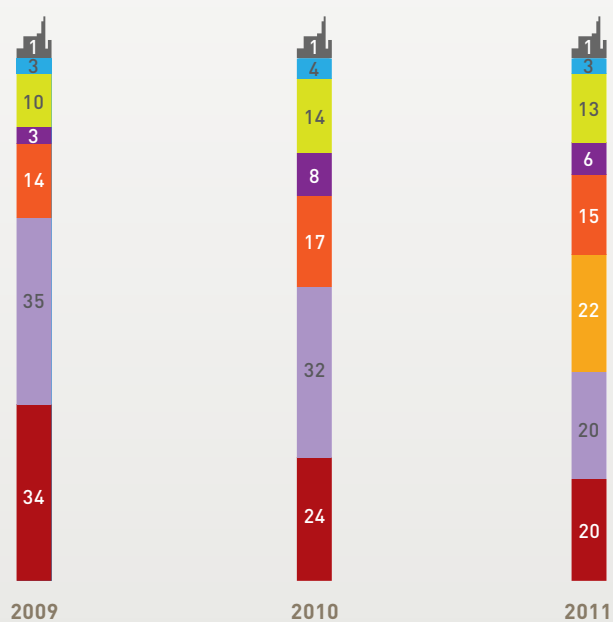


## Products

The Company's products include fuel gas, LPG, 91-octane gasoline, gasohol 91 and 95, jet fuel, B2, B3 and B5 PowerD and fuel oil. For the entire year, the Company operated its refining unit under the gasoline quality improvement project which processed fuel oil into diesel and gasoline and resulted in increased ratios of the two products. In the last quarter, it started up its EURO IV unit, which reduces benzene and sulfur in the refining processes and yields EURO IV standard gasoline before enforcement date of the law (January 1, 2012).

## Product Ratio (%)

- LPG
- Fuel gas
- Jet fuel/kerosene\*\*
- 91- and 95-octane gasoline\*\*
- Gasohol 91 and 95
- Diesel
- B2, B3 and B5 PowerD
- Fuel oil



\* In 2008-2011, no gasoline 95 was refined for domestic sale  
\*\* In 2007-2011, no kerosene was refined.

## Energy

Primary energy consumption for the refinery comprises fuel gas, LPG, natural gas and fuel oil. Overall energy consumption this year dropped from last year due to the maintenance turnaround early in the year. Consumption of LPG and fuel gas was therefore 146 million litres, while that of fuel oil dropped by 6% due to the 2% increase in natural gas consumption.

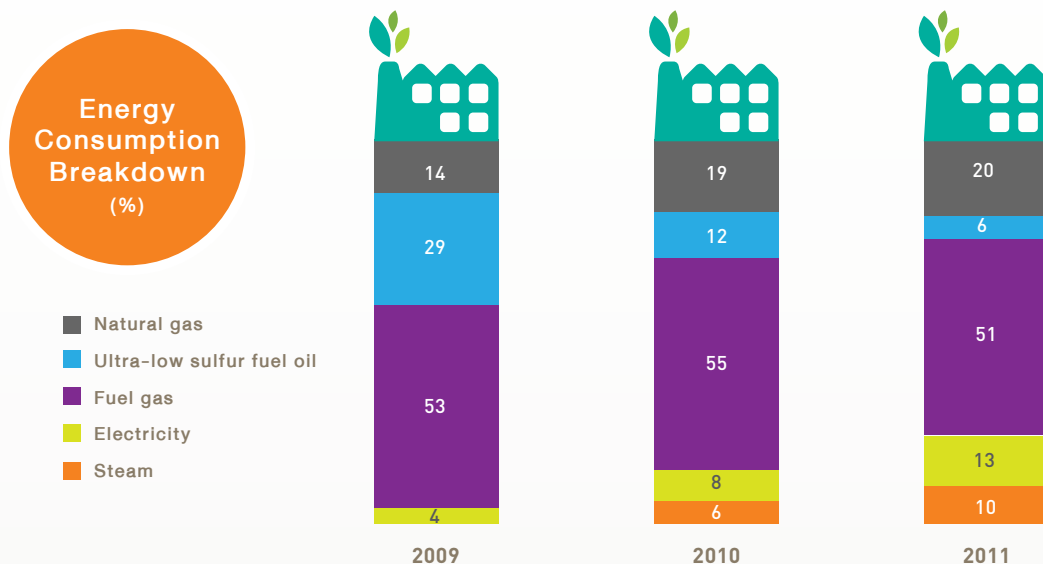
For higher efficiency and energy conservation, the Company consumed electricity energy supplied by the Metropolitan Electricity Authority (MEA) and that from combined-cycle power plants as secondary energy. Electricity consumption this year was equivalent to 42 million litres of fuel oil equivalent barrels, and steam consumption was equivalent to 29 million litres of fuel oil equivalent barrels.

The company has formed an energy management task force to constantly improve its resource consumption to suit its business. This year it reduced energy consumption under six refinery efficiency improvement projects by 104,050 million BTU, equivalent to 6,621 Tons CO<sub>2</sub>e.

Refinery efficiency improvement project	Reduction in energy consumption (Million BTU)	Reduction in greenhouse gas emissions (Ton CO <sub>2</sub> e)
<b>Fuel reduction</b>		
1. Reducing excess oxygen from combustion in the hydrogen plant	51,603	5,173
2. Increasing the inlet temperature of the naphtha splitter column in the hydrocracking unit	173	
3. Improvement the efficiency of the heat exchanger in the topping unit	30,336	
<b>Subtotal</b>	<b>82,112</b>	
<b>Steam reduction</b>		
4.Reducing the recycling rate at the amine regenerator column	2,701	1,448
5.Reducing the recycling rate of the stabilizer column in gasoline production	4,608	
6.Minimizing the steam turbine generator for electricity production	14,629	
<b>Subtotal</b>	<b>21,938</b>	
<b>Grand total</b>	<b>104,050</b>	<b>6,621</b>

The Company also reduced its energy consumption through:

1. Installed scale removers at the heat exchangers of the Crude Distillation Unit
2. Upgraded hydrogen pipeline system of the Hydrogen Plant Unit to reduce flared gas and use it instead as fuel
3. Enhanced energy efficiency by repairing and replacing insulators of heat exchangers and steam pipes
4. Improved piping system at the top of Distillation Unit 2 to reduce unnecessary pumping.



## Water

The Company uses water supplied by MEA for the refinery which will not be affected to anyone, and sources fire water from the Chao Phraya River. Water consumption in 2011 amounted to 2,156,619 cubic metres, a slight drop that of the previous year due to lower refining activities, lower use for maintenance purposes as well as implementation of the following water-saving measures in offices and refining processes:

1. Installed sensors on toilet sinks to lower water losses.
2. Use of treated water for plant watering on the compound, thereby saving 4,800 cubic metres or 0.23% of total water consumption.
3. Use of stripped water from the Sour-Water Stripping Unit as Boiler Feed Water (BFW) of Distillation Unit 4, reducing consumption by 40,800 cubic metres of BFW per year.
4. Use of stripped water from the Sour-Water Stripping Unit of Units 2 and 3 (rather than piped water) to dissolve salts in crude oil, thus lowering water consumption by 57,120 cubic metres per year.
5. Use of a reverse-osmosis system to pre-treat water for the Demineralization System, preserving 38,000 cubic metres of treated water per year.

Ground water is consumed at the Bang Pa-in Oil Distribution Center in Ayutthaya province, while water from the Bang Khian Canal, a tributary of the Chao Phraya River, serves as fire water.

## Emission

### Air Pollution

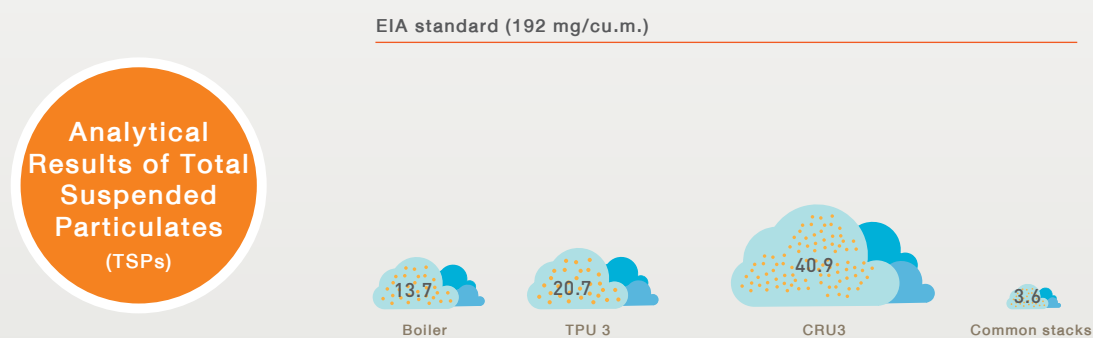
As for environmental monitoring, the Company regularly measures stack-air quality to ensure that the total suspended particulate masses (TSPs), nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) are superior to those announced by the Ministry of Industry and as required in environment impact assessment (EIA) reporting.

Because of its close proximity to communities and recognizing the importance of environmental quality, the Company uses clean fuels in its refining process and closely monitor emissions. Continuous Emission Monitoring (CEM) equipment was installed at the refinery's emission stacks to monitor environment quality and pollutants in the exhausts at all times. Furthermore, the Company has set up two air quality monitoring stations near its neighborhood. The first checkpoint was at Somthawil School, and later this year, the second checkpoint was set up at the Secretariat Department military housing units. All readings go to the monitors in the Process Control Room and air-quality analytical results are displayed together with those from the CEMs on automatic environment quality signboards installed at the entrance to the refinery and communities in its vicinity as well as in public areas, such as Piyarom Sports Club, for the public to monitor them at all times as well as for the comfort of the surrounding communities.

Serious about ozone-depleting Volatile Organic Compounds (VOCs), the company has established VOC accounting. Its measurement of VOC emissions started in 2010, and this year, the Company has bought four units of modern equipment for VOC measurement to prevent emissions and will further define measures for their reduction.

### Carbon footprint

This year the Company released 529,215 tons CO<sub>2</sub>e of greenhouse gases from its own processes and 96,795 tons CO<sub>2</sub>e from its purchase of power and steam for a total of 626,010 tons CO<sub>2</sub>e. This total was slightly lower than that of the previous year, since this year the Company suspended its hydrocracking unit from January to February, accounting for about 20.06 tons CO<sub>2</sub>e per kilobarrel, mildly lower than the 22.91 tons CO<sub>2</sub>e recorded in 2010. Incidentally, a new unit has started up to produce EURO IV fuels since October 2011.



### Analytical Results of Nitrogen Oxides (NO<sub>x</sub>)

EIA standard (160 ppm)



### Analytical Results of Sulfur Dioxide (SO<sub>2</sub>)

EIA standard (400 0ppm)

2.4  
Boiler

106  
Sulfur Recover  
Unit 1/2, 3

EIA standard (48 ppm)

< 2.0 < 2.0 < 2.0 < 2.0 < 2.0 < 2.0  
SRU 1/2, 3 CRU 3 Common Stacks VDU HCU HPU

### Analytical Results of Hydrogen Sulfide

EIA standard (80 ppm)

< 1.0  
SRU 1/2, 3

### Opacity (%)

EIA standard (10%)

0  
Boiler

### Water Pollution

The Company houses high-efficiency wastewater treatment systems using closely-monitored online measurement devices. Effluent is tested daily by its Environmental Quality Analysis Laboratory, certified by the Department of Industrial Works, Ministry of Industry, and is ISO/IEC 17025-certified. Process water is treated physically, chemically and biologically until the quality exceeds the required standards before discharge through the Bang Aw Canal to the Chao Phraya River. In 2011, the Company discharged a total of 613,198 cubic metres of effluent. The Company is committed to the reduction of water consumption and effluent to save water and make the most efficient use of water. It plans to install a sophisticated effluent quality improvement unit to obtain quality water on a par with piped water for reuse in its processes.

Parameter	Unit	Standard	2010	2011
pH		5.5-9.0	7.6	7.5
Oil and Fats	ppm	5.0 Max	1.0	1.4
Suspended Solids	ppm	50 Max	9	10
Soluble Solids	ppm	5,000 Max	1,833	1,364
B.O.D.	ppm	20 Max	6	6
C.O.D.	ppm	120 Max	54	53
Sulfides	ppm	1.0 Max	0.2	0.3
Mercury	ppm	0.005 Max	0.000	0.000

### Waste and scrap / disposal

Process waste from the refinery and the distribution center that cannot be treated internally are reused, recycled and disposed of by domestic transporters and disposers approved by the Department of Industrial Works. Some spent catalysts were exported for extraction of recovered metal for reuse. Waste disposal and management strictly conforms to the laws and Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.

This year the Company exported from its plants a total of 2,938 tons of waste, consisting of 1,487 tons of hazardous waste (51%) and 1,451 tons of non-hazardous waste (49%).

All this waste is treated and disposed of by technically proper methods. About 28% of the Company's waste is segregated for sale to treaters authorized by the Department of Industrial Works for full subsequent use. Late this year, the Company improved its processes to lower wastewater volumes derived from the biodiesel plant. It is therefore expected that in 2012 it will be able to reduce the volume of waste needing treatment by about 40%.

Unit: Percent

Industrial Waste Category	2009	2010	2011
Hazardous	58	45	51
Non-hazardous	42	55	49

Unit: Percent

Industrial Waste Category	2009	2010	2011
Landfill	6	3	7
Incineration	67	72	65
Common wastewater treatment	27	-	-
Segregated for recycling or reuse	-	25	28

NOTE: Definition of waste by regulation of Ministry of Industry Thailand

There is no any significant incident involving oil spill in 2011. All situations that occurred in areas of refinery had been immediately under managed, controlled and recovered in line with SHEE laws and environmental regulations which have never been affected to water resources and environment at all.

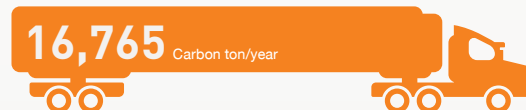
## Transport

As a rule, crude oil transport is done by sea, since crude sources lie offshore and the cost is lower than by truck or train. To avoid traffic jams, transport of products is mainly through underground pipes to Bang Pa-in Oil Distribution Center for further distribution to the North and Northeast, while trucks are used for Bangkok Metropolis. The Company's trucks run on the less-polluting biodiesel B5 instead of normal diesel, and 16,000-litre trucks were replaced with 20,000-litre and 32,000-40,000-litre ones to lower the numbers of trips and lower fuel consumption and carbon dioxide emission. Furthermore, all Bangchak oil trucks are GPS-monitored to control their speeds and reduce risks of accidents harming the environment. Every driver must undergo defensive driving training, and all trucks must be in working order. Emergency teams are required to be on alert, ready to move in to terminate or control the incidents potentially involving oil spill.

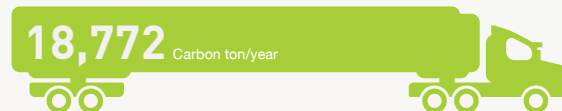
CO<sub>2</sub> emission from replaced larger trucks



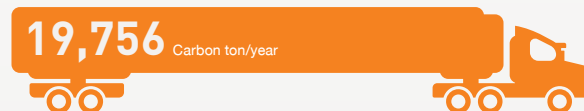
CO<sub>2</sub> emission from 16,000-litre trucks



CO<sub>2</sub> emission from B5 biodiesel



CO<sub>2</sub> emission from diesel



## Compliance

Compliance represents good governance and a health, safety, environment and energy (SHEE) policy element to which all employees and contractors working on behalf of the Company must pay attention and strictly adhere in their operations. Besides having a unit responsible for the follow-up, summary and compliance of new and draft laws on SHEE, there are at least two SHEE compliance audits every year conducted by internal and external auditors. The Company also has a legal office responsible for educating and generating awareness of rules and regulations to ensure compliance. The Company has never been fined or punished as a result of non-conformance to environmental laws or acts in violation of laws or regulations during transport.

# Environmental Cost Accounting



With continuous improvement, BCP has prepared environmental cost accounting annually, beginning with that for the production line in 2005. It introduced an electronic accounting system in 2008 and expanded the scope to the Bangchak and Bang Pa-in Oil Distribution Centers in 2009. In place are daily monitoring and reporting to executives for further reporting to investors and shareholders every quarter in the MD&A section and the IR Newsletter. Besides these, BCP educated students and other interested parties on environmental cost accounting, which is considered a branch of environmental management accounting applied by BCP to resource consumption in its environmental management in tandem with financial management for higher efficiency, which paves the way to BCP's sustainability.

Since 2010, BCP has operated all its various units under the PQI Project at full steam and with significant process changes. The Company therefore presents below data for 2010 and 2011, which can be compared on the same basis as follows:

Environmental expenses this year exceeded those in 2010 by about Baht 26,688 million or 32%. About 99% of the increase is material costs of product outputs, since crude oil prices had risen by an average of Baht 4.98/litre or 31.8% over those of 2010 (when they averaged Baht 15.68/litre), whereas production rose by only 1% from the same period.

For the year, material costs of non-product outputs-in other words, process waste-were about the same as those of 2010 despite the company's close monitoring of processes that reduced about 21% in slop oil volume. Unfortunately, the Company incurred 30% higher rerun costs. On the other hand, the Company managed to lower excess volumes of chemicals as a result of equilibrium adjustment and that of oil tank sludge. Waste and emission control costs, comprising those of maintaining environmental management equipment and those of managing process waste. This year these expenses fell, whereas the costs of waste management rose with the maintenance turnaround and the replacement of machinery. As a result, the equipment lasted longer and the volume of waste needing disposal higher. Incidentally, there was no difference between the prevention and other environmental management costs over the past year.

Other than environmental costs, this year the Company generated revenue from scrap sold to other industries, notably liquid sulfur, a byproduct of sulfur extraction during the quality improvement stage. This year, this revenue rose by Baht 12.81 million in line with the sulfur content of the crude feed, which was about twice higher; incidentally, such crude feed was about eight times that of 2010. The Company has also produced diesel and gasoline of EURO IV standards, which called for more sulfur extraction to obtain more environmentally friendly products ahead of enforcement.

Unit: Million Baht

Item	2010	2011
<b>Material Costs of Product Outputs</b>		
Crude Oil	77,393.94	27,248.50
Ethanol	1,728.85	514.67
Biodiesel (B100)	1,728.55	617.91
Used Vegetable Oil	33.03	9.98
Chemicals	84.01	21.76
Process Water	29.03	7.88
Energy	3,093.93	814.71
<b>Material Costs of Non-Product Outputs</b>		
Slop Oil	120.27	29.90
Bottom-Tank Sludge / Fuel Oil	0.45	-
Effluent	10.92	2.53
Excess Chemicals in Water from stabilizer Pool	0.83	0.06
Poor-Quality Sulfur	-	0.05
<b>Waste and Emission Control Costs</b>		
Environmental Equipment Maintenance	10.65	8.49
Depreciation of Pollution Control Equipment	200.09	31.40
Effluent Treatment	6.68	1.68
Waste Disposal	5.23	1.79
Environmental Fees and Taxes	N.A	N.A
Fines	N.A	N.A
<b>Environmental Management Costs</b>		
Monitoring	7.01	1.49
Depreciation of Waste Storage Area	0.06	0.07
Management Operation Cost	0.91	-
Environmental Equipment Maintenance Cost	0.01	-
<b>Benefit from by-product and waste recycling</b>		
Liquid Sulfur	3.55	3.91
Glycerin	0.30	0.12
Steel-Aluminum Scrap	8.52	4.29
Paper	0.03	0.00

## Eco-Efficiency



In sustainable development, a business cannot consider merely business returns, but must also consider environmental impacts. This is why the Company has introduced an “eco-efficiency” indicator, which blends economic with environmental performance. To obtain this, we use the adjusted EBITDA, which illustrates economic performance, together with the carbon dioxide equivalent in emission, which illustrates environmental performance. All things being equal, better economic performance or better environmental performance raises eco-efficiency. This year, the refinery emitted 626,010 tons of carbon dioxide equivalent (the so-called carbon footprint), which was less than that of last year, thanks to the switch from fuel oil to cleaner-burning natural gas and the co-generator method of heat and power generation (which is highly energy-efficient). Also, the adjusted EBITDA this year accounted for the higher eco-efficiency.

$$\text{Eco-efficiency} = \frac{\text{Adjusted EBITDA (Baht million)}}{\text{Carbon dioxide equivalent (tons)}}$$

**Eco-efficiency table (Baht million/tons CO<sub>2</sub> equivalent)**

2008	2009	2010	2011
0.017	0.012	0.007	0.011

### Biodiversity

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## Eco-Efficiency



In sustainable development, a business cannot consider merely business returns, but must also consider environmental impacts. This is why the Company has introduced an “eco-efficiency” indicator, which blends economic with environmental performance. To obtain this, we use the adjusted EBITDA, which illustrates economic performance, together with the carbon dioxide equivalent in emission, which illustrates environmental performance. All things being equal, better economic performance or better environmental performance raises eco-efficiency. This year, the refinery emitted 626,010 tons of carbon dioxide equivalent (the so-called carbon footprint), which was less than that of last year, thanks to the switch from fuel oil to cleaner-burning natural gas and the co-generator method of heat and power generation (which is highly energy-efficient). Also, the adjusted EBITDA this year accounted for the higher eco-efficiency.

$$\text{Eco-efficiency} = \frac{\text{Adjusted EBITDA (Baht million)}}{\text{Carbon dioxide equivalent (tons)}}$$

**Eco-efficiency table (Baht million/tons CO<sub>2</sub> equivalent)**

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*“ strong stewardship of the environment enables us  
to cherish bird families living together with us in this home ”*

According to the surveys and notes of the Company's bird-watching group, Bangchak Refinery is home to many local birds. Each year, knowledgeable employees serve as volunteer guides for bird-watching around this natural learning center for local youths and families to get acquainted with the ecology and birds. Seventy-two species of birds are sighted on the refinery's compound. Some species are least expected or should have been extinct, yet they are sighted here every year. I'm speaking about Nok Kao Mong (Alexandrine parakeet) or Nok Kao Hua Phrae (blossom-headed parakeet). Then there are migratory birds from Siberia, near the North Pole, like Nok Kraten Noi Thammada (common kingfisher), otherwise known as the king of migratory birds. Commonly seen at the refinery is Nok Ti Thong (coppersmith barbet), also known as the city queen (found living together in families).

**Kanchit Chinarin**

Public Relations Officer, Public Relations Section  
Chairman, Bangchak Bird-watching Club



# Green procurement



Besides exercising environmental care inside the Company, the Company also supports its business partners to do so. The Company values the use of environmentally friendly products through its procurement of products, goods and services, known collectively as Green Procurement. This means that, besides the desired suitability of quality, prices, delivery and services, the Company examine the degree of environmentally friendly production (manufacturing). To elaborate, the life cycles of desired products and services must be compatible with the diagram below as well as socially responsible; business partners must run their businesses by the law, rules, government regulations and abide by labor and safety laws; in treating their employees, business partners must abide by a code of practice and respect for human rights, while avoiding child labor and alien labor. Even in times of floods, which require plenty of laborers, the Company's business partners are to hire only Thai labor.



This year the Company procured the following green products:



## Photocopying machines

The Company bought digital multifunction ones whose technologies leads to improved office workplaces, where the EU-RoHS standard controls the release of toxic materials, including ozone, which poses hazards in workplaces. Lead and halogens, posing threats to the nervous system and the digestive tract, were banned. Chromium, toxic to nasal tissues and carcinogenic, was abolished. Dry toners replaced magnetic powder, thus making it safe for work in the office and odorless.



## Facial tissues and napkins

These products featured 100% eco-fiber, which cut the use of trees in manufacturing processes. Water used in paper manufacturing processes must be free of heavy metals like lead, mercury, cadmium and chromium (+6), must be certified ones or must conform to the Food and Drugs Administration of Thailand or a responsible agency in producing countries or the Green Label projects in other countries. The products must not have bleaching agents containing elemental chlorine and halogens as a composition of the tissue-bleaching process.



## Photocopying paper

The Company bought paper with the likes of the Green Label, produced from at least 30% eco-fiber. The colors used in such paper's manufacturing process must be free of heavy metals like lead, mercury, cadmium and chromium (+6), must be certified ones or must conform to the Food and Drugs Administration of Thailand or a responsible agency in producing countries or the Green Label projects in other countries.



## Name cards

Cream-colored the Company name cards, made from Green Card Paper featuring 100% eco-fiber, were not laminated.



### Wood furniture

The Company furniture conformed to the universally-accepted EU Formaldehyde Emission Standard. E1-standard wood is toxic-free, containing as little as 0.005% chemicals for users' safety.



### Fluorescent bulbs/tubes

Certified by TIS (Thai Industrial Standards) or bearing an international standard, these bulbs/tubes must be efficient with at least 10,000 hours of service life. They were not to contain more than 10 milligrams of mercury in each. Their containers must be made from recycled or corrugated paper of 100% eco-fiber. No foaming materials, laminates or raw materials containing plastics may form part of the containers. Measures must be established for the return of salvaged products and reused properly under technical principles.



### Building paint

The paint must contain up to a given limit of volatile organic compounds, no heavy metals (including mercury, lead, cadmium, chromium, arsenic, antimony, triphenyltins (TPT) and tributyltins (TBT)) and no aromatic hydrocarbons as solvents. Pollutants may not exceed given limits. Halogenic solvents were banned in production processes. Finally, metallic containers must not contain lead.



### Cleaning agents

These agents were to be natural extracts and biodegradable, without petrochemical solutions. They must not catch fire, be non-volatile and be deodorizing, and must save water in the cleaning process.

As for future Green Procurement, the Company will extend this list to promote Green Procurement markets for products and services to encourage producers and manufacturers to pay greater attention to green products.

*“ canon products lowers energy consumption while taking care of our surroundings ”*

When I think of Bangchak Petroleum, I think of a force that conserves the world. To me, Bangchak represents clean energy, environmental stewardship and green thinking. This is pretty much the way Bangchak chose environmentally friendly products from Canon in support of its business and efficiency improvement in document management. Document management becomes simple, time-saving and cost-saving in line with Bangchak's vision and strengths.

Canon is proud to be a part of Bangchak's support, thanks to our commitment to environmental innovation, which so dearly values users' wellbeing. By stemming 30% of carbon dioxide sources, cutting the use of toxic chemicals, preventing pollution with bioplastic technology, and recycling plastics-we ensure that all models of Canon products bear the Energy Star international standard. This confirms that Canon products lowers energy consumption and promotes a good environment.

#### **Captain Soonthorn Pantharamongkol**

Senior Director & General Manager, Business Imaging Solution Section  
Canon Marketing (Thailand) Co., Ltd.



## Development of green products and services



The Company is a leader in the production and distribution of alternative fuels, with constant introduction of green products (both fuel products and lubricants) and services in keeping with its Greenergy Excellence vision.

### Leading supplier of gasohols with top market shares for E20 and E85

The Company pioneered alternative fuels in Thailand by blending ethanol in gasoline into 91-octane and 95-octane gasohols for gasoline engines. It subsequently expanded this leadership to the E20 variety, on sale since 2008, and developed E85 for current models. The Company currently tops the market shares of E20 with 450 stations and E85 with 20 stations. Sales promotion is conducted through the Gasohol Club Project, which saves crude oil imports while adding income for farmers.

### Leading supplier of EURO IV diesel ahead of enforcement

The Company pioneered the production and sale of Super Power D EURO IV four years ahead of the enforcement date of 2012, lowering by seven-fold sulfur emissions and lowering pollutants (carbon monoxide and hydrocarbons) while also combating global warming. In early 2012, the Company is poised to start selling EURO IV gasoline in response to the public policy requiring gasoline to be friendlier to human health and the environment.

### Constant improver of service station image, surroundings and quality

Valuing constant improvement of service stations through the likes of good surroundings (mini-garden, cleanliness and toilets), the Company has completed the refurbishing of 304 stations (114 Bangchak service stations and 190 community ones). This improvement, particularly of those on main roads and highways, prepared them for more road users. Reimaging of supplementary businesses consisted of Bai Chak convenience stores, featuring development of prototype stores where retailers with serious work on quality improvement can showcase their products and further develop them. The Green Series car care business and Inthanin coffee shops add to consumers' satisfaction.

The Company installed toilets for wheelchair users in support of human rights, with ramps promoting their access.

For the third straight year, the Company won the "Quality and Safe Service Stations Award", sponsored by the Department of Energy Business, Ministry of Energy, with a total of 128 awards (53 gold, 42 silver and 33 bronze), the first runner-up among domestic oil companies. It also earned the first runner-up award recognizing "Clean Toilets" at service stations that met the HAS standard, sponsored by the Department of Health, Ministry of Public Health.

### Mobile service stations selling low-priced fuels in aid of flood victims

During the Great Floods of 2011, the Company launched its Sharing Project to extend help to flood victims by selling 91-octane gasoline and diesel at mobile service stations at one baht/litre below regular prices in the following districts of Bangkok Metropolis: Don Mueang, Bang Bua Thong, Thawi Wathana, Bang Khae and Bang Khen.

### Reader's Digest Trusted Brand for the second year in a row

For the second year running, the Company's constant improvement of products and service stations earned a Reader's Digest Trusted Brand Gold Award, from votes given by 1,500 readers of the magazine.

### Growth and quality improvement of lubricants to environmental standards

To bolster consumers' confidence in its lubricants, the Company ensures that its lubricant business is in line with the ISO 9001:2008 quality management standard encompassing the management system, product development, sales, depot management and after-sales services, apart from the ISO/TS 16949:2009 management standard for the automotive industry. The Company is proud to have become the first in Thailand to be so certified. The Company has also introduced new lubricants that conform to API CJ-4, the highest current standard. API CJ-4 diesel-engine lubricants lower engine wear, are more heavy-duty and lessen lubricant replacement frequencies while doing an excellent job in keeping engines clean. They work with new models of cars that run on EURO V, thus hiking Bangchak lubricant sales every year, an illustration of the growth of the lubricant market along with greener development of products with greater environmental care. In addition, the Company has promoted the maximization of resource usage by inserting an environmental message and reusing lubricant can cartons as office document boxes.



## “convinced of fuel quality”

Our family members are staunch Bangchak patrons because we're convinced of the fuel quality, which brings no engine problems. What's more, Bangchak was among the first companies to advocate the use of environmentally friendly gasohol or biodiesel, and has run promotional campaigns for these fuels. Take the Gasohol Club Card: I like point accumulation, which can be turned into discounts. Biscuits, sweets, and other items are Bangchak's nice giveaways, inspiring customers' interest in Bangchak services.

### Ms. Banthita Suppaiboonsuk

Researcher, private company

Ph.D., Faculty of Science, Chemical Technology, Chulalongkorn University



### Bangchak Gasohol Club card

The Bangchak Gasohol Club card gives holders 0.20 baht/litre discounts on gasohols along with those on lubricants, allied stores, privileged access to roadside emergency assistance and extra discounts under the Same Price Project (which entitles holders to get the same prices on the day of fuel price adjustment) in an effort to please cardholders. Today the Company has more than 430,000 cardholders.

This year, to further promote the use of alternative energy, the Company launched a Triple Point campaign for E20 and E85 gasohol buyers to get three times the regular discount of 0.20 baht/litre to 0.60 baht/litre from April 10 to June 30 and still enjoy the Double Point privilege of twice the regular discount of 0.40 baht/litre. Besides, it has issued the Bangchak Lady Card for additional privileges for lady drivers, including discounts provided by allied stores for cosmetic products, spa services, ladies' journals and golf lessons-in an effort to attract more lady drivers by offering them over and beyond the current privileges.

This year, the Company's regular activities for cardholders consisted of a visit to the Royal Chitralada Projects, a tour of hydroponic vegetable planting, a seat at the Golden Culture of Ratanakosin show, a lesson in bouquet arranging, coffee making, photography, make-ups and movie seats. Moreover, when Bangkok and its perimeter as well as the Central Region faced massive flooding, cardholders had donated their cumulative points to help victims through the Thai Red Cross Society, the donation total Baht 35,532.20.



### Bangchak Chueam Yong Thai with community service stations

The Company issued Bangchak Chueam Yong Thai (Linking with Thais) cards for customers of cooperative service stations (the so-called community service stations) to promote sales and customer relationship activities suiting individual local areas. Besides boosting sales, thus strengthening these service stations, this move nurtures the community economy. Today, under an expanding headcount, more than 130,000 have joined the membership.

### Green Series service center and public services

The Green Series car-care business this year staged an activity in which flood victims could have free checks for their flood-affected cars. Up to 50% discounts were offered for participating lubricant products, together with free lubricant changes.



### Mobile phone application (iPhones)

The Company has developed an application for iPhone users, who can download it for access to all current product prices and identification of nearby service stations. This application links databases on Bangchak service stations with GPS, an approach illustrating the Company's innovative ways to cater to customers' demand

*“Bangchak stands for impression, bond and more”*

Driving to work every day, I pass by Bangchak service stations. The mere sight of its logo refreshes me, thanks to its light green color, which pleases the eye. That inspired me in the first place to use Bangchak's fuel. The first time, I got dried, honey-glazed bananas as an impressive giveaway-most others give drinking water, whereas Bangchak gives an OTOP product! This means it's addressing issues like environmental conservation and showcasing the country's natural products. It illustrates the Think Green approach of Bangchak executives. Convinced of Bangchak's attention to details like this, I've never doubted its fuels' benign quality on my car's engines. From that day, I've pledged to become a Bangchak disciple. Then one day I saw an advertisement of Bangchak Gasohol Club (the so-called GSH Club Card), which prompted me to ask a service station attendant about how long it would take to become a member. The application process was a snap! My application was mostly to declare myself as a Bangchak disciple, so I didn't bother to read what benefits the card would provide. On reading it, I became aware of the 100 baht, 200 baht, and so on, discounts and what I like is the accumulation of points, like 500 or 1,000 points-in short, I got hooked! Since the first day when I became a Bangchak patron, I've always thought highly of Bangchak, which stands for impression, bond, and so much more. Thanks for all the good things!

**Mr. Sajee Thawee**  
Executive Secretary  
Sino-Thai Engineering and Construction PCL



### Communication

Customers can inquire about and search for product information by reading product and service labels, and accessing marketing information at the Bangchak customer service center, manned by officers that have passed standard training on communication with customers while taking into account human rights. Customers get fair treatment in their search, apart from accurate, useful and not misleading information; the Company officers also listen to recommendations while remaining prepared to cater to customers' needs and keeping their data confidential. Finally, communication is done through the Company website and online social networks, including Facebook. Other operations in marketing and advertising did not violate the laws, also no complaints on privacy right of customers.

### Safety, health and environment

Recognizing the criticality of safety, health and environmental standards, the Company has installed vapor recovery systems at the Bangchak oil depot on Sukhumvit 64 Road and the Bang Pa-in oil depot in addition to all service stations in Bangkok and its perimeter in an effort to bolster confidence among depot and service station users. Emergency drills regularly take place. Bangchak service stations house wastewater treatment systems before releasing effluent to the outside, looks after the cleanliness of toilets, lawns, trees, drainage and garbage sorting and disposal. As a result, the Company has never faced any compliance issue and has never been subjected to significant fines or liability for damages arising from unsafe products.

*“ Trust underscores Bangchak business execution,  
which embraces society ”*

Bangchak supports communities that are ready to manage service stations. It also expands and finds new marketing channels for community products, and displays them at Bangchak's minimarts (Bai Chak), successfully coordinating help between towns and rural areas.

Today, more than 500 agricultural cooperatives are running Bangchak service stations-that's about half of Bangchak's total station-count! Benefiting from this scheme are more than one million households nationwide. Agricultural communities are therefore sustainable, serve as prototypes for observation tours by other cooperatives and generate income for communities together with Baht 3.5 billion a year in working capital. Communities and society, as a result, are becoming stronger.

**Mr. Chuchat Insawang**

Manager, Si Prachan Agricultural Cooperatives, Ltd.

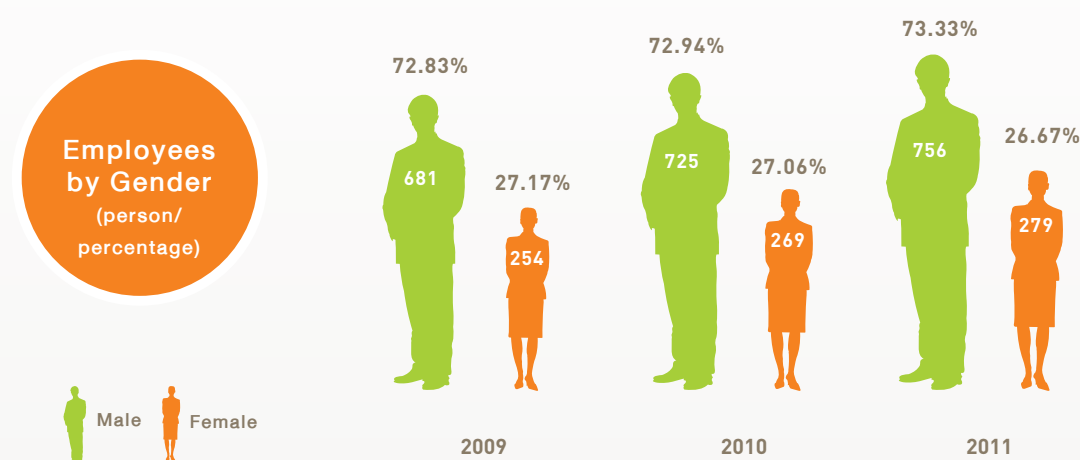


# Social Performance

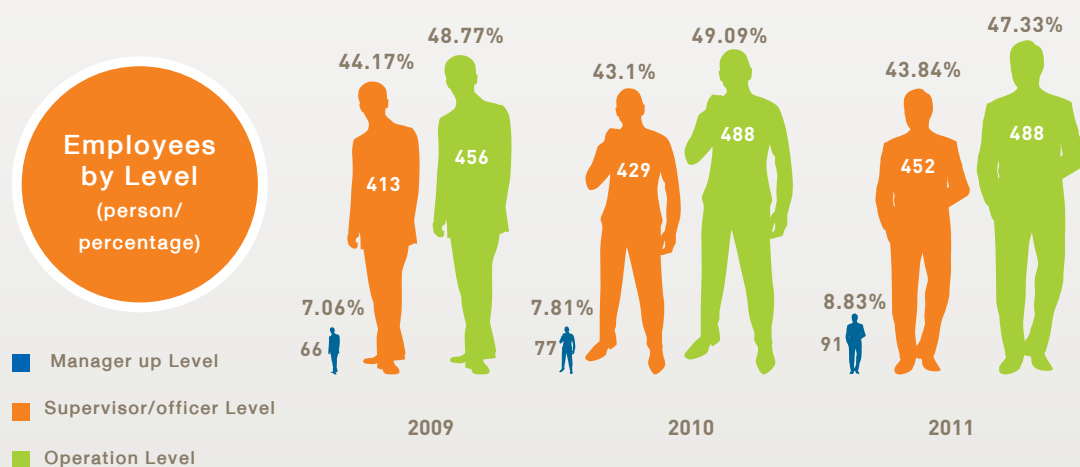
## Labor practices and human rights

### Employment

The Company has 1,031 employees, all of whom are Thai nationals (as of December 2011) with an average age of 34 and average years with the Company of 10.4. There is a diversity of age, gender, educational background and work specifications, as well as the equality of gender, race, religion and culture. As the Company's energy business operates 24 hours, the number of male employees exceeds that of female ones.



In 2011, in order to meet the requirements posed by business expansion and increase efficiency in the operation of various units, the Company recruited more employees based on recruitment standards of written tests, interviews and physical examinations. Therefore, the number of employees exceeded that of last year. The Company groups the employees into levels, from operating to division-manager levels (levels 5-13) and from middle to senior executive levels (levels 4 upward), as shown in Figure

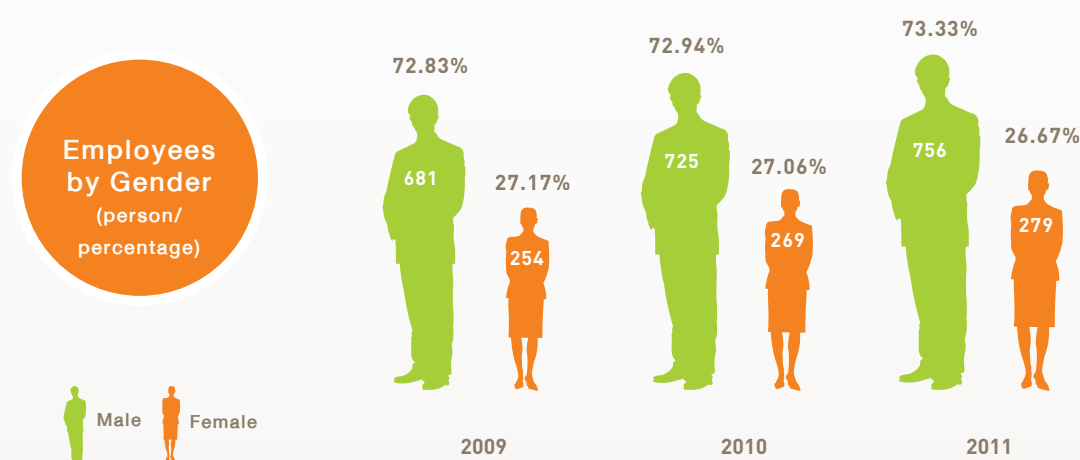


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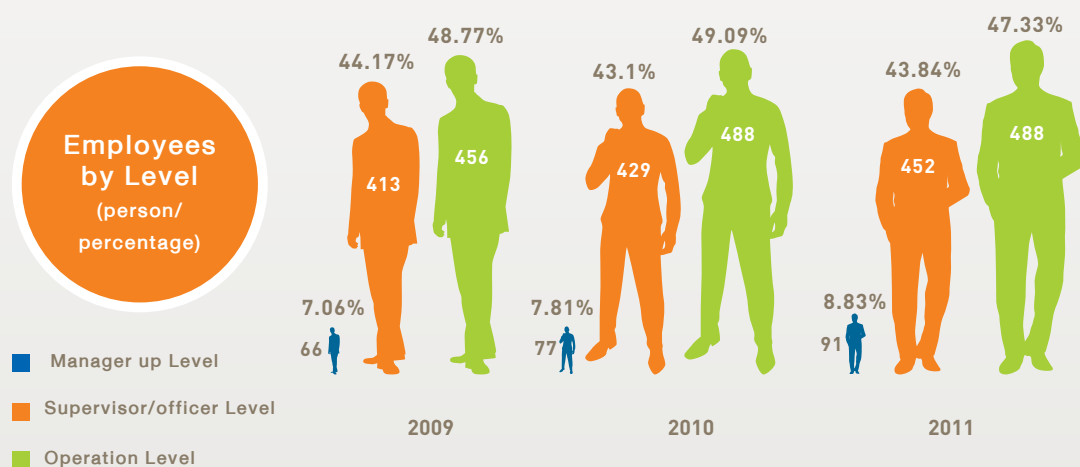
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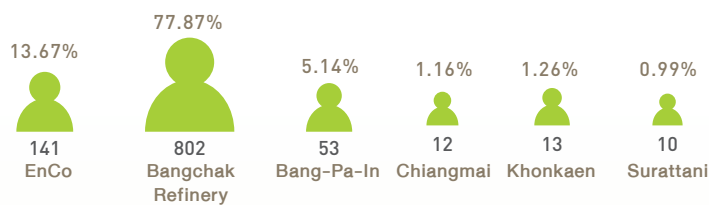
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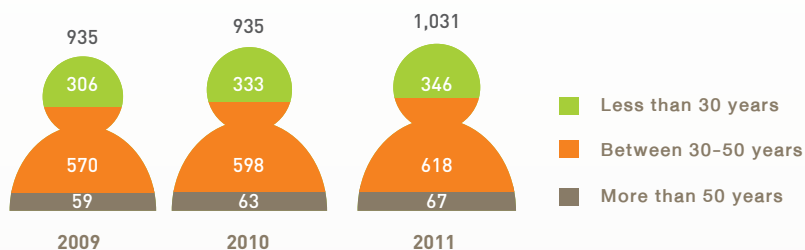
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### Employees by Area 2011 (person/percentage)



### Employees by Age (person)



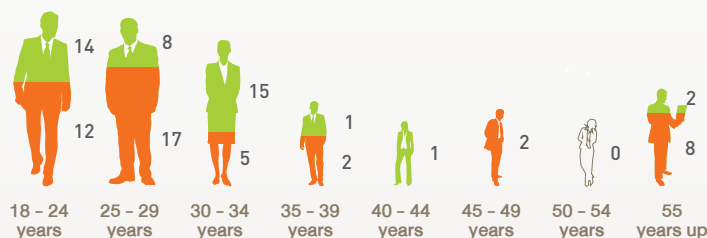
### Turnover Rate (percentage)



NOTE: Excluding retired employees and employees who failed their probation

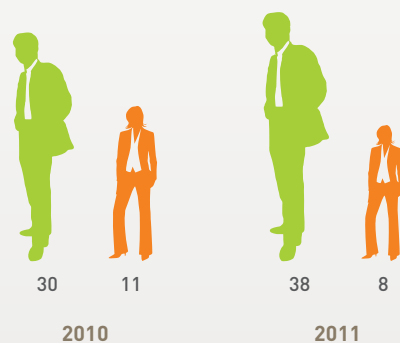
### Total Number of Employees Turnover by age (person)

2010  
2011

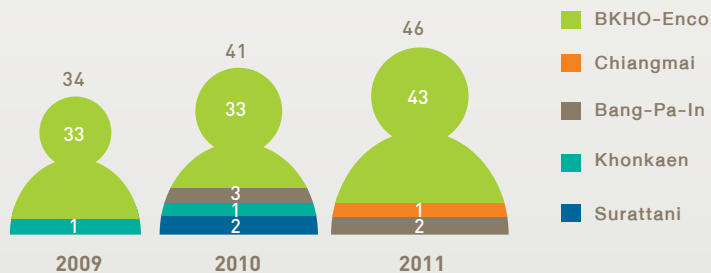


### Total Number of Employees Turnover by gender (person)

Male  
Female



### Total Number of Employees Turnover by Area (person)



## Human rights

The Company respects human rights and abides by labor laws. Its employees and contract employees must be at least 20 years old. It has no policy of hiring child labor or practicing forced labor or gender discrimination. As for contract employees, it requires that contractors treat their workers as required by labor laws, social security, compensation laws and others related to labor protection. Otherwise, contractors will be regarded as violating their contracts, for which the Company can revoke their contracts without prior notice.

Weekly training is given by the Safety Section to contractors and safety officers before the start of work on matters related to the Company's safety, environment and energy, goals, policies and regulations to minimize operation risks due to incompatible procedures. Emphasis is given on the respect of human rights to minimize risks resulting from a lack of understanding that could lead to unfair treatment, visitors' or stakeholders' safety concerns.

## Compensation management

The Company's compensation management is administered with fairness, suitability to the employees' responsibilities and competence. The Company has also adjusted its compensation to compete with peer companies and attract competent people to work with it and stimulate current employees to improve their performances. The Company's performance appraisal system has clear criteria according to KPIs so that both superiors and subordinates may share understanding, leading to both job and employee improvement.

In line with the changing social, economic and business circumstances, the Company has provided more extensive welfare for employees and their families than that required by the law. It has initiated an Employee Joint Investment Program (EJIP) to compensate for the employees' commitment to their work and also to stimulate other employees to dedicate themselves to efficient work.

Besides the normal welfare, during the spread of epidemics such as the 2009 flu, the Company provided vaccination to all employees. It also provided hand-gel in buildings, distributed masks and campaigned for the prevention. Those diagnosed with potential 2009 flu infection could be excused from work with pay.



## Personnel development

The Company is continuously focusing on employee's development in order to promote potentiality, competitiveness at the international level and valuable society members. Its culture is based on the concept of "being virtuous, knowledgeable and contributive to the society", leading to a company of excellence. In addition, the Company regards it as everyone's responsibility to develop and promote knowledge sharing among its personnel.

Competency management, the principle used by the Company to develop its personnel, begins with individual competency assessment to identify competency gaps. This year, the Company's assessment improved to the 180-degree variety-consisting of joint assessment among staff, their superiors, and third-party superiors-for clearer and more efficient assessment together with individual development plans to fill each person's gap.

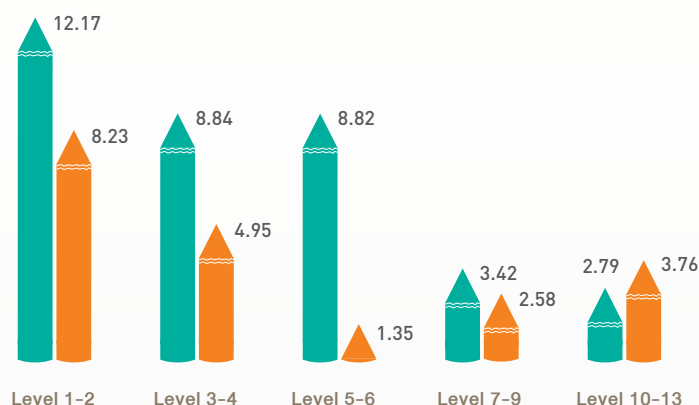
Individual development plans are consistently defined, with various development methods such as training, on-the-job training, self learning through e-learning, Project Assignment, cross functional or functional Development, QCC, KAIZEN and especially the Community of Practices (CoPs)-a venue for the sharing of knowledge among those in similar professions or with similar interests. It is part of knowledge management, leading to lifelong learning.

Moreover, the Company has developed training curricula to meet its short-term and long-term goals and directions. The curricula have been continuously improved to allow employees to upgrade themselves with specialized knowledge, skills and experience, including technical expertise, management skills and knowledge to meet future business requirements.

In addition, the Company provided related training on the respect of human rights-including the revised Labour Protection Act B.E. 2551 (2008) Article 11/1, changes in plans and policies concerning investment in provident funds and labor laws-and supported seminars and site visits so that employees may have forums to share knowledge and experiences with those from other entities and eventually apply them to the Company development. On average, the normal training hours per person is six days, but due to the floods of the last quarter, most training then was postponed.

The training curricula include many topics; such as, Executive Development, Senior Executive Program, Advanced Senior Executive Program, Bangchak Leadership, Business Acumen, HAZOPS, Defensive Driving, BCP Culture CSR&CG, Risk Management and TQA.

## Training Days per Person by Level



## Training Expenses (million baht)



“Because Bangchak is my second home.  
This is true workplace happiness.”

So proud am I to be a part of Bangchak! This is a refinery owned by Thais, a fact that brings pride to many. Besides running the oil business, Bangchak extends its help to society and cares about the surroundings, as seen in our wide array of public service activities.

Bangchak is indeed my second home—a workplace of great warmth and happiness. Our work and various activities give us new experiences, and I've found that colleagues show not only great love for one another, but also strong unity. In tough times, we're ready to fight and overcome obstacles together. For instance, during the Great Floods (in 2011), we joined hands to prevent water encroachment, something that really touched me! I call this true workplace happiness.

**Mr. Suraporn Petchdee**

Senior Engineer, Refinery 1 Section



### Skill development and lifelong learning

The Company emphasized on knowledge management, so that it has set an objective of being a learning organization, defining the direction by searching for and setting the structure and scope, managing, collecting and transferring knowledge, as well as promoting knowledge sharing among employees and to external organizations. The acquired knowledge is applied as Best Practices, resulting in innovation and benefit to the Company's operation and work. Creation of the KM Web allows employees to learn, whether basic knowledge for work, knowledge derived from experience, specialty knowledge, knowledge derived from training, news and information or the transfer of knowledge from those who are resigning or retiring.

Moreover, the Company has set up the BCP Trainer Project, under which the development of an employee is undertaken by another employee. The coaching project allows employee specializing in given fields to transfer tacit to explicit knowledge. This way, the knowledge remains in the Company and employees can fill in for others. It is also an opportunity for employees to regularly exercise and review their own knowledge and experience. Some knowledge that has been transferred including environment, safety, information and technology, accounting and corporate social responsibility.

### Career Development

Career development is a process which derives from a plan for manpower, capability and competence in line with the Company's strategies, directions and objectives. The process consists of the following:

#### Career Path

The Company looks after and defines career-path criteria for all employees, grouping them into management and specialists. All employees have opportunities to progress in the lines and professions of their choice.

#### Talent Management

Under the Talent Management Project, the Company selects, from the leadership & personality assessment, groups of employees with high capability, qualifications and behavior conducive to business success. Special development plans are individually developed for them to increase their competitiveness and employee engagement with the Company in order that they may become a valued force in the efficient and sustainable operation of the Company's business. The Company annually reviews the name of employees of this group, also the development and preservation plans for them.

#### Succession Plan

To ensure smooth business transition, the Company has set up and continuously updated its succession plans for key positions. Management and Personnel jointly define key work specifications in the middle and senior executive groups which are the core groups in propelling the Company toward success, using Leadership & Personality Trait Modeling for Successor, the individual development plans are subsequently defined. The Human Resource Development Division will be the unit which responsible for following the progress and successor readiness.



## Policy to promote corporate learning and personnel development

Committed to raising the standard of management excellence under the approach of the Thailand Quality Awards, which values approaches to corporate and individual learning, leading in turn to continuous improvement of work processes and key changes or innovations, Bangchak Petroleum Plc has defined the following policy to promote corporate learning and personnel development:

1. Cultivate learning into a corporate way by making it a part of routine work practice at all levels (individual, unit and corporate) with a focus on contribution to problem-solving at root causes, knowledge accumulation and sharing across the Company, resulting in opportunities for key and meaningful changes as well as innovations
2. Promote learning in process in all units with a focus on the practical learning cycle that relies on the so-called fact-based data of results against goals through PDCA (plan, do check, act)
3. Promote and carve learning opportunities for personnel to become professionals through education, training, challenging work and job rotation, as well as learning through a knowledge-sharing system, namely the brainstorming of personnel and volunteers, research and development findings, customer information, sharing of best practices and sharing of knowledge or comparable processes. This is achieved by setting individual development goals after competency assessment for each position against the Company's standard.
4. All personnel must exercise discipline in following the Company's guidelines and together cultivate awareness for the Company culture of being virtuous, knowledgeable and contributive to society, as well as for its core competencies, namely striving to learn, adjustment and being self-starters, leadership, teamwork, regard for society and the environment, safety, health and energy-saving
5. Expected outcomes of corporate and individual learning consist of development of knowledge to add value for customers through new or improved products, customer service, new business opportunities, defining and improvement of new processes or new business formats, efficiency and effectiveness improvement, reduction of errors, waste, losses and related costs, improvement in the ability to cater to customers and cut turnaround time, enhancement of corporate performance to achieve social responsibility and employee engagement to the company.

Under this policy, the management must set good role models and all employees must master and observe all stages of business operation to achieve objectives and goals.

This policy is to be enforced from July 26, 2011, onward

(Signed) *Anusorn Sangnimnuan*  
(Dr. Anusorn Sangnimnuan)  
President

## Employee Engagement



To make its workplace a peaceful one filled with contented people that forge great collaboration, the Company has consistently promoted rapport among employees as well as between employees and the Company. Its assorted activities have one common goal: to cultivate virtues and keen awareness of fellow employees, the organization and society at large.

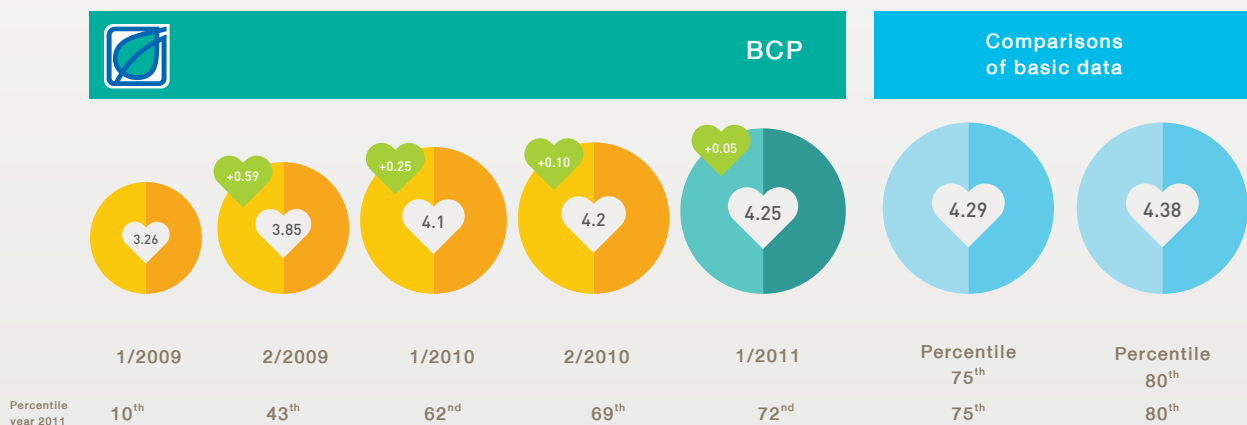
In 2011, the Company elevated such relations into employee engagement. Based on universally accepted thinking, interviews with executives and the rank and file in small groups randomly chosen from the workforce and members of the labor union and the employee committee, the Company defined factors promoting employee engagement of the following aspects:

### Factors promoting employee engagement



The Company annually conducted employee engagement surveys to learn employees' perspectives for career growth, the Company's prospects of security and sustainability of growth, key factors favoring workplace atmosphere and surroundings (both strong points and shortcomings) and benchmarking with other companies around the world). Based on its findings, all units are asked to come up with plans for their own relations improvement to foster rapport, relations and attitudes among them.

### employee engagement scores (1/2011)





Annual Seminars



Employees' Birthdays



Songkran Well-wishing

Based on employee engagement survey outcomes, the Company has developed the following activities:

#### Executive Development on Human Resource Management

All executives-from section heads to the President-are to be developed to manage people so that they may appreciate different needs among people and nurture surroundings that favor employee engagement, such as People Management course and Bangchak Leadership course.

#### Employee Welfare Improvement

To ease employees' healthcare burdens, the Company raised medical care and dental care allowances to include employees' family members by raising the limit on dental care charges for employees and their family members, extending medical care charges to family members; the Company also expanded the list of hospitals under its welfare program for employees' greater convenience.

#### In addition, the Company retained these core employee relations activities:

**Employees' Birthdays:** Employees with birthdays of the same given month together conducted Buddhist ceremonies, dined and undertake public services together at different locations, including visits communities around the refinery, cleaning community spots, painting bridges and planting trees.

**Annual seminars:** To promote employee relations, the Company organizes group sightseeing tours. In 2011, a "Seminar-Wonders of Big Mountain-Adventure of Cowboy Town" tour was organized to Nakhon Ratchasima, where employees were engaged in preparing enzyme ionic plasma for tree-watering purposes at community forests and donated needed items to schools in that province.

**Songkran Well-wishing:** So that employees may preserve fine Thai customs during the traditional Thai New Year, the Company staged a palm-bathing ceremony to seek blessings from the Chairman of the Board and Company executives.

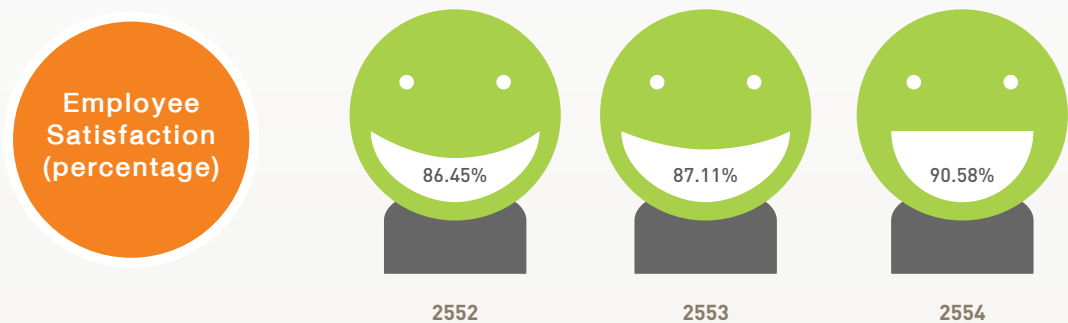
**Bangchak Family Day:** Executives, employees and their family members socialized and joined fun and relations activities.

**Company Founding Day:** On Bangchak's founding day, executives and employees offered alms to 84 monks together to commemorate this auspicious occasion and His Majesty King Bhumibol Adulyadej's 7<sup>th</sup> Cycle 84<sup>th</sup> Birthday Anniversary.

### Bangchak Plc Labor Union

All the Company employees are treated fairly and enjoy equal rights under Company regulations, whether they belong to the labor union or not. Set up under the law with 20% of the workforce as its members, Bangchak Plc Labor Union cooperates with the Company in looking after employees' well-being through regular consultations with top management while getting feedback from employees about their needs to develop the Company's labor aspects. The president quarterly communicates business performance and variation of the Company to all employees by "PS meet employees".

The Company also instituted an Employee Committee, consisting of employee representatives appointed by the labor union and coming from employee elections. The committee is engaged in consultations with representatives from top management on matters of welfare and benefits to ensure their suitability. To date, the consultation sessions went well, with all concerns or queries properly addressed, thus resulting in high employee satisfaction.



### Employees' clubs

The Company encourages the establishment of employees' clubs to enable those with similar interests to form clubs focusing on their interests to support employees' learning to responsibly engage in work processes together through different club activities for physical exercise, recreation and public services, including various sports clubs, Ornithologist (bird study) Club, Bangchak Thai Marine Conservation Club, Bangchak Loves Community Club, Photography Club, Music Club, and Volunteer & Social Development Club. Employees can freely initiate activities for their own benefit in line with the Company culture.

### Lunch project for needy children

This project arose from employees' conscience and culture of "contributive to society". In view of food shortages and malnutrition among society's children (particularly those in the refinery neighborhood), employees regularly donate their spare money from their monthly pays to help schools that still need help. Since 1988 the project has consistently sponsored lunches at schools, with 16 schools and one foundation under its support.

*“Because Bangchak isn't just a business entity,  
but a good future for Thai energy and environment”*

Throughout my eight years here, Bangchak has provided me with opportunities to learn and develop in the things I'm keen on. Seniors and friends are more than just colleagues. Executives serve as role models for successful businessmen and ones who live their lives in a contented way. Bangchak isn't just a business entity, but a part of society that shares good things with it and the surroundings, in addition to teaching all employees the happiness of giving.

I'm proud that Bangchak strives to stand on its own with a clear vision for alternative-energy leadership-which has to do not just with business, but rather Thailand's energy and environmental future. Equally important, Bangchak nurtures agricultural groups as well as Thai society through sustainable business execution by leveraging the sufficiency economy. Bangchak grows together with Thai society and all Thais.

**Ms. Chanadda Satsue**

Planner, Marketing and Price Strategy Section



## Operation on Quality, Safety, Health, Environment, and Energy



The Company places importance to safety, health, environmental, and energy management to ensure that its operations comply with the universal management system, safety and health. Additionally, the operations do not affect the environment, society and communities. The Company promotes the cost-effective use of energy and realizes the important of employees as well as those of its contractors, and other stakeholders. Formulating a SHEE policy and appointing some task forces, the Company requires that SHEE competency is a core competency and promotes recognition of safe behavior to turn it into a company culture and form proper behavior of related people according to the behavior-based safety health environment energy principle. Those task forces are;

### Safety, Health, Environment and Energy Management Team (SHEEM):

comprises high-level management from all business lines, having the responsibility to define management system policies and guidelines, and regularly reviews the management processes while supplying resources for continual process development as well as setting up task forces for efficient and effective safety, health, environmental and energy management.

### Safety, Health and Environment Committee (SHEC):

Having 50% of its membership from employee representatives from the first year of law enforcement on safety committees, it is responsible for compliance with the laws and works with operational-level safety subcommittees for greater work safety.

### Safe Operation Team (SOT):

reviews operation procedures and past performances screened by the JSA&QCA, HAZOP and EQT teams to comply with safety standards while reviewing incident reports and define protection approaches. Apart from the relevant managers, SOT members consist of managers of the operations, technical, and engineering lines of the refinery.

### Safety, Health, Environment and Energy Promotion Team (SHEEP):

through open participation for everyone, promotes awareness of safety, occupational health, environment and energy in each employee's performance.

### JSA&QCA Team:

reviews work processes for safety and detailed quality control.

### HAZOPS Team:

through the HAZOP technique, revises designs and modifications to refinery pipelines, instruments and equipment to meet the Company's technical principles and engineering standards for safe applications.

### Engineering and Quality Team:

This year, the Company improved and controlled design quality to international standards involving the following improvements to work processes:

#### 1. Engineering and Maintenance

- Increase instrument reliability by using Safety Integrity Level (SIL).
- Enhance inspection efficiency through Risk-Based Inspection (RBI).
- Implement Reliability-Centered Maintenance (RCM).
- Revise tank repair standards to exceed those required internationally.
- Develop capability and reliability of the refinery firefighting system.
- Enhance security system by using access control and CCTV.

#### 2. System Working Improvement

- Adopted a management system under the criterion of the Thailand Quality Awards
- Prepared implementation of the ISO 50001 energy management standard
- Improved process energy consumption for greater efficiency and promoted consumption of clean energy (that is, natural gas) as well as energy consumption in office buildings, including switching to energy-saving bulbs and the design of environmentally friendly buildings
- Developed DMS (Document Management System) and e-ISO (online standard management system) to encompass a document filing system and requirements for safety, health and environmental management standards so as to raise work efficiency and reduce consumption of resources (for instance, paper)
- Check up on employees based on an analysis of risk factors from inside and outside their workplaces and inspect the conditions of work areas to define appropriate preventive and remedial measures.

#### 3. Raising of awareness of society, safety, occupational health, environment and energy

- Setting up task forces for efficient and effective energy management such as Refinery Efficiency Enhance Taskforce (REET), Energy Management Taskforce, Following up Taskforce of the Energy Management, ISO50001 Developing Management Taskforce; to develop the energy management to be universal standards.
- Organize basic firefighting training for employees in general and advanced firefighting training for employees in the operation line of refinery, Bangchak Depot and Bang Pa-in Depot.
- Organize safety training, for example, safety analyzing and reviewing technique, safety in confined space and first aid.
- Staged safety training courses for contractors working in the refinery, which included promotion of awareness and proper work behavior of contractors during the major maintenance turnaround
- Staged training to develop employees into assorted experts

- Use toolbox meetings as another communication channel for shift operations.
- Learning System by Knowledge Management in the Intranet of the Company
- Promotion of safety, occupational health, environment and energy activities;
  - BB-SHEE (Behavior-based SHEE), designed to campaign for employees and contractors to adopt proper SHEE behavior and continuously observe it:
    - Brotherly advice on BB-SHEE
    - BBS (Behavior-based Safety) activities
    - SHEE Walking Day, in which the Company executives and rank-and-file employees jointly patrolled work areas and performance of employees and contractors with a focus on SHEE with love and care, together with provision of advice and commendation to those with proper behavior
    - SHEE Quiz contest
    - Good health through exercise
    - QCC Energy Day activities for awareness building and promotion of energy-saving and a related contest
    - Energy Management Matrix (EMM) assessment of company-wide energy management in six aspects
    - Notice Man, designed to promote the issuing of warnings when discovering unsafe work areas. One Man All Excellence, designed to cultivate skills for the use of tools and knowledge transfer to colleagues.
    - “Choe, Tong Chaek”, designed to present a token to contractors observing safety rules and wearing PPE while working in crude-receiving areas; this campaign stressed strict conformance to rules.
    - An environmental and safety contest on transport among employees and transport operators that experienced no accident concerning delivery and accidents in depots. Also, a contest on bulletin boards aimed at transport operators, designed to reduce accidents and complaints.
- Good Health Daily  
Employees can exercise to music rhythms from 15:00 to 15:05 hours every day.
- Communicated SHEE knowledge through the SHEE Channel and smart PR boards
- 5 S Activity  
The Big Cleaning Day
- We Care We Share Activity
  - The Company distributes news and information on safety to all employees through e-mails and internal bulletin boards.
  - A SHEE talk is conducted before daily operation meetings.
  - Lesson & Learnt activities, designed to share knowledge and protection with other units
- Staged Safe Community activities.
- Knowledge and experience sharing at the 24<sup>th</sup> National Safety Week Exhibition.

## Goals and Indicators

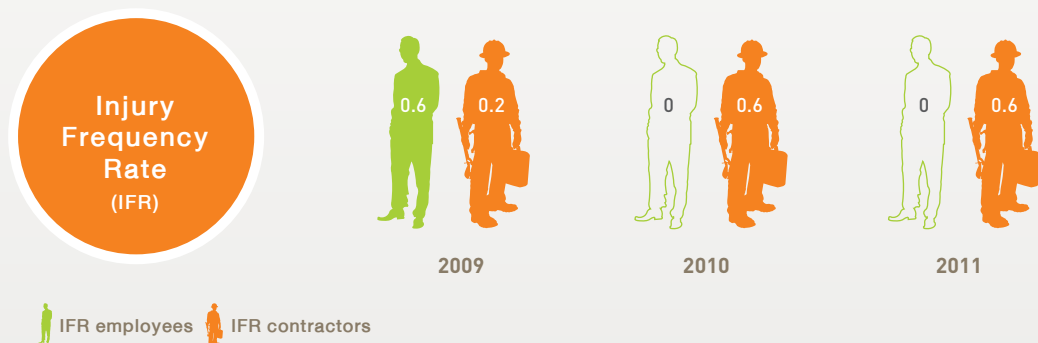
This year, to make employees aware and become more active in safeguarding their own safety as well as their colleagues', the Company set (besides accident statistics) the following defensive safety indicators:

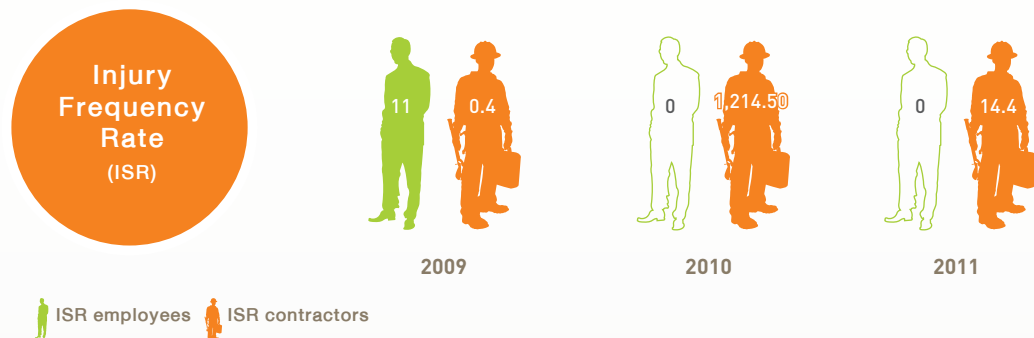
1. **Serious accidents** causing a lost time injury or Company's property damages worth more than Baht 1,000,000.



\* Ignition of plant equipment

2. **Injury Frequency Rate (IFR) and Injury Severity Rate (ISR)** for employees and contractors started in 2008 to record the numbers of those who suffered lost-time injuries and the numbers of lost working days compared with total work hours in a year. This is another way to raise awareness and cooperation among them to prevent occupational injuries.





Remarks : IFR and ISR are based on 1,000,000 work-hours

Year 2011 : One employee's lost-time injury and one contractor's lost-time injury (contractor's lost-time injury more than 6 months)

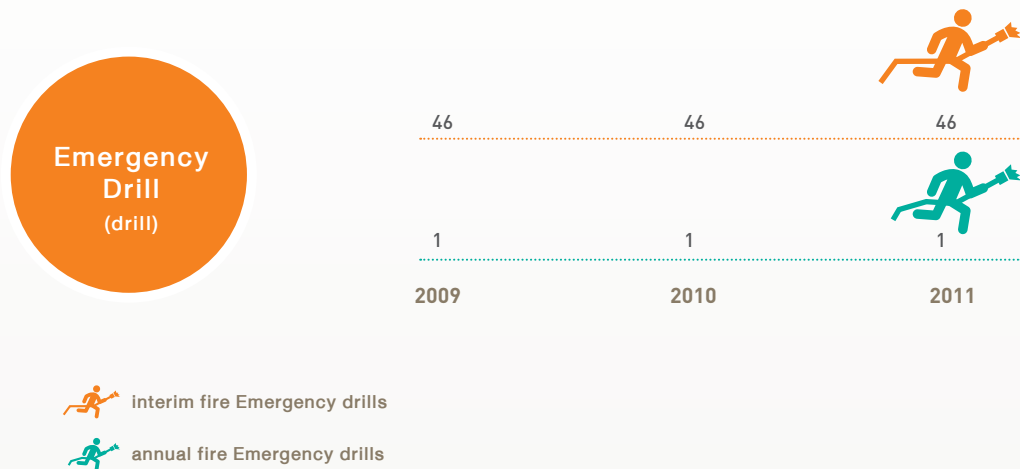
### 3. Number of Suggestions on Safety Improvement from Employees



In 2011, more safety development suggestions were submitted through a suggestion card system covering work area safety improvement and risky or unsafe behavior. Moreover, there were 47 suggestions submitted through the Safety, Health and Environment Committee on workplace environment, and 36 suggestions from QCC (Quality Control Circle)

#### 4. Emergency Drills

The Company emphasizes the preparedness and effective response to emergencies and therefore defines guidelines and procedures to terminate incidents, mitigate impacts, and coordinate with external parties under the Emergency Plan and Crisis Management Plan. The Refinery Operation Units and Bangkok Oil Distribution Center continues their interim and annual emergency drills.



#### Environmental and Safety Training Center

Other than employee training, the Company has established an environmental and safety training center at Bang Pa-in Oil Distribution Center in Ayutthaya province to continually provide integrated safety training-basic and advanced firefighting, fire extinguishing techniques, emergency incident commands, and annual fire escape drills-to employees and the public. Last year, 8,929 delegates learned and practiced in 37 safety training organized by the Company.

# Stakeholder Engagement



The Company has defined its missions in three dimensions to grow sustainable value for stakeholders; they are conducting business to steadily grow its returns in a fair manner, promoting a business culture that is responsible to the environment and society, and growing employees into professionals. All dimensions have been participated in the various communication processes in order to realize stakeholder's expectations and respond correctly.

NO.	Stakeholders	Example of Stakeholders	Participation in the Communication Process	Expectation	Response
1	Shareholders	<ul style="list-style-type: none"> <li>Major Shareholders</li> <li>Minor Shareholders</li> </ul>	<u>Reporting</u> : Annual Report, Sustainability Report, Annual shareholder meeting (AGM), CG manual <u>Meeting</u> : Company visit, Analyst meeting, Opportunity day, Communication Channel : Website, Facebook, IR newsletter	<ul style="list-style-type: none"> <li>Financial Stability</li> <li>Return on investment</li> <li>Transparency Management</li> <li>Continuous Growth</li> </ul>	<ul style="list-style-type: none"> <li>Stock Dividend,</li> <li>Margin form Stock price</li> </ul>
2	Employees	<ul style="list-style-type: none"> <li>Permanent Employees</li> </ul>	<u>Reporting</u> : Annual Report, Sustainability Report <u>Meeting</u> : PS meet employee, Orientation <u>Activity</u> : Events, Seminar, Sport Club Communication Channel : Intranet, Ms. Outlook, Electronic-notice Board, 64 Next Station Radio. E-news, E-letter, Web Board, Website, Facebook, BCP Engagement	<ul style="list-style-type: none"> <li>Potential Development</li> <li>Welfare improvement</li> </ul>	<ul style="list-style-type: none"> <li>Competency Management</li> <li>Training, Workshop</li> <li>Develop welfare</li> <li>BCP Engagement</li> </ul>
3	Community and Society	<u>Community</u> <ul style="list-style-type: none"> <li>Community</li> <li>Family</li> <li>School</li> <li>Condo</li> </ul> <u>Remote Community/ Society</u>	<u>Activity</u> : Thai Traditional Events, Company visit, Community Relations Activities, Community Dialogue <u>Communication Channel</u> : Community radio, San Rob Rua Journal, Krob Krua Bai Mai Journal (a couple-monthly), Community visit, SMS, Call Center, Bangchak Information Center in shopping mall near the refinery, Online Air quality report on LED signboard in the community, Website, Facebook	<ul style="list-style-type: none"> <li>Air and noise pollution concerns</li> <li>Safety Plan for Emergency Situations</li> </ul>	<ul style="list-style-type: none"> <li>Communicate by radio from command center direct to the Community residence in case of Emergency.</li> <li>Online Air quality report on LED signboard in communities</li> <li>Basic Fire Fighting and Evacuation training to communities</li> </ul>
4	Suppliers / Contractors	<ul style="list-style-type: none"> <li>Contractors</li> <li>transportation fuels; ships, cars, vessels</li> <li>Joint Product Development</li> <li>Joint investment in new business</li> </ul>	Meeting Seminar, Training, Customer forum <u>Activity</u> : Customer survey, Customer Relation Management, <u>Communication Channel</u> : Green news letter, Advertising, call center, E-mail, Website, Announcement, Suggestion box,	<ul style="list-style-type: none"> <li>Punctual product delivery / comply with contracts</li> <li>Quality Product</li> <li>Customer Service Quickly</li> <li>Cleanness and attractiveness of service stations</li> <li>Financial Stability</li> </ul>	<ul style="list-style-type: none"> <li>Development on quality of transportations</li> <li>Special Reward for the excellent transportation service men</li> </ul>

NO.	Stakeholders	Example of Stakeholders	Participation in the Communication Process	Expectation	Response
5	Press Conference	<ul style="list-style-type: none"> <li>• Televisions</li> <li>• Radios</li> <li>• Newspapers</li> </ul>	<u>Meeting</u> : CEO Meeting <u>Activity</u> : Press Tour, Company visit Communication Channel : Press Release, Journal and Magazine, Exhibition, E-news, Website	Efficient communications	<ul style="list-style-type: none"> <li>• Accurately inform the presses</li> </ul>
6	Customers and Society	<ul style="list-style-type: none"> <li>• Service Station Dealers</li> <li>• Co-op Service Station</li> <li>• Consumers</li> </ul>	<u>Reporting</u> : Annual report, Sustainability report <u>Meeting</u> : Dealer forum <u>Activity</u> : Entrepreneur manual, Customer Relation Management, Events <u>Product</u> : GSH Club Card, GSH member activities Communication Channel : Green news letter, Customer survey, Advertising, SMS, E-mail, website, Suggestion box, Announcement	<ul style="list-style-type: none"> <li>• Quality Product</li> <li>• Customer Service Quickly</li> <li>• Cleanliness and attractiveness of service stations</li> <li>• Comfortable with ordering all sorts of products</li> <li>• Efficient communications</li> </ul>	<ul style="list-style-type: none"> <li>• Developing quality of products, supportive businesses and other services</li> <li>• Refreshing and Rebranding service stations and supportive businesses</li> <li>• Launching new promotions</li> <li>• Staged some training courses for service station dealers</li> <li>• Verifying the equipments in service stations</li> </ul>
7	Competitors	<ul style="list-style-type: none"> <li>• Other Oil Traders</li> </ul>	<u>Activity</u> : Events, Networking Activities, Website	Free competition and fair marketing	Operate business with transparency under fair trade and competition
8	Lenders	<ul style="list-style-type: none"> <li>• Financial Institute</li> </ul>	<u>Reporting</u> : Annual report, Sustainability report <u>Meeting</u> : Analyst meeting, forum <u>Activity</u> : Road show, Exhibition <u>Communication Channel</u> : Website	Comply with conditions and agreements of Loan contract	Strictly comply with conditions of Loan contract such as interests payment, principal payment
9	government	<ul style="list-style-type: none"> <li>• District Office</li> <li>• Department</li> <li>• Ministry</li> </ul>	<u>Reporting</u> : Annual report, Sustainability report <u>Activity</u> : Company visit <u>Regulation</u> : Laws, Permits, Regulations and monitoring <u>Communication Channel</u> : Website	Comply with laws and regulations	Comply with laws and regulations related to business accurately, transparently and political neutrality



### Bangchak is Thai from roots to leaves

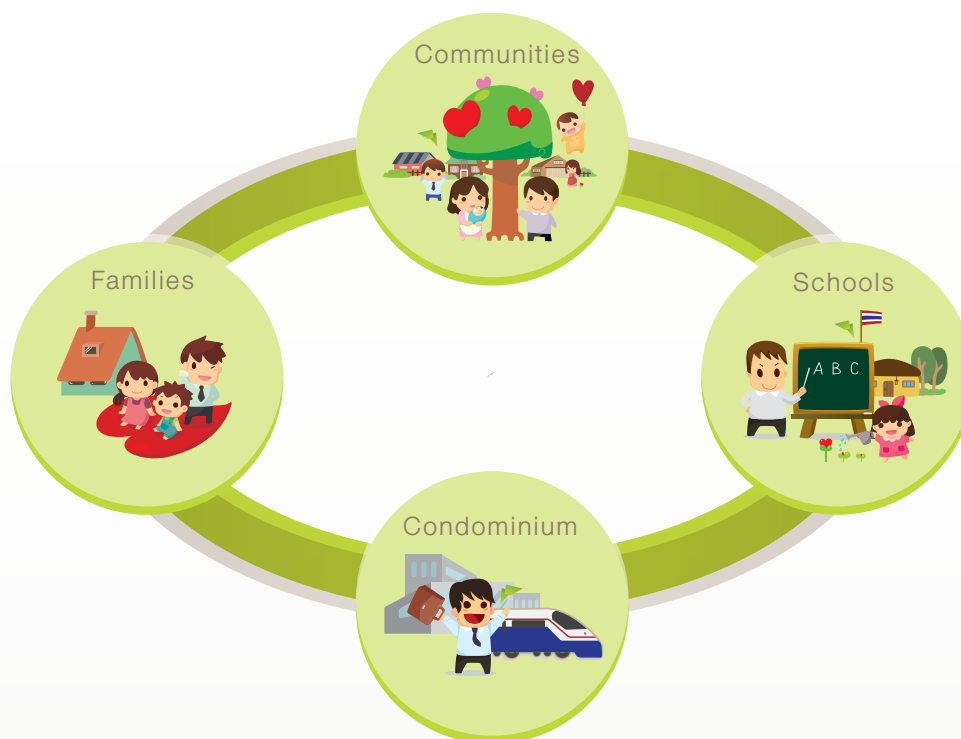
Bangchak's community participation and social development programs have been running ever since the Company's establishment, or as long as 27 years ago. The Company's Greenergy Excellence culture has been inherited and turned into practice from generation to generation, resulting in all levels of operations having responsibilities and respect for communities, social groups, stakeholders and the country at large.

Despite its continuous attempt to equip the public with knowledge about the environment through various projects to alert them to live their lives in an environmentally friendly way, people around the world encountered various natural disasters through 2011, be it earthquakes, volcano eruptions, tsunamis or the Great Floods of Thailand. The Company deems it an obligation to work harder proactively and reactively to raise concerns among the public over the environment, that is, to create awareness by publicizing knowledge about natural disasters and running disaster relief programs in line with the Company's vision, corporate culture, mission and strategies. It is also the Company's normal practice to create value for the community and society.

**Communities around the refinery :** The Company has a "Community Relations Committee (CRC)", comprising a senior executive vice president and executives from various departments. The committee, having environment and community relations section serving as the secretary, is scheduled to meet every two months to devise strategies, grant approvals and follow up on community relations programs.



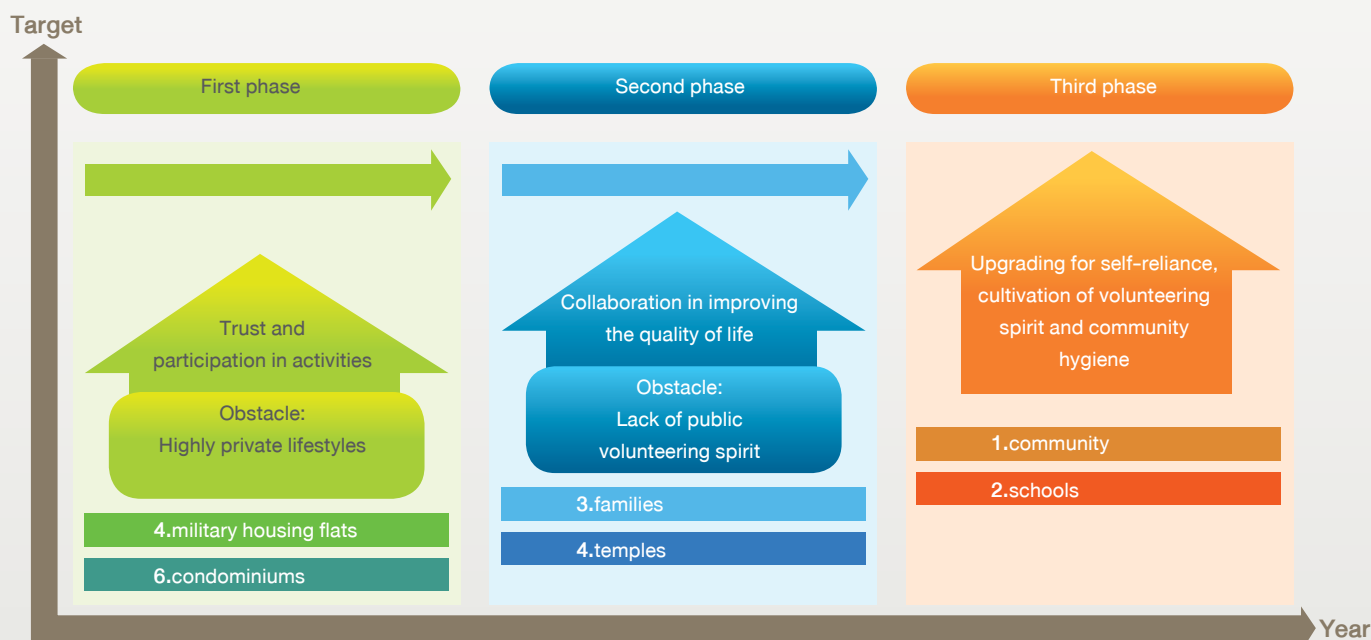
Strategies on community relations are developed from the Company's strengths, ISO 26000 standards and most important, community participation. Community needs could also emerged from the annual community engagement and the community's own forum. There are also visits to communities, carried out seven rounds a year-a program that draws direct participation between the community and the Company. The Company has divided target communities located in a short distance from the Company into four groups:



#### Explanation of target groups:

1. **The community** - Back in the old days, the Company was located far from communities, surrounded by paddy fields, with only a few landholders living next to each other next to Chao Phraya River. The main means of travel was an old rail line. After the city expanded, leading to migration of labor, the surrounding fields were built on and became residential buildings rented out on a yearly basis. Currently the residents around the refinery are registered with Amphoe Phra Khanong and are made up of six communities (1,028 households, 4,710 people) living in slum-like conditions with many migrant workers living there too. This year, the Company's community relations program has been expanded to Tambon Bang Nam Phueng, Amphoe Phra Pra Daeng, Samut Prakan, located on the opposite side of the Chao Phraya River and facing the back of the refinery (11 villages : 1,116 households).
2. **Families** - This group covers people who live in detached houses and townhouses in Phra Khanong and Bang Na areas.
3. **Schools** - There are 11 schools from the primary level to secondary level under the Bangkok Metropolitan Administration and the Department of General Education in the area.
4. **Condominiums** - Condominium dwellers are a new group that has emerged since the BTS line was extended. It is expected that next year, 17 new condominium projects, or around 8,300 condominium units, will be completed.

### Community relations goals by target group, 2011-2013



## Factors that underpin the design of the Company's community relations programs

Origin of the policy	Direction	Project	Target
<ul style="list-style-type: none"> <li>Strengths / policy / corporate culture</li> </ul>	<ul style="list-style-type: none"> <li>Being a leader in alternative energy with environmental awareness and being a CSR role model</li> <li>Creating understanding and confidence in the refinery's safety system</li> <li>Administering and following-up CRC's performance</li> </ul>	<ul style="list-style-type: none"> <li>Purchase of used cooking oil</li> <li>Sapling Planting, Phu Long Reforestation Project</li> <li>Eco-school</li> <li>Fire-fighting drill and evacuation drill / donation of fire extinguishers</li> <li>Donations made to 16 schools surrounding the refinery through BCP's Lunch Program</li> <li>Community relations program</li> </ul>	<ul style="list-style-type: none"> <li>Maintaining relationship and trust at 'very good' and maintaining satisfaction with activities at no less than 90%</li> <li>100% staff participation in CSR programs</li> </ul>
<ul style="list-style-type: none"> <li>Community engagement and joint development</li> </ul>	<ul style="list-style-type: none"> <li>Emphasis on community participation</li> <li>Educational development and community's cultural promotion</li> <li>Technological development and access to technology</li> <li>Social capital development</li> </ul>	<ul style="list-style-type: none"> <li>Youth education support as well as activities and projects initiated for community development to improve people's livelihoods and enhance students' learning process in classrooms</li> <li>Annual community forum</li> </ul>	<ul style="list-style-type: none"> <li>Keeping performance up to ISO 26000 standards</li> <li>Extending activities with an emphasis on boosting public spirit at all target groups</li> </ul>
<ul style="list-style-type: none"> <li>Social Impact Assessment (SIA), community forums with participation in and assessment of all activities</li> </ul>	<ul style="list-style-type: none"> <li>Improving the Company's emergency response plan by incorporating communication within the Company and with communities as well as with outside agencies, reporting process, and communication in an emergency with potential impacts on the communities</li> <li>Forging contentment in communities (happiness and satisfaction)</li> </ul>	<ul style="list-style-type: none"> <li>Development of two-way communication between the Company and communities through voice announcements, SMS, call center, leaflets, Krob Krua Bai Mai bulletins, and Rop Rua newsletters</li> <li>Emergency and evacuation drills for schools and communities as well as training on how to survive assorted disasters to equip people with knowledge to reduce risks on lives and properties from unforeseen happenings</li> <li>Health check-ups for community people, One Family project, activities to promote physical and mental health</li> <li>Community relations activities responding to six target groups in seven aspects</li> </ul>	<ul style="list-style-type: none"> <li>Increasing efficient communication channels to make sure that the messages reach target groups in an emergency and to ensure people's peace of mind and correct understanding</li> <li>Running activities that serve the needs of the target groups</li> </ul>

The strength of the Company's culture, resulting in 100% staff participation in CSR programs with no less than six times a year/person as follows:



Bangchak GIFTED Project



Open up the world of Knowledge Project



Bangchak Children Day

## Communities/Society around the refinery

The seven aspects of projects are as follows:

### 1. Education

#### 1.1 My School Project (Pee Bangchak Son Nong)

Bangchak staff volunteers teach homework and provide useful activities to schoolchildren around the refinery with a focus on mathematics, English and Thai languages, social studies, art and moral values. In this ninth year, staff take one to 1.5 hours before the end of Mondays to Thursdays to teach children from four local communities, with about 20 students in each class. The four communities under this project are the community behind Wat Boonrot Thammaram, Pong Wate Anusorn 1 Community, the community to the side of Bangchak refinery and one in front of Bangchak School.

#### 1.2 Open up the World of Knowledge with Bangchak Project

This project saw collaboration between Bangchak Petroleum Plc. and the Bangkok Metropolitan Educational Service Area Office (Zone 1) in support of the government policy requiring community entities to be sources of learning for modern education. The policy stresses sharing of direct, non-formal experience, to be achieved through the Company's diverse activities. Three integrated learning units consist of Oil World Discovery, A Better Environment, and Safety First. All units link contents like science, mathematics, social science, occupations and technology, arts, hygiene, Thai and foreign languages-all in line with participants' background knowledge. Participating schools can choose learning units of their interest.

#### 1.3 Project Citizen

Bangchak worked with King Prajadhipok's Institute and upper primary & lower secondary schools around the refinery for the second year in cultivating awareness of public service among youths, together with public responsibility-whether in schools, communities or



Bangchak Youth Scholarship Project



Bangchak GIFTED Project



Teachers' Environmental Conservation Project

society. Students looked into community problems, related laws and propose policies for problem-solving through respective schools' processes and core teachers. This year, students from 14 classrooms in eight schools (471 students) participated in this project.

#### 1.4 Bangchak Youth Scholarship Project

The Company has been committed to supporting and giving new academic opportunities to Thai youths, especially those with good grades and good behavior but coming from poor families. It has provided scholarships for seven consecutive years now to students from the primary level to university level selected from the 19 schools under BCP's Lunch program and from the communities around the refinery (at the discretion of the community committees and school directors). A total of 522 scholarships valued at over 2 million baht have been awarded.

#### 1.5 Bangchak GIFTED Project

Bangchak values the laying of a strong academic foundation for schoolchildren in grade 4 with outstanding scholastic records through the captioned project. Selected students are given a special tuition in mathematics, science, social study and the English language every day after school to prepare competent primary students for the secondary level and further to the university level at renowned schools. The Company believes that education improves the quality of life and society.

#### 1.6 Teachers' Environmental Conservation Project

Under an extension of the Eco-School project of the previous year, educational activities with a focus on the environment, energy and natural resources were organized for leading teachers in the hope that the trained teachers will be able to integrate what they have learned from the project into their curricula. The three-day and two-night project took place at Ruam Tawan Center, Amphoe Mueang, Kanchanaburi.



Bangchak Cares for  
School/Condominium Safety



The Eighth Bangchak Youth Futsal  
Tournament Project



Bangchak Youth  
Sport Camp

## 2. Safety

### 2.1 Bangchak Cares for School/Condominium Safety

Promoting community preparedness and safety, the Company has encouraged the communities around the refinery to work together to make sure that their fire safety equipment is always in working order. This project has been continuously carried out through various activities, including emergency response training, evacuation drills under simulated situations, basic fire-fighting exercises and how to survive from disasters like earthquakes, volcano eruptions and tsunamis. The project equips students with knowledge and alertness as well as the ability to survive. Participating in this year's project were students from five schools: Wat Tham Mongkhon School, Wat Saphan School, Roong Ruang U-patam School, Wat Bangna Nai School and Wat Bangna Nok School.

The Company also organized training for condominium dwellers-its latest target group that has just emerged after the BTS skytrain route extension. This activity strengthens the relationship between the Company and condominium neighbors. This year, residents as well as representatives from condominium committees and juristic persons from three condominiums, participated in the activity (namely Ua Amorn Suk, The Room 64, and Ideo Mix on Sukhumvit Road).

## 3. Sports

### 3.1 The Eighth Bangchak Youth Futsal Tournament Project

The Company organized the annual Bangchak Youth Futsal Tournament, in its Eighth year, to give youths a platform for developing sporting skills; promote physical strength, discipline and sportsmanship; deter youths from using drugs and allow a sharing of experiences when they compete with other schools. It also organized a team cheering competition to allow youths to creatively express themselves. This event was participated in by 29 schools from various districts of Bangkok Metropolis.



Waen Kaeo Project



Health Check up for Community



One Family Project, Year 18

### 3.2 Bangchak Youth Sports Camp

The Company, together with the Royal Thai Navy Department of Welfare, organized the Bangchak Youth Sports Camp to teach seven sports to encourage youths around the refinery to spend their school breaks wisely; promote physical, mental, and emotional health and deter them from drugs and broaden their non-classroom experience. The project also enhances sporting and togetherness spirit among community children.

## 4. Quality of Life

### 4.1 Waen Kaeo Project for Children in Schools Surrounding Bangchak Refinery

The Company has cooperated with the Electricity Generating Authority of Thailand in providing the Waen Kaeo project unit to measure eyesight and fix eyeglasses for 600 residents of the local community, now running in its sixth consecutive year. This is part of its effort to improve life for those with poor vision, thus increasing their learning ability.

### 4.2 Health Check-up for Community

Bangchak realizes the need to take good care of people's health; it organized a mobile unit to provide health and dental check-ups for these residents. The mobile unit's service also covers blood checks, bone density checks, chest x-rays and consultation with doctors. Over 420 people received the service, cooperatively provided by a medical team from Krung Siam St. Carlos Hospital.

### 4.3 One Family Project, Year 18

The Company promotes family activities with a focus on provision of knowledge and understanding of physical and emotional wellbeing. It emphasizes hands-on learning, in which experts and the Company staff provide knowledge in such activities as Bangchak Yoga, Power of Massage, Health Food, Keep Dharma in Your Heart, Dharma in the Garden and "Do It Yourself" activity-made up of many smaller programs like plastic bottle recycling, re-do and re-use (painting on used t-shirts) and handmade books.



Sustainable Waste Classification,  
Bang Nam Phueng, Samut Prakan



Sapling Planting  
Phu ling Reforestation Project

## 5. The Environment

### 5.1 Sustainable Waste Classification (Sorting), Aiming for Waste-Free Tambon at Bang Nam Phueng, Samut Prakan

In collaboration with Bang Nam Phueng Tambon Administrative Organization, the Company carried out a waste management project for the tambon to become waste-free. The project provides equipment and training conducted by community experts on sorting waste, making fertilizer and effective-microorganism liquids to reduce the need to buy fertilizer while lowering risks from chemical substances. During the flood crisis this year, villagers learned to collect “EM liquids” from households to make EM balls and distributed them to flood victims for use in cleaning flood waters. EM balls were also put on sale at Bang Nam Phueng market to earn income for the community. So far, 3,200 people in 800 households have learned to understand the need to take care of the environment and are committed to keeping their communities clean. Such action is regarded as a tribute to HM the King on his 84<sup>th</sup> birthday anniversary.

In addition, a workshop was provided for the Bee Power Save the World youth group at Ruam Tawan Center, Amphoe Mueang, Kanchana Buri, to extend their knowledge about the environment, which is useful for waste management, both in the community and at the community’s floating market. The acquired knowledge also enabled youths to manage the ecology of the community’s forest as well as the life-cycles of goods and services. It is hoped that these children will become a driving force in strengthening the community’s environmental conservation efforts.

### 5.2 Sapling Planting, Phu Long Reforestation and Thot Pha Pa, Raksa Ton Nam (Monk Robe Offering, Keeping Water Source) Projects

Convinced of the inter-relationship among all lives and the environment, the Company recognizes the need to take care of the environment (forests in particular), which makes living things’ existence sustainable. It values activities and work procedures that conserve nature and the environment by cooperating with the Phu Long Reforestation Project of



Public Park in Honor of HM King on his 84<sup>th</sup> Birthday Anniversary



Mobile Communities Project



Bangchak Summer Camp Project

Sukhato Temple and Mahawan Temple, Chaiyaphum, in conserving the Lam Pathao watershed (Phu Long), storing and reforesting the area. In this sixth year, six schools from the refinery's surrounding communities and two local schools joined the program and produced 20,000 saplings each year (covering roughly 50 rai) to teach children the importance of conserving forests and engage them in the forest conservation effort. In addition, students joined the Company staff in taking the saplings to Phu Long Forest and offering robes to monks to raise funds to monitor the Phu Long Forest area and Mahawan Forest Temple in Chaiyaphum, where two revered monks (Kham Khian Suwanno and Paisarn Wisalo) are the abbots.

### 5.3 Mobile Families: Sapling Planting, Phu Long Reforestation, Chaiyaphum, Year 2

The Company and its neighbors participated in a Mobile Families activity entitled "Sapling Planting, Phu Long Reforestation, Chaiyaphum" as an extension of the Sapling Planting project to restore the forest area (the origin of Lam Pathao River) for wildlife and the nearby community. This time, more than 13 rai was reforested.

### 5.4 Public Park in Honor of HM the King on his 84th Birthday Anniversary

In collaboration with the Ministry of Defence, the Company organized a planting activity in the "Public Park in Honor of HM the King on his 84th Birthday Anniversary" in the housing compound of the Secretariat Department, Ministry of Defence. The Company staff and military officers residing there jointly created more green areas on World Environment Day by planting over 500 trees. A friendship sports competition was also held to nurture the relationship between both parties.

## 6. Community Relations and Cultural Conservation

### 6.1 Mobile Communities Project

This project is in its third consecutive year. The Company this year took 80 elderly people living around the refinery to pay homage to Buddhist relics in Suphan Buri on Songkran Day (Traditional Thai New Year's Day) and visit the century-old Sam Chuk Market.



Community Relations Project



Khrob Khrua Bai Mai Bulletin



Volunteers took Blind children to do good deeds.

## 6.2 Bangchak Summer Camp Project

Organized annually during the summer school break, this project engaged more than 80 schoolchildren from communities around Bangchak refinery in fun activities that provided knowledge and useful skills, such as arts and crafts, walk rally to reduce global warming, cooking, vegetable planting and a visit to Khao Kheo open zoo. The Company staff served as instructors and took care of the children.

## 6.3 Supporting local communities and Thai traditional values Project

Valuing local communities and Thai traditional values, the Company encourages staff to visit communities on special occasions, such as New Year's Day, Songkran Day and Mother's Day.

## 6.4 Ban Dontri Thai Music Teacher Project

Bangchak staff, together with Thai musical instrument teachers, taught music to interested youths to lay a foundation for the love of Thai musical instruments and to encourage this traditional art to be carried forward by younger generations. The classes were held every Tuesday and Thursday between 16:00 and 18:00 hours. The project started at the community in front of Bangchak School and is still ongoing to particularly grow Thai traditional music talents among students in the first batch, who are now able to pass on their knowledge to newcomers from nearby communities.

## 6.5 Khrob Khrua Bai Mai Bulletin and Rop Rua Bangchak Newsletter

The Company produces Khrob Khrua Bai Mai bulletins and Rop Rua Bangchak newsletters to pass along assorted information. This year, the bulletin focused upon the environment and disasters to alert people and educate them on the changing nature as a result of global warming in an effort to encourage people to mitigate impacts. Also highlighted in the bulletin as an honor to HM the King on his 7th cycle birthday was HM the King's genius in water management and many other projects under his initiatives for the wellbeing of Thais. The bimonthly periodical has 4,500 subscribers, and information appearing in the bulletin is posted on Facebook.



2011 Thailand Go Green Competition under the Topic of “Solar Energy for Future”

## 6.6 Taking Kids to Movies

In supporting non-academic learning for those around its refinery, the Company organized a “Taking Kids to Movies” activity for 70 children and parents from six neighboring communities at a special screening of “King Naresuan–Episode 3”, a film that depicts a part of the Thai history to cultivate patriotic and unity spirit in the children.

## 6.7 Drinking Water for Communities

During the flooding in Bangkok, causing problems to the quality of piped water and scarcity of drinking water, the Company donated 24,000 bottles of drinking water to six communities surrounding the refinery and Ua-Amornsuk Condominium.

## 6.8 Networking of Volunteering

After carrying out the One Family project through Khrop Khrua Bai Mai bulletins and organizing activities for the physical and mental wellbeing of Bangchak’s neighbors for many successive years, the Company has commanded a network of volunteers-some of whom have become teachers who shared knowledge with other members. This year, members of the One Family project and those of the Company expanded their network to others to help society and provide support to organizations that take care of the less-privileged. Volunteers took blind children to Wat Plai Na in Pathum Thani, where both the volunteers and the children learned dharma and jointly cleaned the temple area. They also knitted crochet caps and donated them to Priest Hospital for further distribution to temples in the North and Northeast to help monks fight the cold. Their knitting work was carried on and more crochet caps were donated to more people-an activity that brought joy to each giver and receiver.

## 7. Economy

The Company continued to provide income to the communities around its refinery by ordering food, sweets and drinks for its assorted activities and hired local people to deliver Khrop Khrua Bai Mai bulletins to the refinery’s neighboring residents. In addition, the Company gave special hiring considerations to those interested, qualified community members at both the Company and Bangchak service stations.



BCP Talent Internship Program



BCP Open House



Purchase of Used Cooking Oil for Biodiesel Production Project

## Remote Society:

### 1. Education

#### 1.1 2011 Thailand Go Green Competition under the Topic of “Solar Energy for Future”

This continued program identifies a youth hero in renewable energy, who will win a trophy from HRH Princess Maha Chakri Sirindhorn and a scholarship worth over Baht 2 million together with an educational trip to China. The project encourages students to find out information about solar energy and its applications as an alternative energy in our daily life, both at present and in the future. The project communicator using the Nong Sunny Bangchak pseudonym passed on his knowledge to schools and communities through activities like a drawing to encourage the use of solar power and an exhibition to publicize solar power innovation at schools. Cumulative information through the past four years will drive “Thailand Go Green”. Over 2.5 million students have learned about alternative energy, and the figure is believed to go up to 3.4 million from more than 2,500 schools in 2011.

#### 1.2 BCP Talent Internship Program

The Company organizes a summer training program every year to provide an opportunity for students to gain real-life experience. The project prepares students to take social responsibility while building a network among students from various schools. This year, 57 students out of over 500 applicants won acceptance to the training.

#### 1.3 BCP Open House

The Company welcomes students and interested persons to observe its production processes at the refinery, where a briefing is given by experienced engineers. Each year, the Company welcomes about 200 visitors.

#### 1.4 Purchase of Used Cooking Oil for Biodiesel Production Project

The Company has been proactively running a continuous campaign to buy used cooking oil for biodiesel production. Volunteer BCP staff take turns canvassing fresh markets to give out

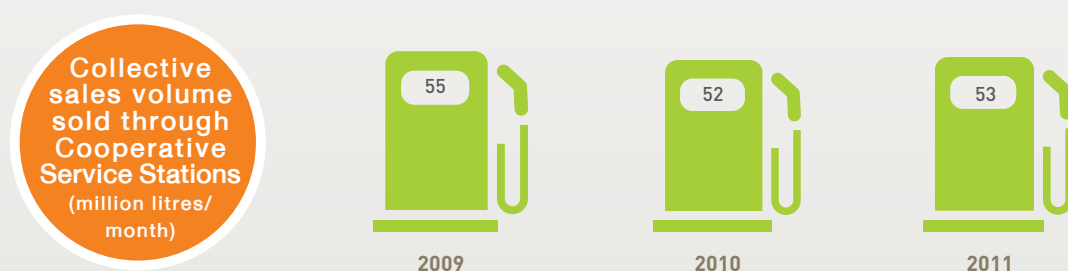


information and buy used cooking oil on Saturdays and Sundays. The campaign, now in its fifth year, raises awareness among vendors and the general public of the need to conserve the environment and take care of one's health by selling used cooking oil to the Company to turn it into biodiesel instead of throwing them in to the river, in order to reduce reusing used cooking oil.

## 2. Economy

### 2.1 Cooperative Service Stations

Conceived from the 'oil for rice' idea of sharing basic necessities, the Cooperative Service Station Project started at Si Prachan Cooperatives, Amphoe Si Prachan, Suphan Buri. Today, the Company donates rice in its Lunch Project at schools surrounding the refinery, while cooperatives sell low-priced oil to its members (a discount of Baht 0.5/litre). Built on the mutual trust between the Company and the community, the collaboration has now blossomed into a modern business with the opening of a standard cooperative service station and, later, a community service station. This business model is based on a mutual support culture that will strengthen community ties while forming a network of Thai-owned businesses. Besides economic gains, the project builds a strong community, in which people's potential is developed to help them stand on their own feet. There are so far more than 500 cooperative service stations, creating an overall income and a cash flow of more than Baht 3,500 million/year for participating communities. These stations registered a collective sales volume of over 53 million litres/month, equivalent to 25% of the total volume sold through Bangchak stations across the country.





Disaster Preparedness  
Guidebook for Thais



Survival Bags and Drinking Water  
Distribution



Nong Bangchak  
Sharing Project

## 2.2 Promotion of Community Products

Bangchak runs sales promotional campaigns at its retail stations differently from other oil brands by continuously promoting community products from the provinces to promote local jobs, while communities may become more self-reliant with the sufficiency economy. This year, 500,000 packets of rice cracker topped with black sesame from the Kham Sakae Saeng agricultural housewife group and the Seng Si Thong Community Enterprise in Nakhon Ratchasima, together with 600,000 packets of Doi Kham dried mango from Chiang Mai, Chiang Rai and Sakon Nakhon-worth altogether almost 6 million baht-generated considerable income for the communities.

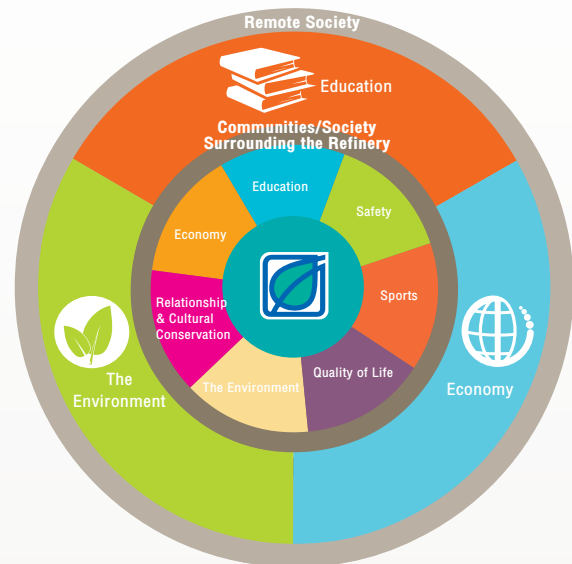
## 3. The Environment

Since the beginning of the year, Thailand has encountered a series of natural disasters-especially floods in northern provinces, the central plains, and southern provinces-which lasted long enough to harm lives and properties, with consequent economic, social and environmental impacts. The Company has been dealing with ranging from fostering pre-disaster awareness, providing relief during the disaster to arranging rehabilitation after the disaster, as detailed below:

1. **Preparedness:** Bangchak values the provision of knowledge and useful information for the general public to prepare themselves for disasters. The public will have a proper understanding of climate change, as well as global warming and their consequences, especially floods, which are now very relevant to Thailand. This year, the Company organized a seminar on "Thailand's Natural Disasters, World's Natural Disasters: Our State of Unreadiness", where it became clear that most Thais are not alert for disasters and possess little information. As a result, the Company produced 400,000 free copies of handbooks for Thai people to deal with disasters, written in both Thai and English, for distribution to interested people. Information appearing in the handbook is also uploaded onto Facebook and the Company website.

2. **During the Disaster:** Thanks to excellent cooperation from staff, Bangchak managed to get through the flood crisis, which lasted from August to November. To help victims, the Company distributed 20,000 survival kits, sent mobile service stations to disaster-hit areas and sold petrol at one baht/litre cheaper and, in cooperation with the Metropolitan Water Works Authority, transported water into disaster-hit areas to provide clean water for people's consumption.
3. **Rehabilitation:** Bangchak initiated the 'Nong Bangchak Pan Namjai' project (Youth's Sharing Project), in which it welcomed employees, volunteers and people who were between jobs as a result of flood-induced unemployment to restore flooded houses and public places, such as schools, in 10 Bangkok districts.

### Communities Surrounding the Refinery



*“Bangchak's environmental forte together with community knowledge and strengths: perfect combination driving community capability to “no-waste community prototype””*

Bang Nam Phueng, a tiny community, possesses tremendous social capital.

As for the environment, the tambon administrative organization (TAO) and local residents joined Bangchak Petroleum under the “Sustainable Garbage Classification for a No-waste Community Project” by supplying tools and creatively building on knowledge for human and environmental development for the community. This is achieved by integrating Bangchak's environmental forte with local wisdom in undertaking common activities. Our aim is to develop immunity while solving the community's fundamental problems of garbage management, thus leading to an approach where the community may achieve sustainable development. This sparks collaboration from all quarters in forging volunteer minds among the community to work together for the stewardship of the environment and society to make ours a nicer place to live.

Despite rather drastic changes to social and environmental conditions, Bang Nam Phueng residents have managed to live their lives admirably.

#### Mr. Samnao Rasamithat

Chairman, Bang Nam Phueng TAO  
Amphoe Phra Pra Daeng, Samut Prakan



# Awards of 2011



Board of the Year Awards - Hall of Fame 2010/11



SET Award of Honor



Recognition Awards 2011 "THE BEST OF ASIA"

The year 2011 saw continual recognition of the Bangchak Petroleum Plc, by the public as well as various entities, as a company with transparent corporate governance and management with efficiency, social responsibility, and environmental awareness.

- **Board of the Year Awards - Hall of Fame 2010/11** for being a Board with commitment to ensuring good corporate governance practices and the Board of the Year Award for Exemplary Practices for three consecutive years in the Board of the Year Awards 2010/11, organized by the Thai Institute of Directors (IOD) in conjunction with the Stock Exchange of Thailand (SET), Board of Trade of Thailand, Federation of Thai Industries (FTI), The Thai Bankers' Association (TBA), Thai Listed Companies Association (TLCA), and the Federation of Thai Capital Market Organizations (FETCO).
- **SET Awards of Honor**, presented at the SET Awards 2011 event, organized by the Stock Exchange of Thailand (SET) and Finance and Banking Magazine:
  - **Top Corporate Governance Report Award**, in its sixth straight year. This award honors listed companies with outstanding reports on compliance with corporate governance
  - **Best Corporate Social Responsibilities Award**, in its fifth straight year. This award honors 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 2011 "THE BEST OF ASIA"**, organized by Corporate Governance Asia Magazine:
  - **Asian Corporate Director Recognition Award 2011**, this award honors Dr. Anusorn Sangnimnuan 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 2011**, this award is given in recognition to the Company's continuing commitment to the development of Corporate Governance in the region.
- **ASEAN Honorary Fellow Award**, presented at Conference of 19<sup>th</sup> ASEAN Federation of Engineering Organization (CAFEO 29), Brunei. This award honors Dr. Anusorn Sangnimnuan with his contributions and efforts in engineering development.
- **The assessment outcome of a survey on corporate governance reports of listed companies of 2011**, 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 2011 project**, given by the Thai Investors Association.



ASEAN Honorary Fellow Award



The Crown Standard



Trusted Brands Awards 2011

- **NACC Integrity Awards 2011 (Honorable Mention Award)** given by the Office of the National Anti-Corruption Commission. This award is given in recognition to the Company's promotional activities for corporate governance, righteousness, and transparency.
- **The Certificate of Green Industry (Level 3)**, given by Ministry of Industry, which certified that the Company has a systematic environmental management, including the monitoring and continuing development.
- **The Crown Standard**, for the Company's solar power plant project (Sunny Bangchak) in operating sustainable development and environment protection project, creating stakeholders' participation procedure, and also supporting activities on society, culture and sufficiency economy philosophy, given by Thailand Greenhouse Gas Management Organization.
- **A plaque and Certificate of CSR-DIW Continuous Award**, as the business with social responsibility, awarded by Management System Certification Institute (Thailand) and the Department of Industrial Works.
- **The Certificate of Green house Gas Reduction for the Company's buildings for using and maintaining buildings and facilities with low emissions of greenhouse gas**, given by Thailand Business Council for Sustainable Development, Thailand Greenhouse Gas Management Organization and Thailand Environment Institute.
- **The Certificate for Green Meeting** in recognition of meetings, seminars, training sessions and businesses conducive to natural balance and sustainable development through cost effective resource application and mitigation of environmental impacts, given by Thailand Greenhouse Gas Management organization and Thailand Environment Institute.
- **The Best Oil and Gas Innovation in Refining Technology Award 2011**, given by opinion surveys among the readers of the World Finance Magazine.
- **The Quality and Safety Service Stations Award** from the Department of Energy Business, designed to raise the quality of service stations nationwide. 128 Bangchak stations were awarded with 53 gold (five-star) medals, 42 silver (four-star) medals, and 33 bronze (three-star) medals.
- **Trusted Brands Awards 2011**, given by votes from the readers of Reader's Digest Magazine, illustrating consumers' confidence in the Company brand when deciding to buy goods and services.
- **Marketing Excellence Awards 2011 (second place)**, for the Company's and outstanding marketing campaign in green marketing or environmentally friendly marketing, given by MCOT FM 100.5 News Network.

# GRI Content Index – UN Global Compact

Table indentifying the location of the Standard Disclosures in the report

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Profile Disclosure	Description	SR Page Number	UNGC Principles	Others reference
4.3	For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members.	11, 21		
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	EC2 Financial implications and other risks and opportunities for the organization's activities due to climate change.	17, 26 42-43	Principle 7	
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Indirect Economic Impacts	EC8 Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	84-85	Principle 9	
	EC9 Understanding and describing significant indirect economic impacts, Including the extent of impacts.	25-27		

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Water	EN8	Total water withdrawal by source.	36		
	EN9	Water sources significantly affected by withdrawal of water.	39	Principle 9	
	EN10	Percentage and total volume of water recycled and reused.	36	Principle 7-9	
Biodiversity	EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	44	Principle 7-9	
	EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas and areas of high biodiversity value outside protected areas.	44	Principle 7-9	
	EN13	Habitats protected or restored.	44	Principle 7-9	
	EN14	Strategies, current actions, and future plans for managing impacts on biodiversity.	39, 44	Principle 7-9	
	EN15	Number of IUCN Red List species and national conservation List species with habitats in areas affected by operations, by level of extinction risk.	44-45	Principle 7-9	
Emissions, Effluents, And Waste	EN16	Total direct and indirect greenhouse gas emission by weight.	37	Principle 7-9	
	EN17	Other relevant indirect greenhouse gas emission by weight.	37, 41	Principle 7-9	
	EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved.	35, 41-42	Principle 7-9	
	EN19	Emissions of ozone-depleting substances by weight.	NR	Principle 7-9	
	EN20	NO, SO, and other significant air emissions by type and weight.	38	Principle 7-9	
	EN21	Total water discharge by quality and destination.	39	Principle 7-9	
	EN22	Total weight of waste by type and disposal method.	40	Principle 7-9	
	EN23	Total number and volume of significant spills.	40	Principle 7-9	
	EN24	Weight of transported, imported, exported, or treated waste Deemed hazardous under the terms of Basel Convention Annex I, II, III, and VII, and percentage of transported waste shipped internationally.	41	Principle 7-9	
	EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff	39, 44	Principle 7-9	
Products & Services	EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	34-42, 46-48, 52	Principle 7-9	
	EN27	Percentage of products sold and their packaging materials that are reclaimed by category.	41	Principle 7-9	
Compliance	EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	41	Principle 7-9	
Transport	EN29	Significant environment impacts of transporting products and other goods and materials used for the organization's operations, and transporting member of the workforce.	41	Principle 7-9	
Overall	EN30	Total environmental protection expenditures and investments by type.	42-43	Principle 7-9	

## Social Disclosure : Labor Practices and Decent Work

		Performance Indicator/Description	SR Page Number	UNGC Principles	Others reference
Employment	Management Approach LA (DMA LA) : Employment, Labor/Management Relations, Occupational healthy and Safety, Training and Education, Diversity and Equal Opportunity		53-54, 56	Principle 3-6	
			58-60	Principle 3-6	
	LA1	Total workforce by employment type, employment contract, and region.	53	Principle 3-6	
	LA2	Total number and rate of employee turnover by age group, gender, and region.	54	Principle 3-6	
	LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.	55	Principle 3-6	
Labor/Management Relations	LA4	Percentage of employees covered by collective bargaining agreements.	60, 62	Principle 3-6	
	LA5	Minimum notice period(s) regarding operational change, including whether it is specified in collective agreements.	55, 62	Principle 3-6	
Occupational Healthy and Safety	LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	62, 65-68	Principle 3-6	
	LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region.	68-69	Principle 3-6	
	LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community member regarding serious diseases.	55-58, 79	Principle 3-6	
	LA9	Health and safety topics covered in formal agreements with trade unions.	55, 65	Principle 3-6	
Training and Education	LA10	Average hours of training per year per employee by employee category.	56-57	Principle 3-6	
	LA11	Programs for skills management and lifelong learning that support The continued employability of employees and assist them in managing career endings.	56-58	Principle 3-6	
	LA12	Percentage of employees receiving regular performance and career development reviews.	55	Principle 3-6	
Diversity and Equal Opportunity	LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity.	53-54	Principle 3-6	
	LA14	Ratio of basic salary men to women by employee category.	55	Principle 3-6	

## Social Disclosure : Human Rights

		Performance Indicator/Description	SR Page Number	UNGC Principles	Others reference
Investment and Procurement Practices	Management Approach HR (DMA HR) : Investment and Procurement Practices, Non – Discrimination, Freedom of Association And Collective Bargaining, Child Labor, Forced and Compulsory, Security Practices, Indigenous Rights		54-56, 59-60, 62-63		
	HR1	Percentage and total number of significant investment agreements that include human right clauses or that have undergone human rights screening.	46, 55	Principle 1-2, 4-6	Policy on CG and Code of Conduct application to all businesses and acquisitions
	HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken.	46	Principle 1-2, 4-6	
	HR3	Total hours of employee training on policies and procedures. Concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	55-56	Principle 1-6	All employees have received training regarding human rights aspects via orientation
Non – Discrimination	HR4	Total number of incidents of discrimination and actions taken.	NR	Principle 1-2, 4-6	No incidents of discrimination in 2011.
Freedom of Association And Collective Bargaining	HR5	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and action taken to support these rights.	60, 62-63	Principle 1-3	
Child Labor	HR6	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor.	46, 55	Principle 1, 2, 4, 5	
Forced and Compulsory	HR7	Operations identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of forced or compulsory labor.	54	Principle 1, 2, 4	
Security Practices	HR8	Percentage of security personnel trained in the organization' policies or procedures concerning aspects of human rights that are relevant to operations.	21, 53, 55-56	Principle 1, 2	
Indigenous Rights	HR9	Total number of incidents of violations involving rights of indigenous people and actions taken.	NR	Principle 1, 2, 4-6	No incidents of violations of violations involving rights of indigenous people was reported in 2011.

## Social Disclosure : Society

		Performance Indicator/Description	SR Page Number	UNGC Principles	Others reference
Community		Management Approach SO (DMA SO) : Community, Corruption, Public Policy, Anti-Competitive, Compliance	7, 73, 21-22 52, 72	Principle 10	
	S01	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.	73-87	-	
Corruption	S02	Percentage and total number of business units analyzed for risks related to corruption.	21-23	Principle 10	
	S03	Percentage of employees trained in organization's anti-corruption policies and procedures.	21	Principle 10	
	S04	Actions taken in response to incidents of corruption.	21-23	Principle 10	
Public Policy	S05	Public policy positions and participation in public policy development and lobbying.	72	Principle 1-10	
	S06	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.	NR	Principle 10	As the BCP code of Conduct – remain strictly political neutrality.
Anti-Competitive	S07	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.	72	Principle 10	
Compliance	S08	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with laws and regulations.	NR		No significant fines.

## Social Disclosure : Product Responsibility

		Performance Indicator/Description	SR Page Number	UNGC Principles	Others reference
Customer Health and Safety		Management Approach PR (DMA PR) : Customer Health and Safety, Product and Service Labeling, Marketing Communications, Customer Privacy, Compliance	48-52		
	PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant product and services categories subject to such procedures.	48-49	Principle 7-9	
	PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.	52	Principle 7-9	
Product and Service Labeling	PR3	Type of product and service information required by procedures, and percentage of significant product and services subject to such Information requirements.	34, 48-52	Principle 7-9	
	PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.	52	Principle 7-9	
	PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	48-52, 88-89	Principle 7-9	
Marketing Communications	PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	48, 52	Principle 7-9	
	PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes.	52	Principle 7-9	
Customer Privacy	PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	52	Principle 7-9	
Compliance	PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the products and services.	52	Principle 7-9	No significant fines.

Remark :

UNGC : United National Global Company

The data is corresponded with GRI G3 Guideline.

The data is partially corresponded with GRI G3 Guideline

NR : Not Relevant

