



CPC Corporation, Taiwan

2012

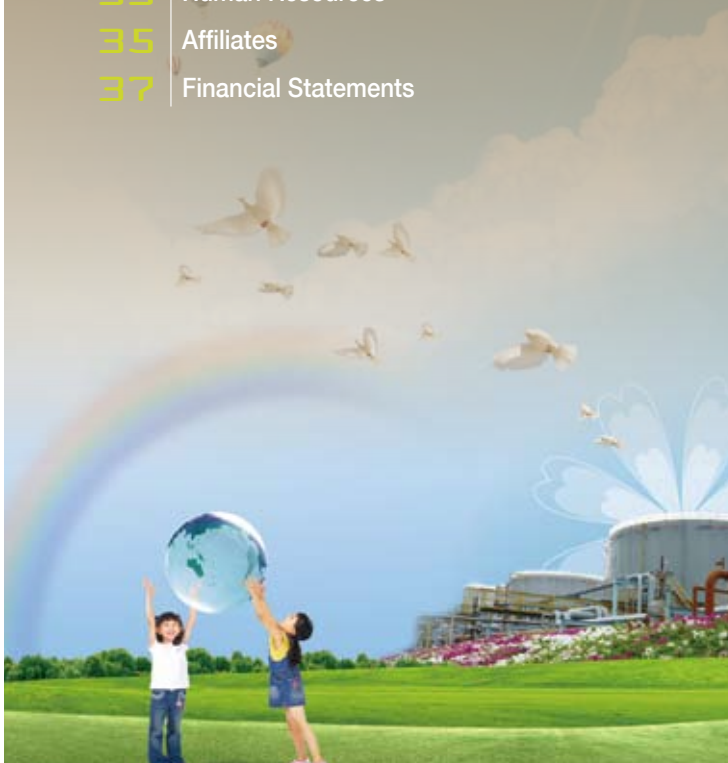
CPC





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## | Message from Chairperson and President |

Thanks to the concerted efforts of our entire staff, the revenues of CPC Corporation reached a historic record of NT\$1.03 trillion in 2011, the centennial year of the Republic of China. This marked the official entry of CPC into the trillion NT dollar club, and we hope that our employees will hold firmly to the spirit of “Feet planted in Taiwan, deployment throughout the Asia-Pacific, eyes on the world” as they continue striving to achieve the goal of NT\$1.5 trillion in revenues at an early date.

The entire world suffered in 2011 from the impact of the political turbulence that the “Jasmine Revolution” brought to Northern Africa and the Middle East, the disastrous Fukushima earthquake and Tsunami that struck Japan, sluggish economic growth in the United States, flooding in Thailand, debt problems in Europe, and instability in Iran. These factors, plus drastic fluctuations in the stock and foreign exchange markets, boosted oil prices to the high level of US\$100 per barrel and raised the cost of procurement for CPC. Despite the improvement in our revenues compared with 2010, CPC worked in line with the government’s efforts to lessen the pressure of rising international oil prices, lighten the burden on our people, and stabilize prices by implementing an oil and gas price-adjustment mitigation mechanism that brought our before-tax losses in 2011 to NT\$38.7 billion and after-tax losses to NT\$32.3 billion. To prevent losses from growing further, creating financial difficulties and rising capital costs that would affect the company’s credit rating and its operations, in addition to striving rigorously to increase income, reduce expenditures, and enhance operating performance, CPC will seek permission from the higher authorities to reduce gradually the amount of petroleum and diesel fuel costs that it absorbs so that our operations can move in the direction of normality.

CPC Corp. won numerous awards for its communication with and service to society in 2011, making this a year of “Brilliant Centennial, Glorious CPC.” In addition to ranking 350th in the world and 5th in Taiwan on the Fortune 500 list, as a single enterprise CPC topped the list as the largest manufacturer in Taiwan; it won a Platinum Award in the Reader’s Digest Trusted Brands for the 11th year in a row, First Place petrol station award in the service category for the 6th year in a row and Total Vote King for the 2nd year in a row from Next magazine, first place in Energy and Resource Integration Benchmark Enterprise awards by the Industrial Development Bureau, Consumers’ Ideal Brand from Management Magazine, and Public Construction Golden Quality Award from the Public Construction Commission. CPC Corp. also topped the list among state-owned enterprises in the “overall service,” “public image,” “social perspective,” and “corporate integrity” categories of the customer satisfaction survey commissioned by the Commission of National Corporations. These honors, won by the endeavours of our staffs, reflect the ongoing affirmation from the government and the public.

In oil and gas exploration, CPC continued cooperating with large international petroleum companies in the acquisition of high-quality overseas exploration blocks. In 2011 we completed three acquisition projects—in Niger, and Prelude and Ichthys in Australia—which will increase our reserves by an estimated 200 million barrels of oil equivalent, and we also acquired six blocks in the United States. We are also actively pursuing opportunities for the cooperative development of overseas blocks in the U.S., Canada, Congo, Iraq, Myanmar, and Indonesia with the aim of boosting our ratio of self-owned energy. Our production reached 6.6 million barrels of crude oil and 810 million cubic meters of natural gas in 2011, and our overseas blocks increased from 18 to 21 in seven countries. The first well in the Chad block discovered oil and gas with an estimated conditional amount of 32 million barrels, and follow-up exploration is now being carried out. In Taiwan, abundant natural gas was discovered in Chuhuangkeng wells No. 145, 146, and 147 in 2010; after piping and other engineering work, production began in early 2012 with a daily capacity of 100,000 cubic meters. In addition, the development of the F Structure gas field off Kaohsiung is being carried out and production is expected to begin in 2015.



Both production and sale of petroleum products declined in comparison with 2010 because of an increase in the number of unplanned refinery stoppages and delayed restarts following major repairs. Facilities that will begin producing in 2012 include a residue fluidized catalytic cracking (RFCC) plant with a daily capacity of 80,000 barrels, a gasoline HDS plant with a daily capacity of 48,000 barrels, and a general 6,500-ton product carrier, all of which will boost production capacity by an estimated 3 million kiloliters of major oil products that year. With the increase in production and further development of the company's operations, refining units should switch their production strategy to a trade orientation, and in line with exports of petroleum products, turn out customized products to increase refining efficiency. In the field of domestic sales, we will continue to promote quality services and carry out construction and maintenance of petrol-station hardware, keep up the attractive appearance and cleanliness of petrol stations, and provide diversified services to attract customers and enhance the company's image.

In line with the government's policy of "quantity expansion overseas, quality enhancement at home," CPC Corp. is cooperating with large domestic and foreign petrochemical product manufacturers to carry out the appropriate utilization of previously undeveloped and low-value materials (such as C5, C9, and bitumen) in the manufacture of high-value products. We have signed strategic alliances with Mitsui Chemicals and Mitsubishi Chemical of Japan, along with 31 strategic alliances for technical cooperation 15 domestic industrial, academic, and research organizations (including companies) in the field of high-value petrochemical products and green energy industries. We have also set up a green energy laboratory and a new materials trial production and certification center, and have established a petrochemical products division within our Refining and Manufacturing Research Institute.

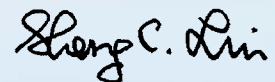
Because of the continuous growth in sales, our natural gas imports reached 198 shiploads in 2011 and the figure is expected to reach 211 shiploads in 2012. The Taichung LNG Receiving Terminal alone broke the 100-dockings mark on Oct. 8, 2011. To meet the constantly growing demand by the Taiwan Power Co., stabilize domestic LNG supplies, and reduce greenhouse gas emissions, CPC Corp. has settled long-term procurement amounts with Qatar and with Prelude and Ichthys in Australia.

In our reinvestment in other enterprises, we have moved into the field of high-value-added petrochemicals by setting up the Taiwan Yiu Petrochemical Materials Technology Co. We have also, in response to the growth of imports and exports of petrochemical raw materials and products and the need to transport liquefied petroleum gas and liquefied natural gas, we have established the Global Energy Maritime Co. to operate a fleet of new-generation tankers.

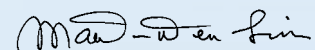
Despite the harsh external environment, CPC Corp. will continue coordinating with government policy and vigorously implementing its corporate governance system while making full use of the expertise of our directors and supervisors. We may not be able to achieve our goals overnight; but, with the efforts of all our employees, there is no peak that we cannot climb.

We extend our sincere thanks to the domestic and overseas customers who have afforded us their long-term care and support, and to the cooperating partners who have favored us with their help throughout our 65 years of growth and transformation. In the future we will continue operating at a stable pace as we advance toward the vision of becoming "a competitive international energy conglomerate that encompasses exploration, oil and gas, petrochemicals, and high technology." It is our earnest hope that our original partners will stay with us and new partners will join our ranks to form our strongest support in the years to come.

Chairperson



President



# Excellence

## Excellence

Consolidating the team spirit through passion, making resolute the fervor for duty through professionalism, a steadfast & well-built team is to concentrate its ardent energy by grit and make the dreams illuminate!



# | Sustainable Development |

Established in Shanghai on June 1st, 1946, Chinese Petroleum Corp. (CPC) was funded and operated by the government under the direction of the Resources Committee (the forerunner of the State-Owned Enterprise Commission, Ministry of Economic Affairs). In 1949 CPC followed the government in relocating to Taiwan, setting up headquarters in Taipei under the direction of the Ministry of Economic Affairs. With service facilities covering the whole nation, its operations today include the import, exploration, development, refining, transport, marketing, and sale of petroleum and natural gas, as well as the production and supply of petrochemicals.

At its 550th meeting in February 2007 the Board of Directors approved a change in the name of this company from Chinese Petroleum Corporation to CPC Corporation, Taiwan, retaining its "Chinese Petroleum" name in Chinese, its logo, and its "CPC" name in English. The objectives of this change were to expand the firm's international business, reinforce the principle of keeping roots in Taiwan, and extending the precious reputation that our company has built up over the decades. CPC's total capital stands at NT\$130.1 billion, and its total revenues in 2011 amounted to NT\$1.03 trillion.

During the more than 60 years since its establishment, CPC has been fully able to fulfill its mission of providing a stable supply of oil products and stimulating the development of petrochemical industries, enabling Taiwan's economy to achieve soaring growth and the island's people to enjoy prosperity, and for this accomplishment our company has won the approbation of all sectors of society. Faced with the impact of the general opening of Taiwan's market for petroleum products in recent years, CPC has moved to consolidate its operating advantages and deeply implant its competitive capabilities not only by engaging in organizational re-engineering and personnel downsizing but also by carrying out production-cost reductions and pursuing maximum benefit in its advancement toward corporatized operations. At the same time it has vigorously sought out opportunities to cooperate with major international oil companies in the development of upstream exploration, petrochemical development, and marketing channels with the aim of expanding its business scope and growing in the international market. CPC hopes, in this way, to become a safe, clean, and competitive international energy company that advances toward sustainable operation and continues to provide the people of Taiwan with high-efficiency, high-quality energy products.

As a government company, even as it pursues profit CPC does not neglect its corporate social responsibility. In addition to continuously enhancing the quality of petroleum products, bringing in and promoting the use of liquefied natural gas (LNG) as a source of clean energy, and striving for environmental protection over the years, our company has, without regard to cost, also provided the fuel needed by the military and the people of remote areas and offshore islands. At the same time it has continuously carried out social-care activities, promoting understanding of the petrochemical industry among the public, educating the people in the safe use of oil and gas, holding safety and health seminars, and guiding enterprises in strengthening the culture of safety. Our company also supports disadvantaged groups, participates in social-benefit activities, sponsors cultural activities, and provides incentives for elite personnel; in addition, it assists with construction around plants and oil exploration areas, works for ecological conservation, practices care for local cultures, promotes environmental education, and stimulates local advancement. These activities conform to the general 21st-century trend toward sustainable operation, and to the progress of corporate operations toward an emphasis on economic growth, environmental protection, and social benefit as well. Even as our company pursues commercial benefit, it also strives for social justice, the benefit of disadvantaged groups, safety and health, community development, and environmental protection.

To go along with global trends and follow the international movement toward environmental protection, CPC initiated the following sustainable development policies at the end of 2003 to promote the spirit of sustainable development in its energy industry operations:

- Conformity with government regulations and international agreements
- Clean production and environmental protection
- Efficient utilization of resources to conserve water and energy
- Emphasis on social responsibility and expansion of the scope of services
- Establishment of key environmental indicators and provision of information transparency
- Active commitment to research and development for the creation of new areas of operation

CPC joined the World Business Council for Sustainable Development (WBCSD) in 2006 and has set up a Committee for the Promotion of Sustainable Development. The Committee is divided into four subcommittees: Environment & Conservation, Social Consciousness, Policy and Research & Development, and Environmental Accounting & Information, all of which adopt appropriate strategies and formulate action plans to attain the ultimate goals of building a reputable corporate image and advancing toward sustainability. CPC also published "Sustainable Development Reports" in 2007, 2009 and 2011 to fulfill its corporate social responsibility in regard to the disclosure of information.

At a time when global petroleum resources are gradually being exhausted, CPC will faithfully perform its role as the main domestic supplier of clean energy and will strive to create a win-win-win situation for environmental protection, economic development, and social responsibility.



# | Board & Corporate Officers |

## Board of Directors

Chairperson of the Board Sheng-Chung Lin

Standing Directors  
Sheng-Chung Lin  
Maw-Wen Lin  
Chi-Yuan Liang

Directors  
Chia-Shen Chen  
Ssu-Li Chang  
Cheng-Liang Chen  
Tung-Yi Lee  
Ping-Cheng Li  
Tiao-Tsan Lai  
Yaw-Chung Liao  
Chin-Lai Huang  
Jyh-Wei Sun  
Kwung-Shing Wu

Supervisors  
Ter-Shing Chen  
Lien-Hwa Hsiang  
Neng-Chuan Chou



From

Sheng-Chung Lin, Maw-Wen Lin, J.S. Yang, L.W. Chen, Ray-Chung Chang, Shane S.I. Lin, Ming-Huai Chen, Jong-Chang Wu, Ching-Yang Wu, J.Y. Chen, Deng-Hsiang Hwang, C.H. Liu.

## Corporate Officers

President

Maw-Wen Lin

Vice Presidents

J. S. Yang  
L.W. Chen  
Ray-Chung Chang  
Shane S. I. Lin  
Ming-Huei Chen

CEO, Exploration & Production Business Division

Jong-Chang Wu

CEO, Refining Business Division

Ching-Yang Wu

CEO, Petrochemical Business Division

Deng-Hsiang Hwang

CEO, Marketing Business Division

C.H. Liu

CEO, Natural Gas Business Division

J.Y. Chen

CEO, Lubricants Business Division

Tien-Chieh Lee

CEO, LPG Business Division

Jung-Lieh Lin

CEO, Solvent & Chemical Business Division

Jimmy Chang

Director, Refining & Manufacturing Research Institute

Jeng-Cheng Lee (Acting), Y.S. Ho (Acting)

Director, Exploration & Development Research Institute

Shin-Tai Hu

Director, LNG Project Division

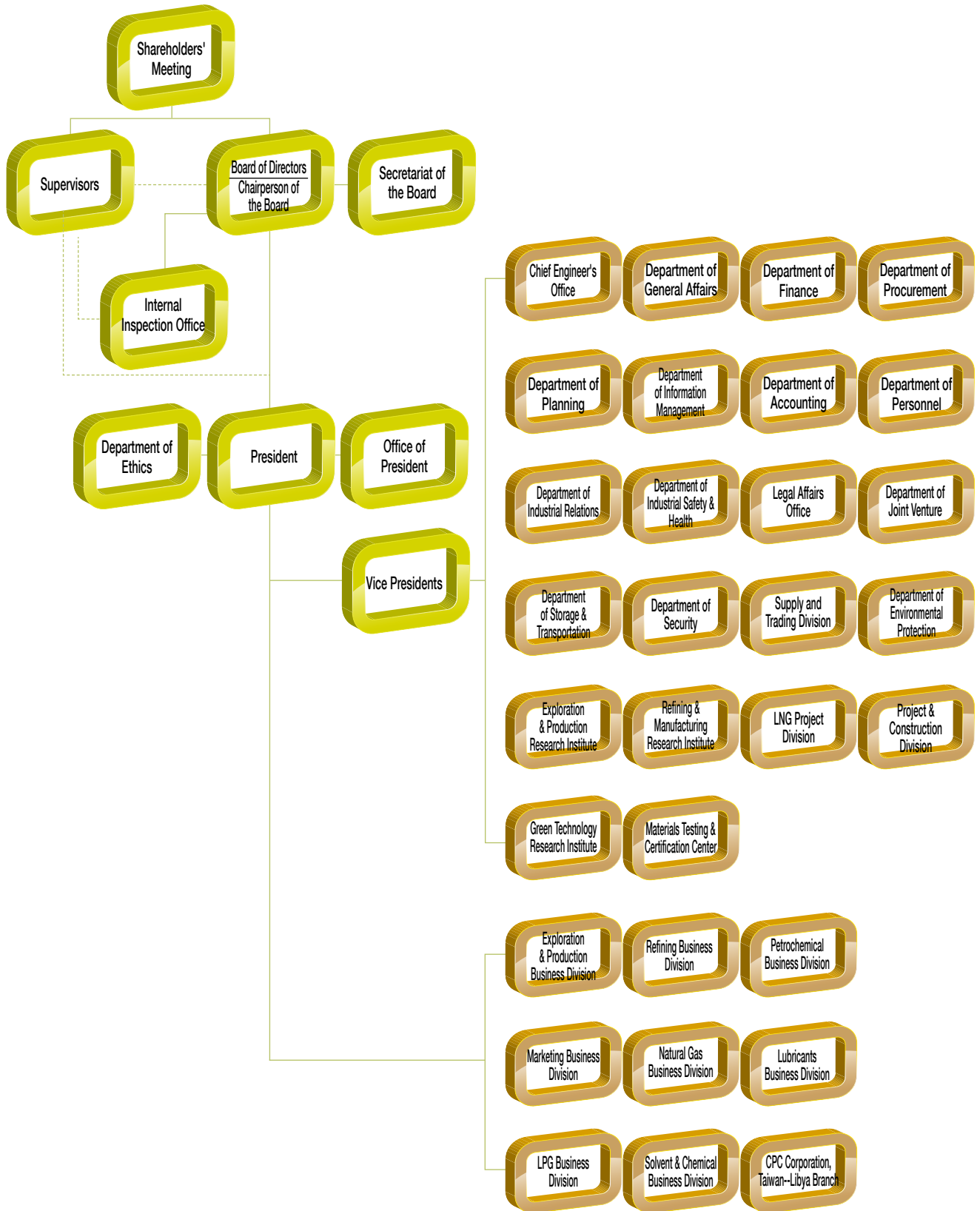
W. H. Lin (Acting)

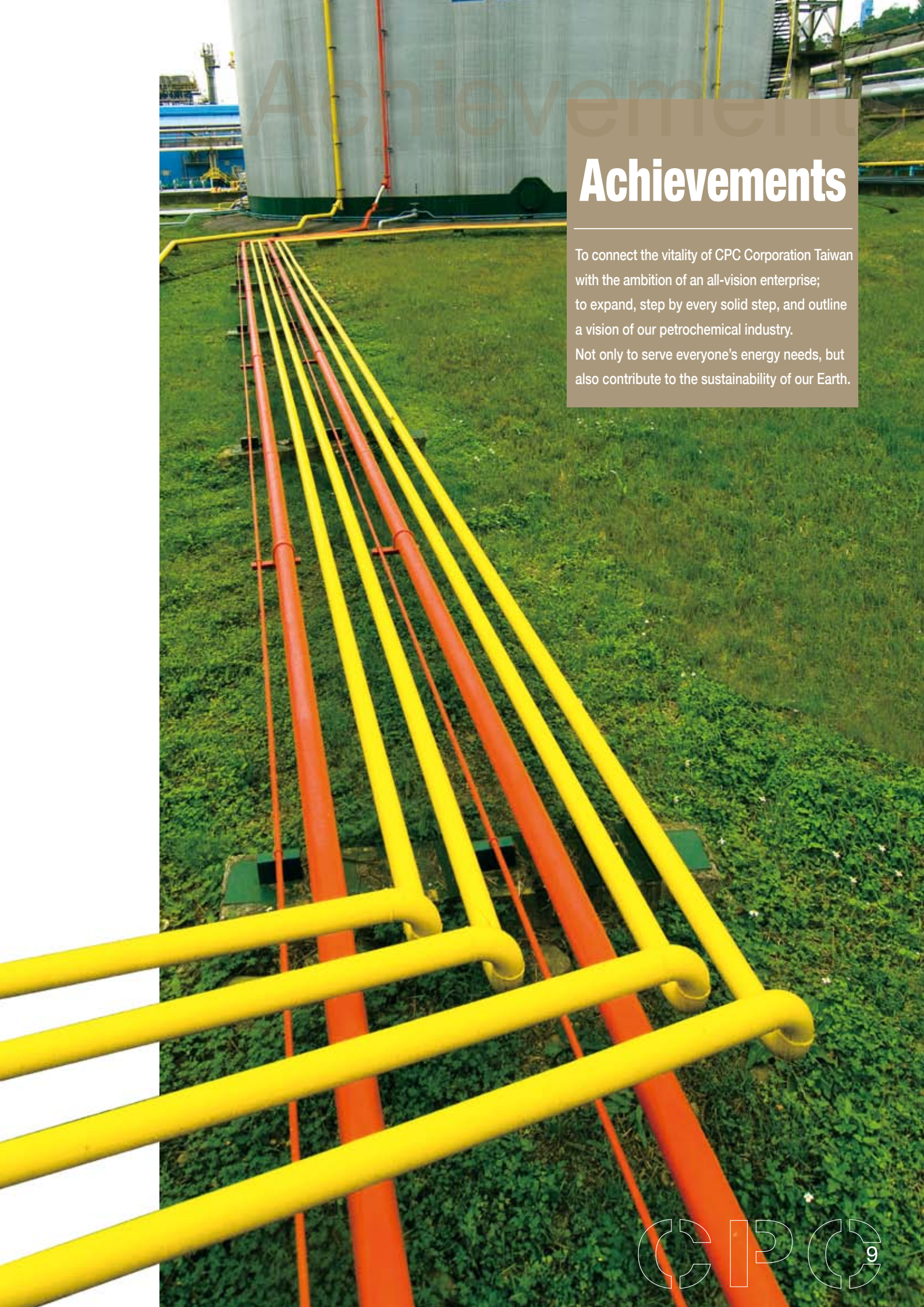
Director, Project & Construction Division

Hsu-Ching Wu



# | Organization Chart |





Achievements

# Achievements

To connect the vitality of CPC Corporation Taiwan with the ambition of an all-vision enterprise; to expand, step by every solid step, and outline a vision of our petrochemical industry. Not only to serve everyone's energy needs, but also contribute to the sustainability of our Earth.



# | Upstream Operations |

## Exploration & Production

For many years CPC has engaged in cooperative exploration with governments, state-owned petroleum companies, and large international oil companies under the name of the Overseas Petroleum and Investment Corp. (OPIC), spreading its operations throughout the Americas, the Asia-Pacific region, and Africa.

With the fluctuations in international oil prices in recent years, CPC has worked strenuously toward the development of upstream exploration in order to secure its own oil sources and enhance its overall performance; and, in line with the government's policy of "deepening the energy supply safety mechanism and promoting international energy cooperation," has constantly engaged in international cooperation in exploration and development in the hope of discovering new reserves of oil and natural gas. At the end of 2011, CPC engaged in cooperative exploration in 21 fields in seven countries together with international oil companies, including Block 16 and 17 in Ecuador; Sanga Sanga, Bulungan, Amborip VI, and Sanga Sanga coal bed methane (CBM) in Indonesia; Gulf of Paria East and Gulf of Paria West in Venezuela (negotiations are in progress in regard to confiscated prospects); Block AC/P21 and NT/P76 in Australia; Caviar, Manahuilla, Estrella, Garden City Field, and Hurricane Creek (Big Horn, Shorts Creek, Danube, Yellowstone) Blocks in the United States; the Murzuq 162 Block in Libya; and the BCO III/BCS 11/BLT I Blocks in Chad. Following company approval, a trading contract was signed with CNPC for the Agadem block in Niger and has been submitted to the Executive Yuan for approval. CPC Corp. uses the opportunities that come with LNG procurement to negotiate purchase prices and contracts with Inpex, Shell, and other companies, and is seeking opportunities for upstream acquisitions in Australian natural gas fields. The Haute-MerA deepwater block participation case in Congo has been submitted to the Board of Directors for approval.

Blocks 16 and 17 in Ecuador; Sanga Sanga in Indonesia; and Caviar, Manahuilla, Garden City Field, Big Horn, Shorts Creek, Danube, Yellowstone, and S. Bancroft in the U.S. are producing blocks. Because of the turbulence in Libya, CPC Corp., which acts as operator there, withdrew its Libyan branch personnel to Taiwan on Feb. 26, 2011 and will return to continue work there when conditions in that country stabilize. The Benoy-1 well in Chad was successful and drilling of a second well in that country, Karin-1, commenced on Dec. 16, 2011 with the aim of determining the scope of oil and gas reserves there.



In Ecuador, operations in Block 16 include 156 producing wells as well as the completion of 72 workover wells and 14 development wells, and Block 17 operations include 28 producing wells along with the completion of 14 workover wells and four development wells. Operations at the Sanga Sanga Block in Indonesia include 655 producing wells and the completion of 43 development wells. In all CPC Corp. was allocated 6.49 million barrels of crude oil and 391 million cubic meters of natural gas from its operations in Ecuador, Indonesia, and the U.S. in 2011.

On land in Taiwan, in 2011 CPC completed 591.37 kilometers of seismic testing and 99 square kilometers of geological surveys, and drilled 2 wells. There are currently 48 natural gas wells in the Tiezhenshan, Qingcaohu, Jinshui, Chuhuangkeng, and Guantian fields, producing a total of 424 million cubic meters of natural gas and 11,300 kiloliters of condensate.

In offshore operations in Taiwan, the Executive Yuan approved resumption and revision of the investment project for the development of the F Structure field off Kaohsiung at the end of May 2010, and project management and bid tendering operations are under way.

In the field of sea exploration and cross-straits cooperation, CPC Corp. plans to diversify exploration risk and bring in deep-sea exploration technology by cooperating with prominent international oil companies to explore deep-sea blocks in the Tainan Basin. Data on 3,300 kilometers of two-dimensional seismic surveys have been processed under the Tainan-Chaoshan Petroleum Contract, along with the reprocessing of data on 800 kilometers of old seismic surveys, and comprehensive interpretation and contract awarding operations are under way.

In its future strategic deployment, CPC will seek to create a more promising situation in overseas exploration and production by heightening the value of its existing overseas oil and gas field assets and establishing core areas with high rates of growth, participating actively in bidding for open blocks, seeking opportunities to take over fields from large oil companies, and pursuing opportunities for M&As in new oil and gas fields so as to add more to our company's reserves.

## Cpc's Overseas Cooperative Exploration Fields



## | Downstream Operations |

### Importation & Refining

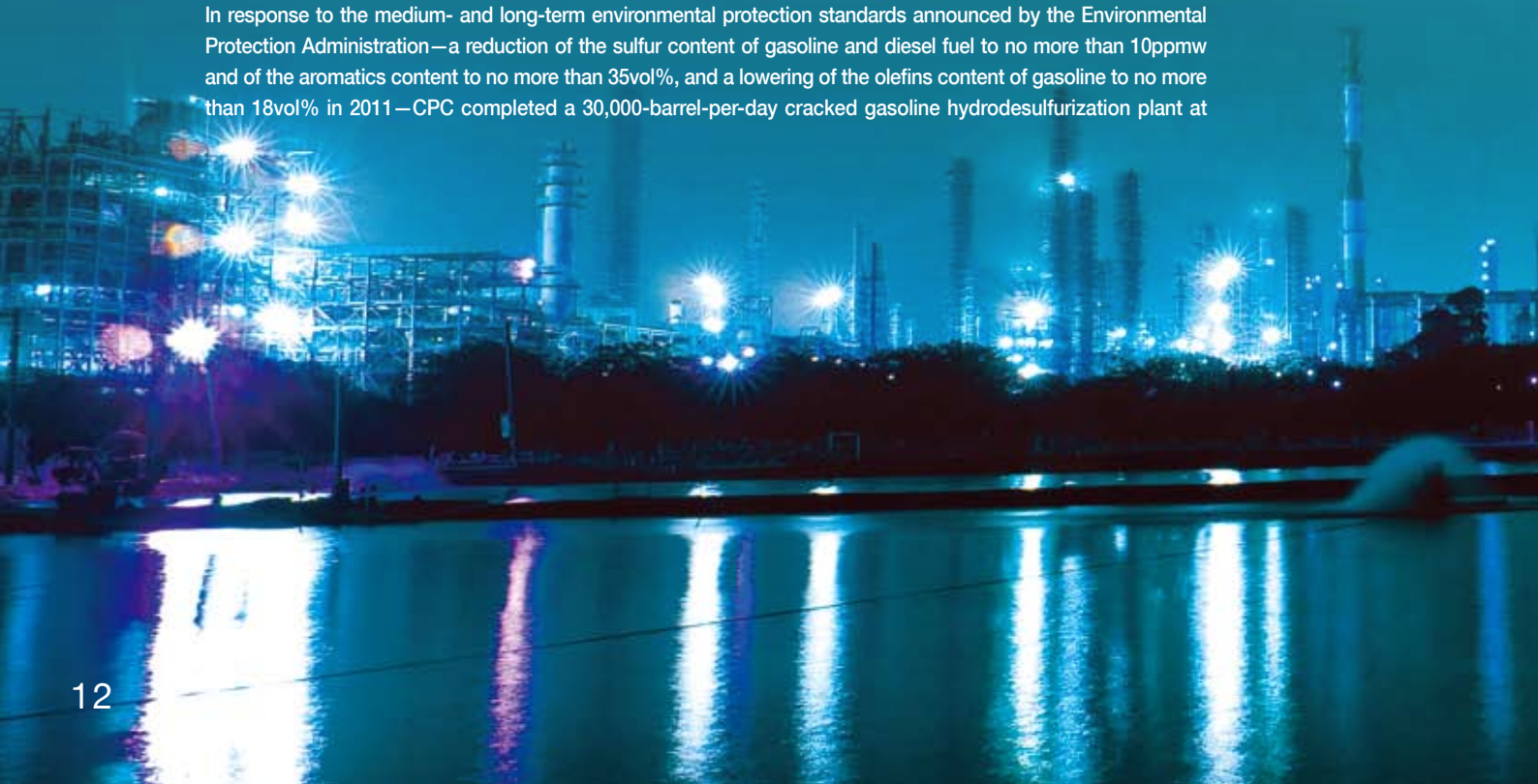
As only an extremely small amount of crude oil is produced in Taiwan, almost all of the crude that is refined by CPC Corp. has to be imported. To assure the stability of crude oil supplies, the company purchases oil through long-term contracts and works vigorously to diversify its sources. Imports of crude oil reached 149.5 million barrels in 2011, with 63.15% coming from the Middle East, 28.69% from Africa, 5.26% from Australia, and 2.89% from West Asia. In line with increasingly stringent domestic environmental protection standards, a set amount of imports consist of low-sulfur crude.

To facilitate oil imports, CPC has offshore mooring buoys for large tankers at the Shalun terminal in Taoyuan County and the Dalinpu terminal in Kaohsiung, as well as oil tanker docks in Kaohsiung, Taichung, and Shen'ao harbors. To secure transportation tonnage and stabilize shipping costs, the company has built up a considerable fleet of self-owned tankers, including one 260,000-ton tanker and two 150,000-ton tankers, which transported nearly 1.91 million tons of imported oil in 2011.

CPC's three existing refineries, one each in Kaohsiung, Taoyuan, and Dalin, have a combined daily capacity of 720,000 barrels. The Kaohsiung Refinery, which has the longest history of the three, is a large integrated oil refining and petrochemical production facility featuring a complex production process and a complete range of equipment. It has a capacity of 220,000 barrels of crude oil per day. The Dalin Refinery, which split off from Kaohsiung to become independent in 1996, has four offshore mooring buoys as well as both large and small docks for the unloading and loading of crude oil and petroleum products. It has a topping capacity of 300,000 barrels per day. The Taoyuan Refinery was established in 1976, and following some de-bottlenecking renovations and the addition of a second distillation plant, currently has a daily capacity of 200,000 barrels of crude oil. CPC's total output of petroleum products in 2011 amounted to 8,512,000 kiloliters of gasoline, 6,546,000 kiloliters of diesel fuel, 6,458,000 kiloliters of fuel oil, and 416,000 metric tons of liquefied petroleum gas.

Respect to increasingly stringent demands in regard to the environment and the quality of life by the people of Taiwan, and their continuously diversifying needs for petroleum products, CPC has moved to improve the quality of its petroleum products and enhance its production value in recent years by building a large number of refining and production facilities such as units for reforming, isomerization, TAME, gasoline, diesel fuel hydrodesulfurization, aviation fuel processing, N-paraffin processing, alkylation, and heavy oil conversion. These facilities are designed to supply Taiwan's people with better petroleum products as well as to enhance production efficiency.

In response to the medium- and long-term environmental protection standards announced by the Environmental Protection Administration—a reduction of the sulfur content of gasoline and diesel fuel to no more than 10ppmw and of the aromatics content to no more than 35vol%, and a lowering of the olefins content of gasoline to no more than 18vol% in 2011—CPC completed a 30,000-barrel-per-day cracked gasoline hydrodesulfurization plant at





the Taoyuan Refinery in 2008, a 20,000-barrel-per-day cracked gasoline hydrodesulfurization plant at the Dalin Refinery in 2009, and a 40,000-barrel-per-day diesel hydrodesulfurization plant at the Dalin Refinery in 2010, and relocated the 18,000-barrel-per-day cracked gasoline upgraded-quality plant from the Kaohsiung Refinery to the Dalin Refinery in 2011. Testing and mass production at the latter facility is expected to be completed in 2012.

At the same time, in 2006 CPC began implementing a plan to construct an 80,000-barrel-per-day heavy-oil conversion plant at the Dalin Refinery and a 70,000-barrel-per-day heavy-oil desulfurization plant and related hydrogen/sulfur recovery unit at the Taoyuan Refinery. The heavy-oil desulfurization plant project was suspended for two years in January of 2008, however, because of rising prices; a re-evaluation carried out when prices fell back in 2010 found that the required investment would still be about NT\$38.46 billion, but because the purpose is to supply the domestic market with low-carbon fuel, an application to resume construction is currently being submitted via the administrative process. To make use of the adequate supply of crude butane to use as a feedstock once the heavy-oil conversion plant is completed, in 2008 the company began implementing a 14,000-barrel-per-day alkylation plant at the Dalin Refinery in order to further raise the quality of gasoline. To boost the value-added of mixed C4 hydrocarbon produced by the heavy-oil conversion plant for the manufacture of high-value petrochemical products, CPC has planned the joint-investment construction of an 180,000-ton-per-year isononanol (INA) plant and a 144,000-ton-per-year methyl tert-butyl ether (MTBE) plant, with implementation expected to begin in 2012 and mass production in 2015.

To deal with the excessive production capacity for gasoline and diesel fuel following the liberalization of the domestic market, CPC has made efforts to readjust and improve its refining structure to conform to market needs and trends and to increase its ratio of heavy-oil conversion in order to optimize its oil production. our company is also working constantly to lower its refining costs. our company's total exports of major petroleum products in 2011 amounted to approximately 2.99 million kiloliters, with shipments going to Vietnam, Singapore, New Zealand, Australia, and mainland China, CPC will continue developing export markets in order to achieve maximum benefit for our company.







## Petrochemical Production

The main bases for CPC's petrochemical production are the Kaohsiung Refinery and Linyuan Petrochemical Plant. The latter operates under the Petrochemical Business Division, which was established on Sept. 1, 2000, and utilizes a full set of facilities including naphtha cracking, butadiene and aromatics extraction, xylene separation, transalkylation, and isomerization units. Annual petrochemical capacity includes 1,080,000 tons of ethylene, 725,000 tons of propylene, 173,000 tons of butadiene, 492,000 tons of benzene, 560,000 tons of para-xylene, and 130,000 tons of ortho-xylene.

In response to the opening of the market to competition, CPC has set up a Petrochemical Business Division and is promoting the establishment of a petrochemical products logistics center with the aim of carrying out vertical integration with mid- and downstream petrochemical operators while using flexible competition strategies to develop trade in petroleum products and strengthen market competitiveness. To narrow the gap in the supply of petrochemical raw materials and enhance the quality of industrial safety and environmental protection, as well as to expand the scale of production through the renewal of production processes, CPC has initiated a "Third Naphtha Cracker Renovation and Expansion Project" at the Linyuan petrochemical complex. This project will cost an estimated NT\$46.9 billion and will give the naphtha cracker an annual capacity of 720,000 tons of ethylene, 430,000 tons of propylene, 100,000 tons of butadiene, and 220,000 tons of benzene. The project will also revamp the existing Fourth Aromatics Plant and auxiliary facilities. When the project is completed in 2013 it will generate an annual production value of NT\$60 billion, stimulate the willingness of other downstream companies to invest, and bring new prosperity to the petrochemical industry.

The Kuokuang Petrochemical Technology Co., established as a joint venture with petrochemical enterprises under the leadership of CPC, began implementing related projects in 2006 with the aim of guiding the domestic petrochemical industry to leave its roots in Taiwan and stimulating overall economic development. Based on environmental protection policy considerations, in 2011 the company notified the Environmental Protection Administration of the withdrawal of the "Environmental Impact Assessment for the Changhua Southwest Corner (Dacheng) Reclaimed Land Industrial Zone Project." To strengthen the competitiveness of Taiwan's economy and increase the government's tax revenues, however, priority today is being given to domestic investment. At the same time, in line with the government's petrochemical policy of "quantity expansion overseas, quality enhancement at home," and the consequent development of high-value-added products in substitution for the production of low-value materials, the company is also engaging in strategic alliances with domestic and foreign petrochemical enterprises in the production of specialty chemical products and materials for which Taiwan now relies heavily on imports, in this way advancing toward the goal of a high-value-added petrochemical industry.



## Marketing

CPC's Marketing Business Division is responsible for the domestic sale of oil products, mainly automotive gasoline, aviation fuel, diesel fuel, and fuel oil. In terms of marketing, CPC's domestic sales of petroleum products consist mainly of automotive gasoline, aviation fuel, diesel fuel, and fuel oil. The company's total sales in 2011 amounted to 20,674KKL of petroleum products, producing overall sales revenue of NT\$504.9 billion, up 11.1% from the year before. Automotive gasoline accounted for the largest amount of the sales (approximately 42%), followed by fuel oil (about 25.2%), diesel fuel (about 24.4%), and aviation fuel (about 8.4%).

In terms of marketing channels, Taiwan's market for oil products is divided between CPC and the Formosa Petroleum Co., and competition between the two is increasingly intense. CPC has worked hard to express the advantage of its marketing network and assure its market share by consolidating its filling-station network; of the 2,619 filling stations operating in Taiwan at the end of 2011, 641 were operated by CPC directly, 16 were operated cooperatively by CPC with other parties, and 1,366 were privately operated franchise stations (for a total of 2,023 CPC stations). This network gave CPC control of more than 77.24% of the market. our company 's shares of the gasoline, aviation fuel, diesel fuel, and fuel oil markets were 75%, 65.6%, 84.5%, and 94.4%, respectively.

In the area of storage and transportation, in addition to its network of gasoline stations CPC also supplies fuel needs in different areas by operating aviation fueling stations at the Taoyuan, Taichung, Hualien, Taitung, Kaohsiung, Kinmen, and Magong airports and by maintaining 35 fishing-harbor filling stations around the island. At the end of 2011 CPC had 14 petroleum supply centers, at Keelung, Shimen, Hsinchu, Taichung, Taichung Harbor, Wangtian, Minxiong, Tainan, Fengde, Qiaotou, Suao, Hualien, Huxi, and Kinmen & Matsu (part of the oil supply center), to supply the oil products needed by filling stations in those different areas. A total of 20,324 KKL of oil was delivered from these centers in 2011. There are also three chemical analysis centers, in Keelung, Taichung, and Kaohsiung, along with seven laboratories, charged with the testing of oil products and the control of quality. Together, they tested 53,518 samples during the year.

In the operation of filling stations, CPC seeks to upgrade customer satisfaction and lead the market through "differentiation of services" and "the service advantage." The Marketing Business Division asks our company 's directly operated filling stations throughout Taiwan to provide high-quality services, create a clean-toilet culture, implement customer experience management, vigorously promote CPC VIP card, and carry out customer relationship management. To reduce operating costs and resolve the problem of insufficient filling-station manpower, our company took the lead in introducing self-service credit-card gas-tank filling. At the same time, all filling stations under CPC banner are asked to promote complex operations, offer diversified services, and strengthen cross-industry strategic alliances in order to generate non-core income.





L9000

CPC-110

## Natural Gas

Based on the advantages offered by natural gas—high efficiency, lack of pollution, safety, and convenience—CPC has moved in line with the policy goal of energy diversification and is following up on the completion of Taiwan's first liquefied natural gas (LNG) receiving terminal in 1990, at Yongan Township in Kaohsiung County, inaugurating a new era in the supply of clean energy in Taiwan. After that, along with the rapid growth of the domestic economy, the steady increase in energy demand, and the rise of environmental consciousness, CPC carried out an expansion project at the receiving terminal, completed in December 1996, boosting its annual handling capacity to 4.5 million tons. To satisfy the future demand for natural gas by independent power plants and by towns in northern Taiwan, CPC initiated a third-stage expansion project in July 1996; in addition to expansion work in the terminal area, our company established a Taiwan precedent by laying a 36-inch diameter, 238km long-distance undersea pipeline from Yongan to Tongxiao. Completion of the pipeline in December 2002 expanded CPC's handling capacity for LNG to 7.44 million tons per year.

To accommodate the Taiwan Power Company's (Taipower) natural-gas-fired Datan Power Station project, CPC used its years of experience in natural gas operations to achieve the signing of a natural gas supply agreement with Qatar, which offers the most competitive prices. By making flexible use of the advantages provided by its existing pipeline distribution system and other factors, CPC won the procurement bid for Datan's natural gas supply in July 2003. Under this agreement, CPC will supply 1.68 million tons of LNG to Datan annually for 25 years, consolidating our company's position as the sole medium- and long-term supplier of natural gas in the domestic market. On Sep. 13, 2005 CPC signed an LNG supply agreement with RasGas II of Qatar; the agreement runs for 25 years, from 2008 to 2032, and calls for the delivery of 3 million tons annually, mainly to supply the Datan Power Station and the growing domestic demand for gas.

To meet the first-stage goal of supplying gas for use by Taipower's Datan Power Station beginning in 2008, and the second-stage goal of





completing storage tanks and related gasification and gas supply facilities by the end of 2009 in order to supply the demands of independent power plants, industrial customers, and city gas users in central and northern Taiwan, CPC is carrying out the construction of an LNG receiving terminal with a yearly capacity of 3 million tons in Taichung. This project, costing a projected NT\$31.5 billion, is being developed at west dock No. 13 in Taichung Harbor as well as inland; it includes three 160,000-kiloliter LNG tanks, gasification and gas supply facilities, and a 135-kilometer, 36-inch sea/land long- distance transportation pipeline from Taichung Harbor through the Tongxiao distribution station to the Datan measuring station, along with related facilities. The pipeline began operating on July 13, 2009.

To achieve flexible distribution and the goal of stabilizing the supply of gas to meet market demand, CPC has built up a transmission and distribution system in western Taiwan that includes 1,471 kilometers of trunk pipelines, reaching from Pingtung to Keelung, with eight supply centers and 40 distribution stations on land. The goal of CPC's gas pipeline plans is



to construct loop networks and lay down 238 kilometers of undersea pipeline from Yongan to Tongxiao, forming a loop gas pipeline network for central and southern Taiwan. In addition, the 36-inch undersea pipeline that runs from Taichung Harbor through Tongxiao to Datan in Taoyuan County has commenced operation, forming another loop transmission network together with on-land pipelines in central and northern Taiwan and completing a “figure 8” gas transmission network.

To assure a stable supply of gas in Taiwan, CPC has worked to diversify its gas sources and its deployment. The company signed a 20-year LNG procurement contract on Mar. 2, 2010 providing for the import of approximately 1.2 million tons of LNG per year from Papua New Guinea, starting in late 2013 or 2014. On Dec. 6, 2011 CPC also signed a 20-year LNG procurement contract with Qatar's RL3, calling for the import of approximately 1.5 million tons of LNG per year beginning in 2013.

In 2011 CPC sold a total of 15.28 billion cubic meters of natural gas, mainly for domestic power generation, co-generation, industrial, and household use. our company imported LNG mainly from Indonesia, Malaysia, and Qatar through long-term procurement contracts; the rest was procured through master agreements with the Republic of Trinidad and Tobago, Egypt, Nigeria, and other suppliers under the objective of stabilizing supplies and diversifying sources.





## | Other Business |

Taiwan's domestic market has long been open to free competition in the field of lubricants, and in recent years major international petroleum companies have rushed in to compete through M&As, integrated marketing channels, and cost reductions. As a result, competition has become ever more intense. Further, the rapid economic growth of the Asia-Pacific region has stimulated demand in the lubricants market, where China and Southeast Asia, particularly, have become favored bases for deployment for international petroleum companies.

CPC's Kuo-Kuang brand lubricating oil leads the domestic market with a share of more than 30%. our company 's Lubricants Business Division espouses an operating strategy of "consolidating domestically, expanding overseas," adopting a twin-brand (Kuo-Kuang and Mirage) marketing strategy in the domestic market while vigorously promoting quality services, reinforcing marketing channels, expanding auto and motorcycle repair and garage channels, and using differentiated products and timely services to satisfy customers' needs. The main target strategies in overseas markets are to operate brands and distribution channels, carry out direct exports and multifaceted trade businesses, and promote the lubricating oil and base oil businesses; serve the successful business system of overseas Taiwanese enterprises in the Asia-Pacific region and deploy Kuo-Kuang brand marketing channels, having already successfully entered the markets of mainland China, Vietnam, Indonesia, the Philippines, and other Southeast Asian countries; and use a quality product image, reasonable pricing, and stable supply to establish a beachhead in Asia-Pacific markets for vehicle maintenance oils and industrial oils.



In the field of liquefied petroleum gas, after the government opened the free import of LPG in 1999, the Formosa Petrochemical Corp. entered the ranks of production and independent traders began importing supplies, ending CPC's monopoly and exposing the market to free competition.

As a government enterprise and the primary supplier, CPC is charged with the mission of enhancing operating performance while providing sufficient supplies of LPG to the domestic market. In the field of household gas, CPC's LPG Business Division makes full use of its quality advantage and fully utilizes its north-south transport and storage system as well as its comprehensive marketing network to consolidate the market. In the area of industrial gas, our company works to strengthen customer service so as to retain existing customers and develop new ones. Furthermore, the LPG Business Division is planning to develop and expand international trading so as to create more oversea sales channels in response to increasing market competition in Taiwan. It also strives to keep a full understanding of price movements in the international LPG market and to choose the best times to import and export so as to lower the cost of procurement and expand exports, thereby creating maximum profit, coordinating with the government's safety reserve policy, and heightening the rate of turnover in storage tanks. our company assists operators in promoting the conversion of automobiles to the use of LPG and in installing more LPG filling stations so as



to reduce CO<sub>2</sub> emissions and improve air quality in urban areas. CPC also strives to strengthen occupational safety and environmental protection and engages constantly in good-neighbor work so as to fulfill, under the precondition of safe operation, its mission of providing abundant supplies of LPG to the domestic market while creating a good operating performance.

In the field of solvents and chemicals, CPC holds 65%-75% of the market for self-produced solvents, 30%-40% of the market for toluene, 30%-35% of the market for xylene, and 40%-45% of the market for methanol. Of the total annual domestic production of 530,000 tons of asphalt, CPC accounts for 400,000 tons; of total sulfur production of 400,000 tons, CPC turns out 220,000 tons.

To reach its operating goals, CPC's Solvent and Chemical Business Division is actively promoting quality services and nurturing sales channels; expanding planned exports and developing markets in Vietnam, mainland China, and other areas; enhancing product quality and image; continuing the improvement of processes and the reduction of costs; and striving for the development of new products and new businesses. Furthermore, CPC's Solvent and Chemical Business Division is responsible for the marketing of bio-products developed by CPCBio, which has built on its experience in microbial fermentation technology and combined the use of modern biotechnology in expanding into biological materials, functional health foods, and green biotechnology, producing high-quality bio-products at reasonable prices.

# Perseverance

## Perseverance

In industrial safety, environmental protection, innovation, research & development, and career growth for employees, we do our best with care and with all aspects in mind.

To transform our conscientiousness into a beautiful perfection, and create a green home of our Earth.



## | Industrial Safety & Health |

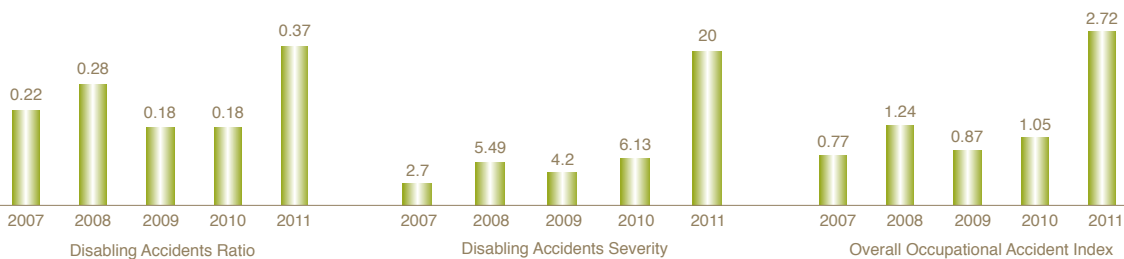
Since both petroleum and natural gas are easily combustible, CPC has always placed extreme emphasis on industrial safety, health, and fire control in order to ensure the smooth execution of production operations as well as to assure the safety of the lives and property of employees and residents in communities around plants and wells. In addition to operating in accordance with domestic laws and regulations, CPC also establishes safety and fire rules, in reference to regulations in the advanced countries of Europe, America, and Japan, which conform to conditions in the Taiwan area and the characteristics of CPC's own business.

Industrial safety is the foundation of company development. To achieve the goal of "100% industrial safety and zero accidents," CPC holds to a policy of "safety discipline and thorough inspection, health promotion and responsible care, risk management in system operation, and continuous improvement and sustainable operation" in the constant upgrading of the safety culture. our company 's industrial safety performance is recognized not only at home but internationally as well, as manifested in its receiving a plaque from the World Safety Organization in 2005.

The key points of CPC's industrial safety and health operations at the present time are as follows:

- Implementation of the Taiwan Occupational Safety and Health Management System (TOSHMS), and continuous improvement of the operating environment.
- Strengthening of the safety management of contractors and establishment of contractor autonomy so as to reduce contractors' occupational hazards.
- Scheduled review of industrial safety and health regulations, and continuous review and amendment of standard operating procedures.
- Strengthening of industrial safety management, holding of scheduled employee health examinations, analysis and follow-up of physical examination information, promotion of health improvement, and emphasis on the mental health of employees.
- Implementation of risk management and equipment integrity operations, establishment of equipment safety management processes, thorough implementation of the oil tank and pipeline inspection function, and establishment of a long-distance oil & gas pipeline monitoring and leak detection system.
- Strengthening of fire-fighting management, organization of a professional team, and guidance of the different units in carrying out fire-pump function testing. Five fire-safety technical manuals have been published.
- Implementation of graded on-site safety inspections and continuous improvement, through safety observation, on the systemic, management, and execution levels.
- Strengthening of industrial safety inspections including "management by walking around" by ranking officials, professional industrial safety inspections, and pre-startup inspections of new and renovated factories. All deficiencies that are discovered are followed up through the information system and improved.
- Planning and implementation of various kinds of safety-environment training and education, establishment and provision of online study courses and an industrial safety test-question databank, and compilation and publication of accident case studies.
- Reinforcement of the functions of the Safety Information Center, lending of materials for reading, and provision of an Internet data inquiry service system.

### CPC Occupational Accidents over the Past Five Years





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## | Pollution Prevention & Environmental Protection |

To fulfill its corporate social responsibility and uphold the spirit of sustainable development, CPC is engaged in a long-term effort to improve wastewater, air, noise, solid waste, and groundwater pollution issues. In recent years our company has also carried out carbon dioxide emission inventory and reduction work, and has adopted best available technology (BAT) and equipment for all new investment projects so as to lessen the pollution caused in production, transportation, and storage processes. CPC also works actively to enhance the quality of petroleum products and achieve the goal of protecting the general environment.

CPC thoroughly carries out an environmental policy of "pollution prevention, employee participation, and constant improvement," and has invested more than NT\$50 billion in environmental protection since 1989. Since 1995 our company has promoted the establishment of ISO 14001 environmental management systems in all units, and 20 units had passed certification by the end of 2009. A company-wide environmental accounting system was set up in 2004 to constantly enhance the performance of environmental improvement.

Although Taiwan is not a signatory of the agreement on greenhouse reduction signed in 1997 (the Kyoto Protocol), in line with future international environmental trends CPC strives to reduce greenhouse gas emissions throughout our company. It has set carbon dioxide reduction targets and timetables for existing plants and carries out emissions-reduction measures by using low-carbon fuel, conserving energy, improving equipment efficiency, and reducing waste. To cope with global climate change and fulfill its corporate social responsibility, CPC completed a company-wide inventory of greenhouse gases in 2005 and is carrying out an ongoing CO<sub>2</sub> reduction plan. The target for CO<sub>2</sub> emission reduction was 1 million tons by 2009, and the actual amount of reduction reached 1.22 million tons. The goal of CO<sub>2</sub> emission reduction is 650,000 tons during the period of 2010 to 2015.

In addition, CPC carries out environmental education and other activities that use ecological experiences and learning to publicize the principles of environmental protection and love of native resources.

The company also appeals to the entire populace to care about local ecological issues and local development, to become involved in park and forest adoption activities, to help clean up the environment and dispose of garbage, and to rectify sea pollution in order to leave a clean environment for our sons and grandsons.





### Comparison of CPC Refinery Environmental Quality with National Standards

#### ⌘ Effluents

Item	Year	Performance in 2011	National Standard
COD (ppm)		62*-100	100
Oil (ppm)		< 5	10
SS (ppm)		< 30	30

\*monthly average

#### ⌘ Emissions

Item	Year	Performance in 2011	National Standard
SOx (ppm)	Gas fuel	< 20	100
	Liquid fuel	< 250	300
NOx (ppm)	Gas fuel	< 100	150
	Liquid fuel	< 200	250
TSP (mg/Nm <sup>3</sup> )	By emission rate	20-100	< 25-500

#### ⌘ Noise

Item	Year	Performance in 2011	National Standard
Night limit (decibels)		< 55	55



### CPC Utilization of Resources, Production of Pollutants, and Production Value

Input (crude oil)	149.5	million bbl/yr	<p>Employees: 15,219</p> <p>Land: 2,876 hectares</p> <p>Capital: NT\$130.1 billion</p>	Income	NT\$1.03	trillion/yr
Fuel Oil	569,381	T / Y		Gasolin	8,512	kiloliters/yr
Fuel Gas	1,375,119	T / Y		Diesel Fuel	6,546	kiloliters/yr
Natural Gas	800,838	KS / Y		Fuel Oil	6,458	kiloliters/yr
Purchased Water	24,350,821	T / Y		Ethylene	990,000	T/Y
Purchased Electricity	1,483,314,530	KWH / Y		CO <sub>2</sub>	9,569,474	T / Y
Recovered External Waste	0	T / Y		NO <sub>x</sub>	12,382	T / Y
			SO <sub>x</sub>	5,778	T / Y	
			TSP	837	T / Y	
			Waste Gases	285,290	T / Y	
			COD	660	T / Y	
			Waste Water	17,538,856	T / Y	
			Garbage	51,702	T / Y	
			Paybacks	NT\$220.44	million /yr	
			Safety	3	/yr	
0.346 CO <sub>2</sub> (Ton) / tons product						
276 CO <sub>2</sub> (Ton) / million revenue						
<p>■ Equivalent energy consumption per unit for refineries : 784 kkal / kl crude</p> <p>■ Average equivalent energy consumption per unit for petrochemical plants : 8,047 kkal / MT ethylene</p>						

### CPC Greenhouse Gas Ecology Indexes

Index	2007	2008	2009	2010	2011
1. Annual Income/(whole-year/FOE) (NT\$/ton)	219,708	380,162	229,338	272,274	203,352
2. Annual Income/(whole-year CO <sub>2</sub> emissions) (NT\$/ton)	72,920	83,585	54,083	69,920	86,785
3. Income/(whole-year COD) (NT\$/ton)	1,261,936,837	1,552,743,754	1,191,599,080	1,326,627,802	2,199,322,686
4. Income/(SOx+NOx+TSP) (NT\$/ton)	38,520,029	51,046,897	33,460,062	51,775,430	58,275,301
5. Income/(emissions+waste water+solid waste) (NT\$/ton)	52,023	69,869	47,057	58,051	63,628
6. Income/(purchased electricity) (NT\$/KWH)	958	724	465	532	665

To improve the quality of air in Taiwan and conform to the gasoline quality standards of the advanced countries, CPC stopped supplying leaded gasoline in January 2000. The company also reduced the sulfur content of its diesel fuel to 10ppmw in July 2011, and that of gasoline to the same level in 2012. The scope of application of biofuel technology has been expanded in line with the government's energy policy; in July 2009 the company introduced E3 gasohol in Taipei and Kaohsiung, and began the overall supply of B2 biodiesel in December 2010 to reduce atmospheric pollution and CO<sub>2</sub> emissions. In addition, vapor recovery hoses have been installed at all CPC filling stations and storage tanks have been fitted with vapor recovery systems, resulting in the recovery of more than 3,200 kiloliters of gasoline per year; this is equivalent to a reduction in emissions of a similar amount of volatile organic materials, and so improves air quality.

Through years of constant effort the quality of Taiwan's petroleum products has been upgraded until today it compares with that of Japan, the United States, and other advanced countries. However, CPC is not satisfied with these achievements. In the future our company will use the "new environmental standards for petroleum products" of the advanced countries as its benchmark in the ongoing pursuit of ever-better quality. With a love for home and environment in mind, CPC will continue to employ the newest pollution prevention technology, constantly enhance environmental protection performance, pursue sustainable development, and share in the health and prosperity of the people of Taiwan.





## | R&D and Information Management |

Research and development has always been the driving force behind CPC's technological innovation, business development, and sustainable growth. In general, the Planning Division is responsible for the overall planning and implementation of R&D work, while the Exploration and Production Research Institute in Miaoli and the Refining and Manufacturing Research Institute in Chiayi are responsible for research in their respective fields. In addition, other production and business divisions have technology units that carry out on-site improvements and resolve production bottlenecks. CPC has devoted strenuous efforts to R&D over the years, and as a result has effectively reduced operating costs and increased revenues.

Faced with the intense competition of Taiwan's completely open market for petroleum products, CPC will continue using R&D to break through technological bottlenecks in refining and exploration and will coordinate actively with our company's operational plans in carrying out forward-looking research, developing new products, and opening up new businesses with the aim of strengthening its overall competitiveness.

Our company's R&D spending in 2010 was approximately NT\$1.29 billion, yielding the following major results:

### Exploration and Production

- Completion of research on equity participation in promising blocks in Africa, America, and Indonesia.
- Completion of preliminary evaluation of six Canadian oil-sand blocks, and listing of the McKay Great Divide Expansion for priority consideration.
- Completion of tectonic framework analysis, stratigraphic correlation, reservoir characteristics, structural typing, basin petroleum system, and hydrocarbon potential evaluation for the Lower Magdalena Basin in western Colombia.
- Future exploration of the Taixi Basin will be concentrated on petroleum system synrift deposits.
- Completion of comprehensive analysis of hydrocarbon potential in the Tainan Basin 3D seismographic area.
- Study of Ecuadorian blocks shows two high-potential blocks on the skirt border of mushroom igneous bodies.
- Completion of CPC's internal "Exploration Decision Support System" website, and Google Earth Enterprise GIS decision system tool testing and establishment of a Google cloud-computing layers.
- Studies indicate the possible presence of gas deposits consisting mainly of biogenic gas in the seas off Tainan and Kaohsiung, and the possible presence of gas deposits consisting mainly of thermogenic gas in the seas off Kaohsiung and Pingtung, perhaps with economic value.
- Completion of 2D and 3D electrical resistivity tomography at multiple Kaohsiung Refinery sites, and TPH 3D analysis and application at the Lingyaliao Terminal.
- Research was completed for underbalanced drilling, managed pressure drilling, and low-damage drilling mud technologies.
- Completion of flushing regulation system establishment and setting of standard procedures.
- Selection of the exhausted Yonghe Mountain gas field for use as a pilot test site for CO<sub>2</sub> geologic storage.
- Winning of an NT\$42.59 million subsidy from the Ministry of Economic Affairs' Petroleum Fund for the encouragement of petroleum development technology research projects in 2011.



## Refining and Petrochemical Production

- Proposal to switch to BASF catalyst at the RFCC plant to increase gasoline production and save 60 million in catalyst costs.
- Assistance for the ROC plant in achieving 669 days without an unplanned shutdown, setting a record for that plant (whose previous record was 414 days).
- Use of GRTMPS external simulator to simulate an LP operating strategy for petrochemical plants so as to allow the Linyuan Refinery's xylene plant to carry out production in accordance with petrochemical product pricing and upgrade its operating accuracy.
- Study of energy conservation at the normal paraffin hydrocarbon plant showed that the recovery ratio (Feb. 9, 2010 - Oct. 31, 2011) was maintained at above 98%, surpassing UOP's expectations (of an average recovery of 92% over five years).
- Use of extractive distillation technology in the BTX aromatics extraction unit (BTX ED); the new BTX ED production process passed on-site performance testing and became the world's first successfully commercialized patented aromatics extraction technology. It is currently being extended through talks with American, Korea, Japanese, and Chinese companies.
- Widespread application of advanced magnetic separators in company plants to separate magnetic impurities from fluids. A patent is pending in the U.S.
- Development of six new products: Kuo-Kuang 9000 SN 5W/30 engine oil, 9000 SN 10W/40 engine oil, SN 5W/50 racing-grade fully synthetic engine oil, Superior CJ-4 Plus 15W/40 engine oil, Superior CJK-4 15W/40 engine oil, and China Motor fully synthetic SN 10W/40 engine oil.
- Development of NTM 100 (No-Twist Mill 100) oil for China Steel's high-speed wire rod mill, with quality passing the Morgan Oil Quality Specification and meeting China Steel's requirements. Testing is expected to be completed on Sept. 21, 2012.
- Completion of a study on the long-term storage of diesel fuel. Taiwan's humid climate is not favorable to the storage of biodiesel and the raw materials for biodiesel are both expensive and insufficient; with the governments of other countries gradually readjusting their periods of promotion and additive amounts for biodiesel, it is suggested that Taiwan's schedule for promotion be reconsidered.
- Improvement of the best measurement of the gas flow rate calibration lab from 0.4% to 0.3%; calculating the annual trading volume of natural gas at NT\$100 billion, this improvement can reduce losses from uncertainty of trading volume by about NT\$100 million.
- Completion of a survey of pollution at the Kaohsiung Refinery, a supplementary survey of pollution at the 758-3 waste site, and preliminary planning for rectification work.
- Implementation of a study of lipid production by microalgae, study of physic nut tree planting, study of application of physic nut tree byproducts, development of NAG cosmetics, and development of Q-10 skin care products.
- Study of the development of amorphous carbon, using CPC's low-value heavy oil, for use in lithium batteries for electric vehicles; the study included the selection of oil, conversion of heavy oil into carbon material, electrical testing, and physical testing.
- Establishment of technology for the use of the supercritical methanol in vegetable oils containing fatty acids to produce biodiesel fuel, so that the production rate of biodiesel exceeds 90wt%. This technology has the potential for commercialization and merits further R&D work.

## Management and Energy Economics

- Completed a report on "Research on the relationship between oil product consumption & energy conservation and deduction of carbon dioxide emission." Concerning:
  1. The impact of the MRT system on Taipei citizen's gasoline consumption and deduction of carbon dioxide emission (including consumer behavior analysis).
  2. The impact of the Taiwan High Speed Rail System on Taiwan's jet consumption and deduction of carbon dioxide emission.
  3. The impact of the "floating oil product price system" on Taiwan's gasoline consumption and deduction of carbon dioxide emission.



- Implemented the research on the planning strategy and management of CPC's land assets.
- Implemented the feasibility study of the expansion of LNG receiving terminal at Taichung Harbor and environmental impact assessment.

In the area of information management, CPC's current strategy is to use the latest information technology, carry out process re-engineering, implement integrated corporate resource planning, and establish an e-enterprise with the aim of grasping core technology, establishing a digital knowledge bank, reducing information and telecommunication costs, and developing innovative information services. The aim is to use front-rank international energy companies as a benchmark and to gain a greater competitive advantage through the utilization of information technology.

In coordination with the development of core businesses, following the installation of mainframe and peripheral equipment, establishment of a remote back-up communications channel, and setting up of open-system server facilities in recent years, CPC carried out an unannounced switch of the headquarters operating environment to the Kaohsiung Refining Unit's mainframe in 2006 in order to verify the feasibility and effectiveness of these new facilities. The two mainframes were formally integrated in April, 2007, capable of remotely backing up each other. This was the first such operation in Taiwan, and the results were exemplary. In 2010, a plan to upgrade the mainframe system software, along with a step-by-step virtualization and consolidation of major application servers, was initiated with an aim to establish a standard for data exchange and to provide a better application development environment.

Furthermore, to improve its network quality and dependability, CPC in 2006 began to install NG-SDH, the Next Generation Synchronous Digital Hierarchy system. Completed in early 2007, the system serves as the transmission back-up for the Neihu-Nanzih second-route backbone network and provides an effective MSTP, the Multi-service Transport Platform service. In 2010, new telecommunication development plans were carried out to improve the quality of video conference and to provide employees with integrated voice and media communication services. And with the existing network system and digital environment, and by combining mobile communication technologies and services, a foundational infrastructure will be built for mobile commerce.

At the same time, key mission information systems were developed and maintained, including the improvement of key information operating procedures, the closing of accounts on the first day of each month, the development and promotion of an integrated e-business system for oil products, and the strengthening of the POS system at filling stations and the diversified marketing network. A Refining and Petrochemical Information System was set up, production planning and oil accounting were integrated, an Exploration Information System was established, and the Exploration Management and Geographic Information System was integrated.

To meet the development of information, digitization, and globalization in the new century, CPC's overall information systems development will be founded on a complete ERP system, customer relationship management, enterprise intelligence, knowledge management, e-commerce, integration of corporate applications, management innovation, and information infrastructure. In the area of systems development, operating processes will be further integrated to reduce the time required to close monthly accounts and professional information technology will be used to enhance production performance. On the service side, customer relationship management will be enhanced through the provision of quality services, and virtual and physical service channels will be integrated to expand the industrial value chain. For employees, the newly implemented IT Service Management System will continue to provide real-time and transparent information service. In the utilization of business intelligence, knowledge management will be used to increase e-business capital and decision-making systems will be promoted to encourage application usage. In the field of information and communications, with the strengthening of the infrastructure environment, online services and mobile business will be further integrated. On the management side, CPC's information organization will be reinforced to enhance the performance of management. All process operations will be built on an open-system integrated IT resource operating platform and all of CPC's internal IT resources, processes, infrastructure framework will be synchronized in order to provide full support for competition in the market.

## | Human Resources |

CPC currently has a total of 15,219 employees. Our company strives to develop the potential of its employees fully through long-term efforts at training and assistance, while at the same time strengthening incentive and welfare measures and pinpointing managerial talent with the aim of having its corporate development led by outstanding human resources.

In its use of manpower, our company has carried out continuous organizational and process re-engineering in recent years and has established personnel rotation rules in order to use its manpower effectively. It has also constantly recruited young professionals to inject new blood and bring about an overall upgrading of manpower competitiveness. To achieve its corporate growth targets, in addition to the consideration of necessary professional qualifications and character in the selection of executives, our company uses management and leadership development training to help the executives achieve their full potential. At the same time our company is strengthening on-the-job training at all levels, integrating existing training systems in the establishment of a Petroleum University, enhancing professional skills, and developing multi-skilled employees so as to facilitate manpower utilization. our company encourages its employees to participate in national skills qualification examinations and helps them to obtain needed industrial safety, environmental protection, and other certifications; and, in line with the needs of our company's transformation, it strengthens second-skill training. In addition, employees are chosen on a regular basis to go abroad for advanced education, research, or internship, or to participate in seminars of various types in line with business needs.

In the area of work incentives and welfare, CPC awards bonuses of various kinds based on our company's overall performance as well as on the contributions and job performance of individual employees. In addition, welfare committees organize all sorts of welfare and entertainment activities. All employees participate in national health insurance, civil service insurance, labor insurance, group life insurance, and accident insurance; in addition, consolation payments are made in cases of job-related injury, disability, or death. The different business units also run clinics, company restaurants, libraries, company stores, and other welfare facilities, along with swimming pools, ball fields, gymnasiums, and the like at their place of operation. In addition, there are scholarships for employees' children; educational loans for children in college and university; medical subsidies for employees and their dependents; wedding, funeral, and retirement subsidies; and interest-free emergency loans. Contributions are made to support the activities of civic groups, such as ball games, bridge tournaments, mountain climbing, swimming, painting, and film appreciation, in order to provide physical and mental relaxation for employees and to boost their working morale



# Expansion

## Expansion

Besides focusing on the development of core business, we will leverage into cross-industry investment in the creation of profit and value, through forward-looking vision and precise perspective, bringing new vigor to our company and exploring more fertile territories.



## | Affiliates |

CPC holds equity in numerous companies, both at home and overseas. The most representative of these are introduced below:

### ● CPC-Shell Lubricant Co. Ltd. (CSLC)

CPC-Shell Lubricant Co., established in 1965, is located at CPC's Kaohsiung Refinery and produces mainly base oils, lubricants, and byproducts. CPC holds 49% of the company's equity.

### ● China American Petrochemical Co. Ltd. (CAPCO)

Established in 1976, the China American Petrochemical Co. is the major supplier of purified terephthalic acid (PTA) to the polyester industry in Taiwan. Its plants in Taichung and the Linyuan Petrochemical Complex in Kaohsiung have a combined annual capacity of 1.9 million tons. CPC owns 38.57% of the company's equity, including preferred stock.

### ● KuoKuang Power Co. Ltd. (KKPC)

In line with the government policy of opening power plants to private operation in order to alleviate northern Taiwan's insufficiency of power supply, CPC and private investors have jointly established the KuoKuang Power Co. (with CPC holding 45% of the equity) and constructed a gas-fired power plant with an installed capacity of 480MW at Guishan Township in Taoyuan County. The plant began commercial operation on Nov. 3, 2003

### ● Chun Pin Enterprise Co., Ltd. (CPEC)

The Chun Pin Enterprise Co. was established by CPC (with 49% of the equity) and private investors to carry out construction of East Wharfs 4, 5, and 6, as well as E2-2-area storage tanks at the Port of Taipei, and to engage in the storage and transshipment of petroleum and petrochemical products. Formal operation started in May 2006.

### ● Kuokuang Petrochemical Technology Co. (KPTC)

To facilitate the vertical upstream, midstream, and downstream integration of oil refining and petrochemical production, CPC and other domestic companies established the KPTC as a joint venture in 2006 as part of a Petrochemical Technology Zone Joint Investment Plan. To support the high-valued petrochemical industry related policy from the government, the plan contains the review of investment to petrochemical products with high profitability, high entry-barriers, product durability, and environmental friendliness. CPC's share of the investment is 43%.

### ● Dai Hai Petrol Corp. (DHP)

Established in 1994, the Dai Hai Petrol Corp. is headquartered in Haiphong, Vietnam and owns docks, receiving equipment, and liquefied petroleum gas (LPG) storage and distribution facilities with a capacity of 1,050 tons. It also operates two LPG filling stations, in Hanoi and Ha Tay. The company engages primarily in the storage, transport, and supply of LPG, asphalt, and other petroleum products in northern Vietnam. CPC owns 35% of its equity.

### ● Qatar Fuel Additives Company Limited (QAFAC)

The Qatar Fuel Additives Company Limited (QAFAC) was established in 1996 as a joint venture between CPC, Industries Qatar, LCY Middle East Corp. and International Octane Ltd. of Canada. QAFAC's plant is located in the



Mesaieed Industrial Zone; it went on line on June 20, 2000, producing mainly methanol and methyl tert-butyl ether (MTBE). CPC holds 20% of the company's equity.

- Faraway Maritimes Shipping Co. (FMSC)

The Faraway Maritimes Shipping Co. was jointly established in 1997 by CPC and foreign partner Osprey; it built the LNG carrier Golar Mazo, which was delivered on Jan. 7, 2000 and went into service on the 15th of that month. The ship carries LNG purchased from Badak VI in Indonesia, CPC owns 40% of the equity in the company.

- Chun Pin Enterprise Co., Ltd. (CPEC)

The Chun Pin Enterprise Co. was established by CPC (with 49% of the equity) and private investors to carry out construction of East Wharfs 4, 5, and 6, as well as E2-2-area storage tanks at the Port of Taipei, and to engage in the storage and transshipment of petroleum and petrochemical products. Formal operation started in May 2006.

- Kuokuang Petrochemical Technology Co. (KPTC)

To facilitate the vertical upstream, midstream, and downstream integration of oil refining and petrochemical production, CPC and other domestic companies established the KPTC as a joint venture in 2006 as part of a Petrochemical Technology Zone Joint Investment Plan. The plan includes the construction of an oil refinery, olefin center, aromatic hydrocarbons center, mid- and downstream petrochemical derivatives plants, cogeneration facilities, and industrial harbor. CPC's share of the investment is 43%.

- NiMiC Ship Holding Co., Ltd. (NSHC)

The NiMiC Ship Holding Company was jointly established by CPC, NYK, and Mitsui, and has four ship-owning companies under its umbrella. The four companies built four LNG tankers, CPC's giving it 45% of the equity.

- NiMiC Ship Management Co., Ltd. (NSMC)

The NiMiC Ship Management Company was jointly established by CPC and foreign partner NYK to handle the operation and management of four LNG tankers. CPC's hold 45% of the company's equity.

- Ras Laffan Liquefied Natural Gas Company Limited II (RasGasII)

RasGasII was jointly established in 2001 by Qatar Petroleum and ExxonMobil RasGas Inc. The company's operations include natural gas production, liquefaction, and marketing. CPC completed an investment project on Sept. 18, giving it a 5% interest in RasGasII's Series B profit center.

- Global Energy Maritime Co. (GEMCO)

GEMCO was jointly established by CPC Corp., U-Ming Marine Transport Corp., and Chinese Maritime Transport Ltd. in 2011 to build crude oil tankers and oil product carriers. CPC holds 48% of the company's equity.

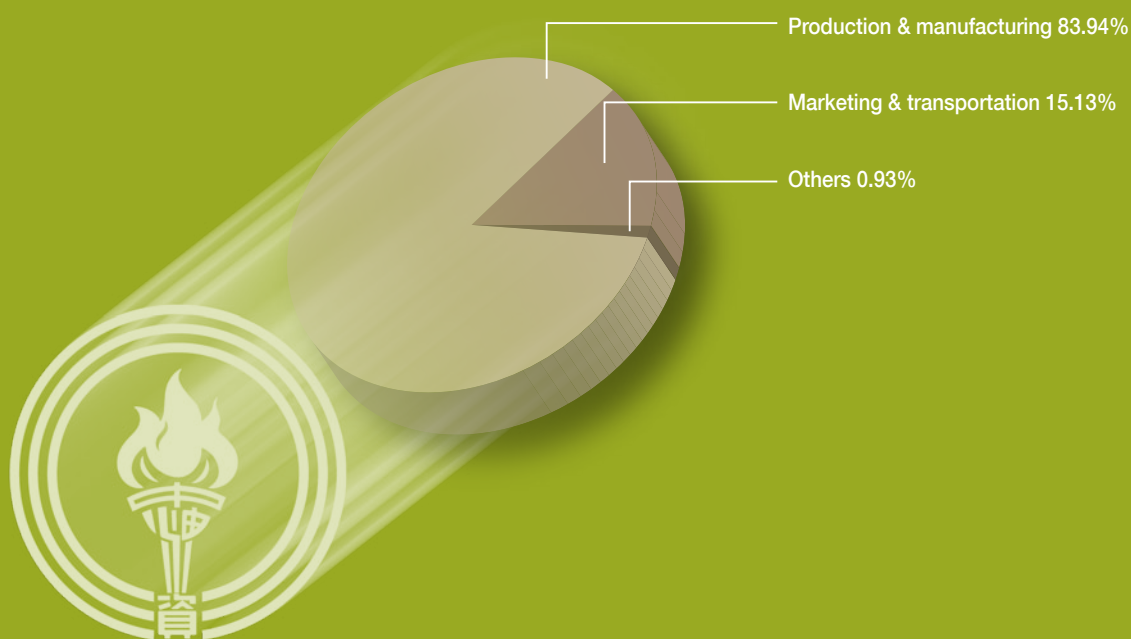


## CPC Corporation, Taiwan

# Financial Statements 2012

Due to the increase in crude oil prices and insufficient adjustment of domestic gas prices to reasonably reflect real market values in 2011, CPC's loss before income tax in 2011 was NT\$38,735 million. The difference between loss before income tax in 2011 and income before income tax in 2010 was up to 260.71%.

The capital expenditure incurred in 2011 was NT\$31,663 million, a 8.32% increase from 2010. The breakdown of the expenditure was as follows:



The exchange rate between the NT dollar and the US dollar was 30.281:1 on December 31, 2011.



# STATEMENTS OF INCOME

FOR THE YEARS ENDED DECEMBER 31, 2011 AND 2010

(In Thousands of New Taiwan Dollars)

	<u>2011</u>	<u>2010</u>
<b>Operating Revenues</b>		
Sales	\$1,015,182,109	\$925,639,122
Other operating revenues	<u>14,671,400</u>	<u>8,563,137</u>
<b>Total operating revenues</b>	<u>1,029,853,509</u>	<u>934,202,259</u>
<b>Operating Costs and Expenses</b>		
Cost of goods sold	1,026,749,194	874,000,874
Exploration expenses	3,615,283	3,465,271
Rental expenses for leased properties	577,377	546,064
Oil and gas transmission and storage expenses	12,335,496	12,884,877
Other operating costs	<u>6,794,676</u>	<u>3,046,799</u>
<b>Total operating costs and expenses</b>	<u>1,050,072,026</u>	<u>893,943,885</u>
<b>Gross Profit</b>	<u>(20,218,517)</u>	<u>40,258,374</u>
<b>Operating Expenses</b>	<u>18,937,528</u>	<u>18,219,373</u>
<b>Non-Operating Income and Gains</b>	<u>9,257,504</u>	<u>9,972,789</u>
<b>Non-Operating Expenses and Losses</b>	<u>8,836,278</u>	<u>7,909,786</u>
<b>INCOME (LOSS) BEFORE INCOME TAX</b>	<u>(38,734,819)</u>	<u>24,102,004</u>
Income Tax Expense (Benefit)	<u>(6,284,987)</u>	<u>8,027,658</u>
<b>NET INCOME (LOSS)</b>	<u>\$(32,449,832)</u>	<u>\$16,074,346</u>

# BALANCE SHEETS

DECEMBER 31, 2011 AND 2010

(In Thousands of New Taiwan Dollars)

Assets	<u>2011</u>	<u>2010</u>
<b>Current Assets</b>		
Cash	\$4,240,541	\$1,323,174
Financial assets at fair value through profit or loss-current	19,882	-
Hedging derivative assets-current	624	4,752
Accounts receivable, net	67,957,785	52,926,782
Accounts receivable-related parties	1,262,374	1,795,734
Income tax refund receivable	3,815	3,552
Other receivables	5,718,041	2,210,431
Inventories	171,618,735	146,805,866
Prepaid expenses	3,181,728	3,340,721
Advances to suppliers	9,731,616	12,608,803
Deferred income tax assets-current	1,263,813	859,034
Pledged time deposits	-	49,241
Other current assets	<u>2,740,875</u>	<u>820,875</u>
<b>Total Current Assets</b>	<u>267,739,829</u>	<u>222,748,965</u>
<b>Special Funds and Long-Term Investments</b>	<u>17,880,767</u>	<u>18,581,031</u>
<b>Properties (Less Accumulated Depreciation and Accumulated Impairment Loss)</b>	<u>456,761,864</u>	<u>361,408,567</u>
<b>Oil and Gas Interests</b>	<u>13,003,673</u>	<u>11,431,875</u>
<b>Other Assets</b>	<u>48,599,637</u>	<u>44,102,523</u>
<b>Total Assets</b>	<u>\$803,985,770</u>	<u>\$658,272,961</u>

# BALANCE SHEETS

DECEMBER 31, 2011 AND 2010

(In Thousands of New Taiwan Dollars)

Liabilities and Shareholders' Equity	<u>2011</u>	<u>2010</u>
<b>Current Liabilities</b>		
Short-term loans	\$112,639,042	\$39,305,623
Short-term bills payable	55,604,039	55,667,771
Financial liabilities at fair value through profit or loss-current	-	3,133
Hedging derivative liabilities-current	4,433	-
Accounts payable	51,664,668	42,132,796
Accounts payable-related parties	605,786	716,684
Accrued expenses	19,218,521	20,674,220
Payable to contractors	5,607,379	4,955,333
Receipts in advance	8,818,481	9,595,692
Current portion of bonds payable	1,550,000	7,500,000
Current portion of long-term loans	11,400,000	8,440,000
Current portion of obligations under capital leases - current	2,782,592	-
Other current liabilities	<u>10,477,540</u>	<u>7,633,963</u>
<b>Total Current Liabilities</b>	<u>280,372,481</u>	<u>196,625,215</u>
<b>Long -Term Debt</b>	<u>150,799,946</u>	<u>104,460,000</u>
<b>Reserve for Land Value Increment Tax</b>	<u>83,753,539</u>	<u>71,419,811</u>
<b>Other Liabilities</b>	<u>15,466,376</u>	<u>17,778,427</u>
<b>Total Liabilities</b>	<u>530,392,342</u>	<u>390,283,453</u>
<b>Shareholders' Equity</b>		
Capital stock	130,100,000	130,100,000
Accumulated deficit	(36,271,057)	(3,821,225)
Other equity	<u>179,764,485</u>	<u>141,710,733</u>
<b>Total Shareholders' Equity</b>	<u>273,593,428</u>	<u>267,989,508</u>
<b>Total Liabilities and Shareholders' Equity</b>	<u>\$803,985,770</u>	<u>\$658,272,961</u>

# STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED DECEMBER 31, 2011 AND 2010

(In Thousands of New Taiwan Dollars)

	<u>2011</u>	<u>2010</u>
<b>Cash Flows From Operating Activities</b>		
Net (loss) income	\$(32,449,832)	\$16,074,346
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	13,689,266	13,782,033
Amortization	1,943,810	3,503,949
Allowance for doubtful accounts	22,862	20,327
Realized deferred gains	(148,816)	(36,023)
Unrealized exchange loss	4,485	218,775
Allowance for loss on inventories	6,970,367	1,372,551
Gain on disposal of properties and other assets	(655,326)	(427,027)
Gain on valuation of financial assets, net	(14,454)	(11,370)
Investment income recognized by the equity method	(2,511,289)	(3,070,288)
Gain on oil and gas interests - Huffco	(1,389,168)	(1,019,999)
Earnings remitted by Huffco	576,500	1,667,325
Cash dividends from equity-method investees	2,437,981	523,568
Other operating revenue	(10,581)	-
Deferred income tax	(6,284,997)	7,989,034
Net changes in operating assets and liabilities	<u>(41,223,826)</u>	<u>(9,077,737)</u>
Net cash provided by (used in) operating activities	<u>(59,043,018)</u>	<u>31,509,464</u>

### Cash Flows From Investing Activities

Decrease in pledged time deposits	49,241	117,000
Increase in oil and gas interests	(1,496,327)	(1,240,086)
Proceeds from disposal of properties and other assets	876,629	676,284
Acquisition of long-term investments recognized by the equity method	(109,400)	(382,537)
Net decrease (increase) in other assets	119,557	(655,806)
Acquisition of properties	(31,011,322)	(28,932,774)
Proceeds from capital reduction in financial assets carried at cost	<u>-</u>	<u>210,695</u>
Net cash used in investing activities	<u>(31,571,622)</u>	<u>(30,207,224)</u>

### Cash Flows From Financing Activities

Net increase (decrease) in short-term loans	73,270,011	(17,993,023)
Increase in other liabilities	401,996	1,156,313
Repayment of long-term debts	(15,940,000)	(4,540,000)
Proceeds from long-term debts	19,000,000	4,000,000
Issuance of bonds payable	<u>16,800,000</u>	<u>16,000,000</u>
Net cash provided by (used in) financing activities	<u>93,532,007</u>	<u>(1,376,710)</u>
Net Increase (Decrease) in Cash	2,917,367	(74,470)
Cash, Beginning of Year	<u>1,323,174</u>	<u>1,397,644</u>
Cash, End of Year	<u>\$ 4,240,541</u>	<u>\$ 1,323,174</u>

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# Notes to Financial Statements

## 1. Organization and Operations

CPC Corporation, Taiwan was established on June 1, 1946 and engages mainly in oil and gas exploration, refining, procurement, transport, storage and marketing.

As of December 31, 2011 and 2010, CPC had 15,219 and 14,871 employees, respectively.

## 2. Summary of Significant Accounting Policies

### ● Basis of Presentation

CPC is operated and managed by the Government of the Republic of China (ROC). CPC's accounts are maintained generally in accordance with the accounting laws and regulations governing state-owned enterprises. CPC's significant accounting policies conform to the Guidelines Governing the Preparation of Financial Reports by Securities Issuers, Business Accounting Law, Guidelines Governing Business Accounting, and accounting principles generally accepted in the ROC.

CPC's annual financial statements are required to be examined by the Executive Yuan and the Ministry of Audit of the Control Yuan. The examinations are primarily aimed at determining the extent to which CPC meets its budget as approved by the Legislative Yuan. CPC's financial statements are finalized on the basis of the result of these examinations. The Ministry of Audit's adjustments should be reflected in the financial statements audited by independent certified public accountants. The opening balance of the following year of CPC's books of account is based on the balance after adjustments made by the Ministry of Audit. The examinations of CPC's financial statements as of and for the year ended December 31, 2010 by these government agencies had already been completed.

Under these guidelines, law and principles, certain estimates and assumptions have been used for the allowance for doubtful accounts, allowance for loss on inventories, depreciation of properties, impairment of properties, impairment of idle assets, amortization of oil and gas interests, impairment of oil and gas interests, income tax, pension cost, loss on pending litigations, etc. Actual results may differ from these estimates.

### ● Inventories

Inventories include raw materials, supplies and spare parts, finished goods, work in process, semifinished goods, merchandise, construction in progress, materials in transit - crude oil, and merchandise in transit - fuel oil. Inventories are stated at the lower of cost or net realizable value. Inventory write-downs are made item by item, except where it may be appropriate to group similar or related items. Net realizable value is the estimated selling price of inventories less all estimated costs of completion and costs necessary to make the sale. Inventories are recorded at weighted-average cost.

### ● Construction in Progress

When construction contracts are accounted for by the percentage-of-completion method, the stage of completion of each contract is measured by the percentage of actual cumulative costs to the total estimated costs. Construction revenues and costs

for the current year are the actual cumulative construction revenues and costs in excess of the cumulative construction revenues and costs recognized in prior years, respectively. Any estimated loss on a construction contract is recognized currently.

#### ● Investments Accounted for by the Equity Method

Investments in which CPC holds 20 percent or more of the investee's voting shares or exercises significant influence over the investees' operating and financial policy decisions are accounted for by the equity method.

The acquisition cost is allocated to the assets acquired and liabilities assumed on the basis of their fair values at the date of acquisition, and the acquisition cost in excess of the fair value of the identifiable net assets acquired is recognized as goodwill. Goodwill is not being amortized. The fair value of the net identifiable assets acquired in excess of the acquisition cost is used to reduce the fair value of each of the noncurrent assets acquired (except for financial assets other than investments accounted for by the equity method, noncurrent assets held for sale, deferred income tax assets, prepaid pension or other postretirement benefit) in proportion to the respective fair values of the noncurrent assets, with any excess recognized as an extraordinary gain.

Profits from downstream transactions with an equity-method investee are eliminated in proportion to CPC's percentage of ownership in the investee; however, if CPC has control over the investee, all the profits are eliminated. Profits from upstream transactions with an equity-method investee, whether or not CPC has control over the investee, are eliminated in proportion to CPC's percentage of ownership in the investee.

When CPC subscribes for its investee's newly issued shares at a percentage different from its percentage of ownership in the investee, CPC records the change in its equity in the investee's net assets as an adjustment to investments, with a corresponding amount credited or charged to capital surplus. When the adjustment should be debited to capital surplus, but the capital surplus arising from long-term investments is insufficient, the shortage is debited to retained earnings.

When CPC's share in losses of an investee over which it has significant influence equals its investment in that investee plus any advances made to the investee, CPC discontinues applying the equity method. CPC continues to recognize its share in losses of the investee if (a) CPC commits to provide further financial support to the investee or (b) the losses of the investee are considered to be temporary and sufficient evidence shows imminent return to profitability.

#### ● Properties

Properties are stated at cost plus revaluation increment less accumulated depreciation and accumulated impairment losses. Major additions and improvements to properties are capitalized, while costs of repairs and maintenance are expensed currently.

Interest expenses for construction in progress are capitalized. Interest capitalized each month is calculated using the following formula:

Interest capitalized = Accumulated payments × Budgeted financing ratio of individual capital expenditure plans × Actual interest rate of loans

The total interest capitalized each month may not exceed the interest expense recognized in that month.

Depreciation is computed using the fixed-percentage-on-declining-balance method over the following estimated service lives prescribed by the Executive Yuan:

#### Machinery and equipment

Main part of the distillation equipment	15 years
Main part of the reforming feedstock prefraction equipment	15 years
Main part of the reforming equipment	15 years
Main part of the fluidized catalytic cracking equipment	10-15 years
Main part of the alkylation equipment	8-25 years
Main part of the visbreaking equipment	15 years
Main part of the vacuum distillation and bitumen equipment	7-15 years
Main part of the defat equipment	3-15 years
Main part of the chemical refining equipment	4-10 years
Main part of the hydrodesulfurization equipment	5-15 years
Main part of the lube oil blending equipment	8-20 years
Main part of the light oil rectifying equipment	12 years
Main part of the cracking equipment	7-10 years
Main part of the boiler type heater and other heating equipment	10-25 years
Main part of the machine and equipment for oil transportation and storage	15-20 years
Main part of the oil storage tank	8-15 years
Main part of the submarine pipeline for natural gas	15 years
Main part of the main land-pipeline for natural gas	15 years
Main part of the LNG storage tank	20 years

#### Transportation equipment

Motor vehicles	5-15 years
Oil tankers	14 years

#### Buildings

Factory building	30-45 years
Office building	35-60 years

The related cost (including revaluation increment), accumulated depreciation, accumulated impairment losses and any unrealized revaluation increment of an item of properties are derecognized from the balance sheet upon its disposal. Any gain or loss on disposal of the asset is included in non-operating gains or losses in the year of disposal.

#### ● Mineral Resources

Mineral resources previously recorded referred to the estimated value of the mineral reserves in areas for which the Government of the ROC had gratuitously granted CPC in 1990 the right to extract minerals. The estimated market value of these mineral reserves less costs to extract the minerals and normal gross profit up to June 2009 was capitalized as mineral resources and credited to capital surplus arising from donations. The capitalized costs were amortized using the unit-of-production method.

Under the Mining Law, which took effect on December 31, 2003, CPC has to make a payment for ownership of a mine based on the type of the mine, mining area and the right to explore or extract mineral deposits. When mining begins, CPC also has to pay for mining



rights at 2% to 50% of the value of the minerals extracted. Therefore, CPC wrote off the net book value of mineral resources and reduced capital surplus arising from donations by the same amount on December 31, 2003.

### ● Exploration Expenses

All geological and geophysical exploration costs are charged to current income.

The costs of drilling exploratory wells (“exploration well expenses”) in sites that have not yet proven to contain reserves of commercial quantities (“unproven sites”) are initially charged to current income. Exploration well expenses are subsequently capitalized as part of “oil and gas interests” accounts when (i) sites are proven to contain mineral reserves of commercial quantities and (ii) the construction of the wellhead equipment or offshore production platforms and flow lines is complete. The exploration expenses incurred in the current year are reclassified from “exploration expenses” to assets. Costs already charged to income in prior years are recognized as assets and as “non-operating income.”

The costs of drilling commercial wells, which are constructed after the sites are proven to contain mineral reserves of commercial quantities, are capitalized as assets. However, if the commercial wells turn out to be dry, such costs are charged to current income.

### ● Oil and Gas Interests

For oil site acquisitions, CPC’s payments for this purchase or investments in foreign joint ventures involving interest in oil sites - including CPC’s share in the costs of drilling commercial wells, production, transport and storage equipment but excluding CPC’s share in the costs of drilling exploratory wells and other exploration expenses - are capitalized as oil and gas interests. CPC’s share in joint ventures’ net earnings (or net losses) is recognized as other operating revenues (or other operating costs). CPC recognizes earnings remitted by joint ventures as a reduction of oil and gas interests. These costs are amortized at the ratio of the actual quantity of minerals extracted from the wells for the year to the estimated mineral reserve. The amortized costs and operating expenses paid to joint ventures are regarded as the cost of CPC’s share of the oil and gas extracted. The accompanying financial statements included the related sales and cost of goods sold attributable to CPC’s share of the oil and gas sold by the joint ventures.

CPC recognizes earnings from OPIC-Houston (“Huffco”) and translation adjustments based on the financial statements of Huffco for the same reporting period as that of CPC.

### ● Pension Cost

Under a defined benefit pension plan, pension cost is recognized on the basis of actuarial calculations without considering the planned privatization. The transition obligation is amortized over 17 years and 18 years, depending on the classification of employees. Under government regulations, CPC may recognize additional pension cost to meet the additional pension obligation arising from the planned privatization, but the additional pension cost should not affect the budgeted dividends to be distributed to the government.

Under a defined contribution pension plan, CPC makes monthly contributions to employees’ individual pension accounts and records them as current expenses.

### 3. Long-Term Investments

December 31, 2011 and 2010

(In Thousands of New Taiwan Dollars)

	<u>2011</u>	<u>2010</u>
<b>Long -Term Investments</b>		
■ China American Petrochemical Co., Ltd. -CPC owned 38.64% equity	\$5,281,578	\$ 5,673,297
■ Kuo Kuang Power Company Ltd. -CPC owned 45% equity	1,949,508	1,897,619
■ Faraway Maritime Shipping Corp. -CPC owned 40% equity	1,893,616	1,609,022
■ CPC Shell Lubricants Company Ltd. -CPC owned 49% equity	1,091,401	1,048,246
■ NiMiC Ship Holding Co., Ltd. -CPC owned 45% equity	409,938	1,017,957
■ Chun Pin Enterprise Co., Ltd. -CPC owned 49% equity	354,688	323,929
■ Daihai Petrol Corporation. -CPC owned 35% equity	124,701	122,239
■ Global Energy Maritime Co., Ltd. -CPC owned 48% equity	96,004	
■ Kuokuang Petrochemical Technology Co., Ltd. -CPC owned 43% equity	19,771	38,568
■ NiMiC Ship Management Co., Ltd. -CPC owned 45% equity	<u>13,663</u>	<u>7,913</u>
<b>Total Long-Term Investments</b>	<u>\$ 11,234,868</u>	<u>\$ 11,738,790</u>

## 4. Properties

### December 31, 2011 and 2010

(In Thousands of New Taiwan Dollars)

	<u>2011</u>	<u>2010</u>
Land	282,788,966	\$230,563,783
Less: Accumulated impairment loss on land	7,252	7,252
Land improvements	14,669,500	14,432,881
Less: Accumulated depreciation on land improvements	10,947,905	10,637,592
Buildings	36,506,327	36,869,576
Less: Accumulated depreciation on buildings	23,650,551	22,962,244
Machinery and equipment	396,527,028	387,793,204
Less: Accumulated depreciation and accumulated impairment loss on machinery and equipment	352,123,241	343,549,925
Transportation equipment	26,040,411	26,001,339
Less: Accumulated depreciation and accumulated impairment loss on transportation equipment	20,504,490	23,766,530
Leased assets	26,272,538	
Miscellaneous equipment	4,863,615	4,915,759
Less: Accumulated depreciation and accumulated impairment loss on miscellaneous equipment	4,235,158	4,306,724
Leasehold improvements	805	805
Less: Accumulated depreciation on leasehold improvements	713	685
Construction in progress	<u>80,561,984</u>	<u>66,062,172</u>
<b>Net Properties</b>	<u><b>\$456,761,864</b></u>	<u><b>\$361,408,567</b></u>

## 5.Long-Term Debt

December 31, 2011 and 2010

(In Thousands of New Taiwan Dollars)

	<u>2011</u>	<u>2010</u>
■ Improvement of Finance Structure	65,805,712	54,134,493
■ Construction of Gas-Station Plan)	817,566	892,170
■ Construction of RFCC Unit in Talin Refinery	18,371,409	14,731,002
■ The RDS Project of Taoyuan Refinery	667,855	77,379
■ Construction of LNG Receiving Terminal Project North Taiwan	9,169,605	13,932,261
■ No.6 Naphtha Cracker Project of Petrochemical	18,169,335	11,073,173
■ Upgrading of Gas and Diesel Quality Project in Talin Refinery	3,641,858	3,714,645
■ No.5-6 CCR Project Expansile in Talin Refinery	586,758	648,598
■ No.12 Boiler Replace Project of Petrochemical Business Division	225,852	506,220
■ No.4 Boiler Project in Taoyuan Refinery	906,979	482,063
■ Upgrading of NO.2 FCC Project in KOR	948,633	536,724
■ The Alkylation Project of Talin Refinery	2,571,536	872,605
■ Elimination and Replacement of Oil Tank	2,440,300	-
■ Others	<u>2,986,602</u>	<u>2,858,667</u>
<b>Total Long-Term Debt</b>	<b><u>\$127,310,000</u></b>	<b><u>\$104,460,000</u></b>

## 6. Pension Plans

The pension plan under the Labor Pension Act (LPA) is a defined contribution plan. Based on the LPA, the rate of CPC's monthly contributions to employees' individual pension accounts is at 6% of monthly salaries and wages.

CPC also has defined benefit plans under the Labor Standards Law (LSL). Benefits under the plans are based on employee's length of service and average basic pay in the last six months before retirement (for the length of service before the LSL was enacted) or three months before retirement (for the length of service after the LSL was enacted).

Personnel employed by CPC are referred to as either appointees or employees. The appointees' retirement fund (ARF), established under the guidelines of the Ministry of Economic Affairs, requires monthly contributions of amounts equal to 15% of monthly salaries and is administered by a pension plan committee. The ARF is deposited in the committee's name in a bank. The employees' retirement fund (ERF) entails monthly contributions by CPC to a fund at amounts equal to a fixed percentage of 15% of salaries and wages. The ERF is administered by a monitoring committee and is deposited in the committee's name in the Bank of Taiwan.

On June 1, 1999, CPC stopped paying pensions out of the pension funds. Pensions paid by CPC were charged instead to accrued pension cost. Pension payments totaled \$18,073,108 thousand from June 1999 to December 2010 and \$925,484 thousand in 2011, resulting in a decrease of \$18,998,592 thousand in accrued pension cost.

Under government regulations, CPC may recognize additional pension cost to meet the additional pension obligation arising from the planned privatization, but the additional pension cost should not affect the budgeted dividends to be distributed to the government.

Certain pension information is summarized as follows:

	<u>2011</u>	<u>2010</u>
Appointees' retirement plan	\$ 682,984	\$ 1,678,456
Employees' retirement plan	<u>10,381,798</u>	<u>11,951,558</u>
Accrued pension cost	<u>\$ 11,064,782</u>	<u>\$ 13,630,014</u>

## A Five-year Financial Summary

(In Thousands of New Taiwan Dollars)

	2011	2010	2009	2008	2007
Sales and other operating revenues	1,029,853,509	934,202,259	735,000,475	957,630,646	882,026,498
Income before income tax	(38,734,819)	24,102,004	28,922,608	(138,681,109)	14,344,844
per dollar of sales and other operating revenues (NT\$)	(0.04)	0.03	0.04	(0.14)	0.02
Cash dividends	-	-	-	-	-
per dollar of capita l(NT\$)	-	-	-	-	-
Owner's equity	273,593,428	267,989,508	253,209,847	213,867,151	335,609,444
per dollar of capital (NT\$)	2.10	2.06	1.95	1.64	2.58
General taxes and import duties	52,271,166	55,437,560	38,801,757	50,668,842	49,193,245
Commodity tax	67,071,667	66,106,757	65,295,400	61,703,178	67,432,967
Total taxes	119,342,833	121,544,317	104,097,157	112,372,020	116,626,212
Working capital (current assets less current liabilities)	(12,632,652)	26,123,750	16,379,420	(29,877,272)	69,711,200
Ratio of current assets to current liabilities	0.95	1.13	1.08	0.86	1.53
Long-term Liabilities	234,553,485	175,879,811	171,863,196	147,149,705	106,591,420
Properties, plant, and equipment-gross	868,231,174	766,639,519	743,756,832	729,952,388	715,758,299
Properties, plant, and equipment-net	456,761,864	361,408,567	346,392,870	339,115,223	333,092,049
Expenditures for plant and related assets	31,663,368	29,193,071	24,040,843	18,170,583	17,858,436
Exploration expenses (including all dry holes)	3,615,283	3,465,271	2,411,914	2,557,275	2,137,771
Total assets	803,985,770	658,272,961	646,672,019	590,868,764	596,948,959
Employed capital (owner's equity, long-term debt)	508,146,913	443,869,319	425,073,043	361,016,856	442,200,864
Employees on December 31	15,219	14,871	14,931	14,843	14,768
Sales and other operating revenues per employee	67,669	62,820	49,226	64,517	59,726

## A Five-year Operation Summary

	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Crude oil produced-total KL	88,264	575,648	564,059	857,151	904,291
daily average KL	242	1,577	1,545	2,348	2,478
Natural gas produced-total MCM	336,735	293,403	356,744	357,357	416,830
MCM per day	923	804	977	979	1,142
Wells drilled during the year	3	4	4	4	4
Crude oil processed-total KL	24,549,203	25,358,686	27,395,603	26,009,603	30,014,609
daily average KL	67,258	69,476	75,056	71,259	82,232
Natural gas sold-total MCM	15,276,357	14,056,431	11,139,358	11,449,599	10,727,103
MCM per day	41,853	38,511	30,519	31,369	29,389
Refined products sold-total KL	33,261,506	36,161,661	34,174,102	35,160,109	40,032,138
daily average KL	91,127	99,073	93,628	96,329	109,677
Petrochemicals sold-MT	4,509,329	4,636,198	4,160,566	3,893,507	4,769,252
daily average MT	12,354	12,702	11,399	10,667	13,066







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