



2011 Sustainability Report

ENERGIZE · HARMONIZE · REALIZE





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exceeded **100%**

The replacement ratio of oil and gas reserve equivalents continued to exceed 100%, which consolidated and strengthened Company's resource base.

1,286 million barrels

Annual domestic production of oil equivalent reached 1,165 million barrels, and overseas net production rose to 121 million barrels, which ensures energy security for the sake of stable economic development.

75 billion cubic meters

We supplied over 75 billion cubic meters of natural gas, up by 19.5% year on year.

the **7th** 10 Mt/a refinery base

Significant progress was achieved in the adjustment of strategic refinery layout. Since its launch, Liaoyang Petrochemical Company has become the Company's seventh 10 Mt/a refinery base.



CUSTOMER-FIRST MARKET SERVICE 34	"PEOPLE-ORIENTED" - EM- PLOYEE DEVELOPMENT 42	GIVING BACK TO SOCIETY 50
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8,704_{km}

The trunk line of the 8,704 km-long Second West-East Gas Pipeline, with a designed annual transportation capacity of 30 billion cubic meters was commissioned. Hence, natural gas from Central Asia was transported to the Pearl River Delta in 2011.

2,000_{billion RMB}

Sales of the Company exceeded 2,000 billion RMB according to international financial reporting standards.

96.7%

The ratio of high grade gasoline rose 12.2 percentage points to 96.7%. We provided more quality products to our customers.

1.13_{million tons}

We conserved 1.13 million tons of Standard Coal Equivalent, 1744 million cubic meters of water, and reduced COD and SO₂ emissions by 5.4% and 2.5%, respectively. Deaths caused by industrial accidents dropped 47.1%. The safety and environmental protection situation has been improving.

2_{achievements}

Two achievements were awarded the first prize for National Scientific and Technological Advancement.

FROM THE CHAIRMAN OF THE BOARD



江泽民

Jiang Jiemin, Chairman of the Board

In 2011, committed to the mission of “Caring for Energy, Caring for You”, we ensured oil and gas supply, boosted economic growth, protected the environment, and promoted social development. We also set our sights on building “a green, international and sustainable PetroChina” in the coming five years, to deliver the commitment we made to investors and the public.

Promoting Green Energy

Green energy is booming around the globe. As the world’s largest emerging economy, China has become an important energy consumer, which is also faced with the dual challenges of rising energy demand and a commitment to reduce CO₂ emissions. As one of the major energy suppliers in China, we strategically accelerate natural gas development while continuing to increase crude oil production, expand refining capacity and enhance the quality of our oil products. In 2011, we continued our strategy of increasing resources based on major oil & gas basin exploration and achieved important discoveries in the Sichuan Basin and Bohai Bay. Our gas supply experienced substantial growth as a result of well-organized gas supply measures, such as, coordinating the development of conventional and non-conventional gas, and domestically produced and imported gas. To enhance natural gas utilization, we encouraged power generation and other industries to replace coal with natural gas, and oil with LNG, to reduce carbon emissions. At the same time, we have committed more efforts to exploiting alternative and clean energy, including ethanol fuel and non-grain based aviation bio-kerosene. We have reinforced our efforts in saving energy and reducing emissions to sustain harmony between economic growth, social development and environmental protection. We believe that with concerted efforts from the government, enterprises and consumers, the development of green energy will lead us to a higher quality living environment.

Strengthening International Cooperation

Meeting humankind’s ever-increasing demand for clean energy and adapting to more complicated exploration conditions are common challenges faced by the players in the global petroleum industry, which call for closer cooperation among international energy companies, service companies and cooperation host countries. Win-lose competition is being replaced by win-win cooperation, a realistic option that emphasizes complementary advantages and mutual benefits. PetroChina is committed to strengthening international cooperation, and a relatively integrated industry chain has taken shape in its international business, from exploration and development to refining and

chemicals, pipeline storage and distribution, and sales and trade. Five overseas oil and gas cooperation zones and three international oil-gas operating hubs have been established. We have been seeking new business models for the common benefit of all parties, and deepened multi-dimensional strategic cooperation with our peers, service providers and host countries to tackle energy and environmental challenges. In 2011, we cooperated with BP in the Rumaila project in Iraq, taking the lead to substantially increase output. Overseas oil-gas net output exceeded 121 million barrels.

Transforming the Development Pattern

Technological advantages and managerial expertise are critical to enhancing core competitiveness. PetroChina relies on the transformation of its development pattern to sustain growth, in particular, on safer and cleaner operations, as well as technological and management innovations. In 2011, we adopted tertiary recovery technology and maintained crude yields of 40 million tons at Daqing Oilfield despite the high water cut. We researched and developed matching technologies, including horizontal well staged fracturing, to develop the ultra-low permeability reservoir, dramatically boosting oil-gas output at Changqing Oilfield to over 40 million tons. Two LNG projects in Dalian and Jiangsu have been commissioned and connected to the gas supply networks. We reinforced management in institutions, process and standards, and conducted fine management in operations. Consequently, we achieved progress in safe production, environmental protection and resource conservation while keeping our entire production process under control. We took advantage of the information system with ERP at the core to facilitate operations and management. We are convinced that PetroChina is capable of bringing more benefits to society through innovative technologies and management solutions.

Boosting Socio-economic Development

Being a listed company on three stock markets at home and abroad, PetroChina strives to bring handsome returns to its shareholders, and bring mutual growth and benefits to local communities and its employees in the scope of its business. Wherever we operate, we have been enthusiastically involved in public welfare endeavors. We have shown great enthusiasm in public welfare work, such as supporting education, alleviating poverty, and building public facilities and infrastructure. More efforts have been made to boost local socio-economic growth, for example, purchasing local products and services, hiring local labor, etc. We have strived to build up the benefit sharing system

with local communities, and have integrated our advantages with local opportunities and resources to deepen strategic cooperation.

Looking to the future, we will, as always, fulfill our duties and strive to deliver better returns to our shareholders, employees and society. In this way, PetroChina aims at becoming a loyal, trustworthy and respected corporate citizen.

Thank you very much for reading this report for your interest in PetroChina. Your comments and suggestions are of great value to us.

DIALOGUE WITH THE PRESIDENT



周吉平

Zhou Jiping, Vice Chairman of the Board and President

What is your take on the future development trends of the global petroleum industry?

Looking to the future, I envision three trends for our industry as follows: First, oil and natural gas are expected to remain dominant energy sources, while natural gas will see its share in the energy mix rise to that of oil or coal before 2030. Second, our overall E&D conditions are getting much more challenging and the quality of reserves is gradually deteriorating. As a matter of fact, such areas and resources as deepwater, polar regions, tar sands and oil shale are becoming an increasingly important replacement of strategic resources and the main focus of our technological innovation. Third, Due to the global climate change, a carbon-emission constrained era is around the corner and a green energy revolution is under way. New energy and renewables are getting more attention. Therefore, the industry is faced with the double challenges of energy supply and environmental protection.

PetroChina is rapidly developing into an international energy company. How do you view international competition and cooperation?

In the context of economic globalization, opportunities and challenges are ubiquitous, and so are competition and cooperation, both of which are very common in business activities. Facing severe challenges, one player alone cannot win a game. But we will work it out with concerted efforts. It has been proven that IOCs' long-term success depends on whether and how their own interests are tied up with the sustainability issues of local communities. NOCs have to learn advanced technologies and management experience from their rivals. The kind of partnership offering access to markets, technology, capital and resources is much more likely to achieve the target of win-win. Mutual respect and trust is the cornerstone of cooperation. A forward-looking approach is also needed to seek innovative cooperation models. Cooperation along the entire value chain is conducive to obtaining more access to resources and markets, sharing risks and maximizing returns for shareholders and host countries. Our cooperation with partners such as Shell and ExxonMobil in China has been fruitful. Win-win Partnerships with NOCs of host countries have also fostered local economic growth and social development. As PetroChina becomes increasingly localized, it will provide more common ground for shared interests and opportunities.

The industry is faced with severe challenges posed by global climate change and carbon emission restrictions. What's PetroChina's role in the international green energy revolution?

PetroChina has foreseen and embraced the green energy revolution. In early 2011, we proposed the objective of building a green PetroChina to embark on a greener track. First, we are accelerating the development of natural gas from exploration and development, pipeline storage and transportation, to marketing and downstream utilization. Second, we are speeding up the construction of gas transportation infrastructure and increase gas imports. Third, we will proactively develop non-conventional natural gas by boosting mass exploration of coal-bed methane, pressing ahead with exploration and cooperation in shale gas, and launching tight gas evaluation. Fourth, we are promoting the research and development of biomass fuels such as fuel ethanol and aviation bio-kerosene.

Technological innovation is the major driving force for sustainable development. How does PetroChina build its technological innovation capabilities?

Over the past five years, we have constantly improved our innovation system and brought our proprietary innovation capabilities to a new level, giving support to the sustained and effective growth of our business. In the future, we will seek high-end strategic alliances with our peers and forge ahead with exchanges with domestic and international scientific and technological circles. We will also encourage and support more participation of our technical experts in international academic organizations, conferences and projects. More efforts will be made to enhance our technological innovation, including strengthening training and building up innovation bases, expanding growth channels for our technical experts, and attracting more talents.

In recent years, PetroChina has expanded its international operations. However, when exposed to uncertainties and risks in countries and regions with turbulent political situation, volatile policies and legislation or even wars and terrorist attacks, how does the Company effectively prevent and control these situations?

PetroChina is experiencing rapid business development both at home and abroad. Most of our overseas projects are located in high risk countries and regions, exposing us to uncertainties, unexpected factors and safety risks. Given that, we have adopted a number of prevention and control countermeasures. First,

we have launched joint operations with strong and competent partners to share both achievements and risks with the host countries and partners. Second, we further optimized our portfolios and focus on our priorities. Third, we have devised flexible and practical operations strategies to adapt to political, economic and environmental changes. Fourth, we have hired more local employees. Fifth, we have strictly complied with the laws and regulations of the host countries, respected local culture, and honored our social responsibilities, for instance, supporting and participating in public welfare endeavors, protecting the environment, and bringing benefits to local communities. Lastly, we have established early warning and emergency response mechanisms, and improved risk control systems. Our emergency handling capabilities have enhanced to secure the operation of overseas projects and the safety of employees. Our policies and measures were proven effective, and we will persist with such practices and strive to make further improvements.

ABOUT US



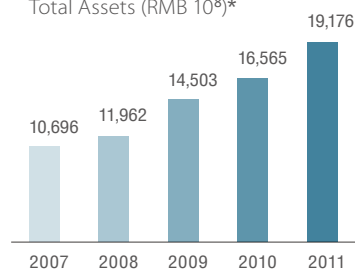
Headquarters of the Company

Company Profile

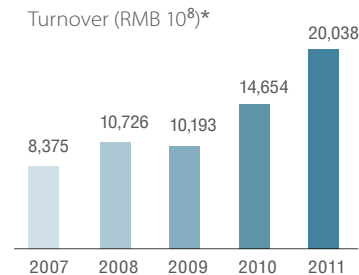
PetroChina Company Limited (PetroChina) was established on 5 November, 1995, under the restructuring of China National Petroleum Corporation (CNPC). PetroChina was listed respectively on the NYSE (ADS code: PTR) and the HKSE (stock code: 00857) in April 2000 and on the Shanghai Stock Exchange (stock code: 601857) in November 2007. By 31 December, 2011, the total market value of PetroChina on the A-share market reached 1577.121 billion RMB, and CNPC holds 86.507% of shares in PetroChina.

PetroChina adheres to the corporate policy of “Caring for Energy, Caring for You” and the core operation principles of “Honesty, Innovation, Performance, Harmony and Safety”. PetroChina aims to conduct its business in an effective, safe and environmentally friendly manner, in pursuance of harmony between the economy, the environment and society, and providing sustainable energy for economic and social development to create a better life for all.

Total Assets (RMB 10⁸)*



Turnover (RMB 10⁸)*



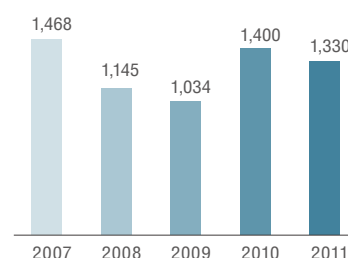
Core Businesses

PetroChina is engaged in a broad range of businesses in relation to oil and natural gas, which mainly include the exploration, development and production of crude oil and natural gas, refining, transportation, storage and sales and marketing of crude oil and refined products, the production and sales and marketing of primary petrochemical products, extended chemical products and others, and the transportation and sales and marketing of natural gas.

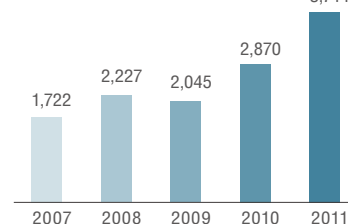
Development Strategies

Through a scientific approach, we implement the three strategies related to resources, markets and internationalization, and focus on the transformation of business growth models, the enhancement of proprietary innovative capabilities, the establishment of a long-term mechanism for work safety, environmental protection and energy conservation, all with a view to creating a harmonious enterprise.

Net Profit (RMB 10⁸)*



Taxes (RMB 10⁸)*



*Under International Financial Reporting Standards

Major Appraisals and Awards in 2011

Agencies	Appraisals and Awards
Shanghai Stock Exchange	Constituent stock of SSE Social Responsibility Index 2011 Award for Board of Directors (the only petrochemical company nominated) Ranked 1 st in Internal Control Index of China's Listed Companies (2011)
Hang Seng Indexes Company Limited	Constituent stock of Hang Seng Corporate Sustainability Index
Dow Jones Indexes Company	Constituent stock of Dow Jones Asia Indexes
Forbes	Ranked 6 th among the world's 2,000 largest public companies
Petroleum Intelligence Weekly	Ranked 5 th among the world's Top 50 oil companies
Platts	Ranked 4 th among top 250 global energy companies Best integrated oil and gas company in Asia
Fortune	Ranked 2 nd among Fortune 500 China
Financial Times	Ranked 2 nd among FT Global 500
Corporate Governance Asia	Corporate Governance Asia Recognition Awards 2011 Best Investor Relations Award (Chinese enterprise)
BrandZ	The only petrochemical company in China nominated as "Top 100 Most Valuable Global Brands 2011"

Stakeholders

PetroChina is able to evolve and develop based on the foundation of trust and support of our stakeholders. We are dedicated to improving quality and efficiency to maximize our long-term value. We are also committed to delivering achievements to stakeholders to maximize the common interests of the Company and its stakeholders so as to achieve harmonious and mutually beneficial growth.

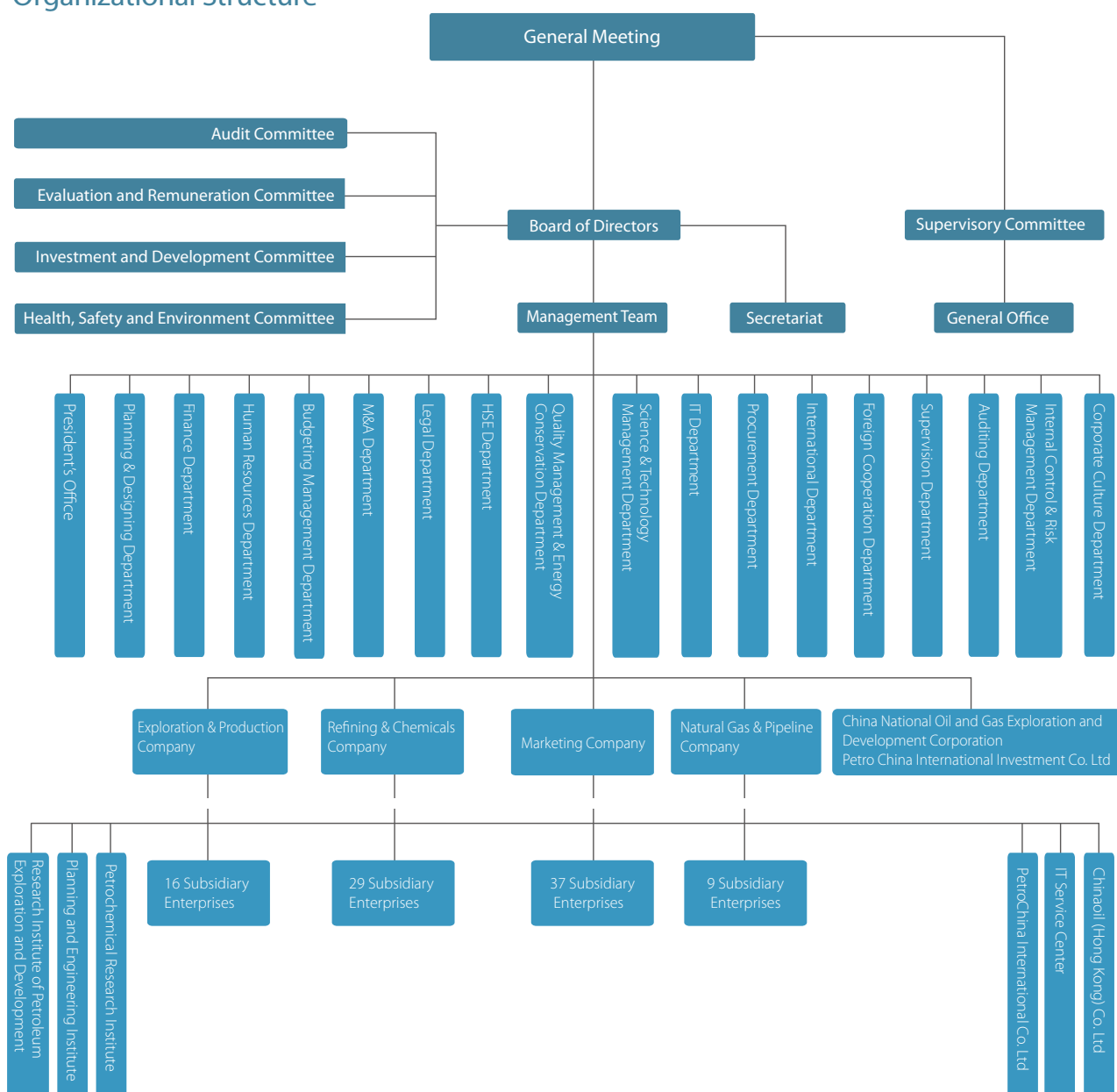
Stakeholders	Communication approach
Government	(1) Participate in discussion on formulation of policies, regulations and standards, and offer enterprise expertise (2) Attend to public concerns and improve corporate behavior (3) Launch strategic cooperation with relevant departments (4) Attend seminars and forums
Shareholders	(1) Disclose information as required by law (2) Roadshow activities (3) Issue reports and announce results performance on a regular basis (4) Create a mailbox to Secretary of Chairman to receive public opinions
Employees	(1) Employee representatives in the Board of Directors and Supervisory Committee (2) The establishment of trade unions at all levels (3) Convene employee representatives' meeting (4) Organize various staff training (5) Set up complaints and feedback system
Consumers	(1) Carry out activities to protect consumers' interests (2) Publicize commitment to quality services (3) Provide hot-line services (4) Carry out customer satisfaction survey
Business partners	(1) Hold tender meetings (2) Hold large cross-border business negotiations and technical exchange meetings (3) Use of the e-transaction platform (4) Share management expertise and technical standards (5) Contract negotiation and routine meetings (6) Hold training for business partners (7) Hold business exchange meetings
NGOs	(1) Contribution of the Company's experience (2) Participate in related activities (3) Facilitate international exchanges
Community	(1) Hold dialogues with local communities (2) Community visits to enhance communication (3) Society assessment and environmental evaluation (4) Publicize the promotion of education (5) Increase information disclosure

Key activities	Key performance indicators
(1) Abide by laws and regulations and operate with integrity and in compliance with the requirements (2) Stabilize oil and gas supply (3) Pay close attention and participate in government's policy discussion on climate change, energy-saving and emission reduction (4) Promote local employment and cultivate local talents (5) Pay tax to host countries according to local laws	(1) Fees and taxes paid (2) Oil and gas output (3) Performance in energy-saving and emission reduction
(1) Operate in a responsible manner to maintain good reputation (2) Convene annual general meetings (3) Equal treatment of shareholders, value opinions of small and medium-sized shareholders (4) Hold dialogues with investors and shareholders in various forms	Dividend payout ratio
(1) Carry out employee skills' training and hold skills competitions (2) Occupational health check (3) Promote labor localization for overseas projects (4) Strengthen basic building and set up platform for employee development (5) Safety guarantees for overseas employees	(1) Number of employees (2) Rate of the occupational health examination (3) Staff training (4) Ratio of local employees in overseas projects
(1) Strengthen quality management (2) Hold "Quality Month" activity (3) Carry out appraisal for quality management system (4) Launch activities such as "Serve the public and strive for excellence" to improve quality service at gas stations (5) Provide a "speedy change of engine oil" service at gas stations (6) Increase supply of clean fuel such as natural gas, high-standard gasoline and diesel (7) Ensure oil supply for disaster relief and rescue as well as for agricultural production	(1) Oil products supply (2) Natural gas supply (3) Quantity of chemical products (4) Number of gas stations (5) Percentage of high-standard fuel
(1) Use www.energyahead.com as a transaction platform and strengthen centralized procurement management to provide suppliers with equal opportunities and establish PetroChina strategic supplier system (2) Emphasize communication and coordination with suppliers, strengthen HSE management of contractors by creating a safe and healthy working environment for operators (3) Improve security measures and emergency response network	(1) Total quantity of e-commerce procurement (2) Number of business partners
(1) Attend Global Compact Leaders Summit and UN Global Compact High Level Forum China and submit COP (2) Undertake and participate in the 23 rd Annual Meeting of Natural Gas Technology Committee of International Standardization Organization (ISO/TC 193) (3) Participate in 2011 API Exploration and Production Summer Standards Conference (4) Hold various forms of dialogues on external concerns (5) Participate in and support international environmental standardization (6) Participate in related forums and conferences	(1) Number of institutions attended (2) Number of international forums and conferences attended
(1) Disaster relief, rebuilding disaster-hit areas, financial support for education, poverty alleviation (2) Support and drive local economic growth through large projects (3) Supply clean energy such as natural gas to remote regions (4) Hold staff volunteer activities (5) Procure locally where the business is carried out (6) Provide job opportunities and trainings for communities	(1) Investment in social welfare (2) Number of volunteers (3) Local purchase expenditure (4) Number of local supplier and contractors

OPERATION WITH CREDIBILITY AND COMPLIANCE

Following the legal concepts for governing modern enterprises such as supremacy of law, equal rights and responsibilities, compliance with procedures, honesty and accountability with a sense of fairness and justice, and protection of rights according to law, we focus on operating with credibility, in compliance with laws and regulations, as well as business codes and corporate regulations. We deal with suppliers, customers, government agencies, business partners and competitors under the principles of fairness and credibility, and endeavor to improve our intrinsic quality and value through operation of credibility and compliance.

Organizational Structure



Corporate Governance

We have stringently followed the requirements made by domestic and foreign regulators, constantly standardize and improve our corporate governance structure, set up Annual General Meetings, a Board of Directors and relevant Board Committees, a Supervisors Committee and a management team with the CEO taking responsibility. All these agencies are operating in accordance with standards and efficiencies. We have been standardizing internal management and operations according to laws and regulations. In addition, we also provide timely, accurate, complete and reliable information on the Company to all market participants and supervision departments so as to enhance our value.

Annual General Meeting (AGM)

The Company hosts the Annual General Meeting, exercising its functions and powers in accordance with the law. We hold shareholders' meeting annually to ensure all shareholders enjoy equal rights that can be exercised effectively. In order to ensure the fairness and reasonableness of a connected transaction, CNPC as a controlling shareholder, avoids voting at the AGM. Our independent non-executive directors review our full disclosure on detailed contents and executions of a connected transaction.

Board of Directors and Board Committees

Our directors and Board of Directors have diligently carried out governance in order to be responsible to shareholders. All directors participate in board meetings in an earnest and responsible manner and perform their responsibilities assiduously to determine the Company's major decisions, appointments, dismissal and supervision of members in executive agencies and communicate with shareholders. The Board of Directors has four board committees, namely the Audit Committee, Investment and Development Committee, Evaluation and Remuneration Committee, and the Health, Safety and Environment Committee, which support the Board of Directors for decision making.

The Board of Directors always stick to the principle of being scientific, democratic and responsible, which has been a solid guarantee of the continuous and stable improvement of our operating performance. The Board of Directors was granted the "2011 Award for Board of Directors" by Shanghai Stock Exchange.

By the end of 2011, there were 13 directors on our board, including 5 independent non-executive directors and 1 employee director. Independent non-executive directors protect rights and interests of small shareholders in an objective and independent manner, and also carry out a supervisory role in the decision making process.

Supervisors and Supervisory Committee

As specified in laws and administrative regulations, the Supervisory Committee is responsible for carrying out the duties of the AGM such as following procedures, attending supervisory committee meetings, participating in all board meetings and reporting to the AGM. In order to be responsible

for all shareholders, Supervisory Committee supervises and monitors the compliance of finance officials, directors and other senior management of the Company, and also proposes recommendations for business operations and investment projects. By the end of 2011, there were 8 members of the Supervisory Committee, including 3 employee representative supervisors and 1 independent supervisor.

Executive Body

The management under the leadership of the President - including the Vice President and the Financial Controller - is the executive body of the Company. It is appointed by and is accountable to the Board of Directors. In accordance with the provisions set out in the *Articles of Association* and the authorization of the Board of Directors, this executive body implements the resolutions of the Board of Directors and organizes business activities such as production and operations. The Company has adopted an administrative system containing two-levels of administrative management (headquarters - regional companies) and three-levels of business management system (headquarters - professional branches - regional companies). The Company's main business consists of four major segments, namely exploration and production, refining and chemicals, marketing, and natural gas & pipelines. These segments are operated by four branch companies, respectively. Our international businesses are operated by China National Oil and Gas Exploration and Development Corporation (CNODC) and PetroChina International Investment Company Limited.

Our connected transaction with CNPC has been agreed during general and daily business operations according to articles of treating shareholders equally and rationally, and guided on the basis of general commercial terms (if similar agreement is not available, then the conditions should not be inferior to an independent third party term). Our independent auditors carry out auditing of connected transactions between CNPC and PetroChina annually and confirm that all transactions are conducted according to agreement terms.

Please visit <http://www.petrochina.com.cn/PetroChina/tzzgx/gszljg/> for more information on the corporate governance structure.

Corporate Governance Developments in 2011

Annual General Meeting	<ul style="list-style-type: none"> Held 2010 Annual General Meetings, deliberated and approved 10 resolutions including <i>2010 Report of Board of Directors</i>, <i>2010 Report of Supervisory Committee</i>, <i>2010 Financial Report</i> and <i>2010 Profit Allocation Plan</i>, etc. Held 2011 Extraordinary General Meetings, deliberated and approved 2 resolutions including <i>Resolution on Applying for Updating Limit of Sustainable Connected Transaction among PetroChina, CNPC and Companies with common shares</i>, etc.
Board of Directors	<ul style="list-style-type: none"> Held 4 routine meetings, listened to 1 special report presentation and Audit Committee proposals, deliberated and approved 22 resolutions including <i>2010 Resolution on President's Work Report</i>, <i>Resolution on 2010 Operation Performance of President's Team</i> and <i>2011 President's Performance on Contract Formulation</i>, <i>Resolution on Internal Control Report</i> and <i>Resolution on Sustainable Development Report</i>, etc. Held 6 temporary meetings, deliberated and approved 8 resolutions including <i>Resolution on Implementation Plan of Internal Control Regulation of PetroChina Company Limited</i>, <i>Resolution on Approving 20-F Annual Report 2010</i> and <i>Resolution on 2011 Third Quarter Report</i>, etc.
Supervisory Committee	<ul style="list-style-type: none"> Held 6 meetings, listened to reports made by relevant departments, deliberated and approved 15 proposals and completed review of the Company's annual report, completed reappointments and chairman election of Supervisory Committee, provided relevant materials for information disclosure according to the requirements of supervision departments. Attended 4 meetings of Board of Directors, listened to 23 proposals and reports including <i>2010 President's Work Report</i> deliberated by Board of Directors, released 5 proposals including <i>2010 Proposal on Financial Report Reviewed by Supervisory Committee</i>. Participated in Annual General Meetings and Extraordinary General Meetings and delivered 4 proposals which were approved by the meetings including <i>Proposal on Reappointments of Supervisory Committee</i>, etc. Launched a financial survey through sampling, identified 95 problems, proposed 52 suggestions, drafted <i>2010 Financial Sampling Survey Report</i> and <i>Mid-2011 Financial Sampling Survey Report</i>, launched inspection on supervisors and conducted reports to provide suggestions for improvement.

Control Systems

We have been constantly improving the control system, strengthening the integrated application of the information system with ERP at the core, and enhancing source and process control by utilizing information technology, so as to fulfill our corporate social responsibility and realize sustainable development.

Internal Control & Risk Management System

We pay great attention to internal control and risk management. In 2011, we progressed in the building of our internal control system and regulating business processes to constantly improve our risk managing capacity. The Company has passed

internal control audits conducted by external auditors for six consecutive years and ranked 1st in the "Internal Control Index of China's Listed Companies (2011)". We launched risk evaluations in order to improve management strategies for 5 major risks including health, safety and environmental protection. We

compiled and completed risk management reports for 24 affiliates, standardized business processes, sorted out procedures of 13 departments, and released 19 professional process standards covering 60% of our main businesses. In addition, we promoted the internal control system of the overseas business and strengthened risk control for overseas projects. We established regulations for management self-evaluation, built a management evaluation mechanism, improved testing quality, arranged testing plan according to actual management needs, and enhanced supervision and system execution by self-testing, management testing and evaluation testing.

Anti-corruption System

We have steadily enhanced the building of anti-corruption system by deepening education, improving the system, strengthening supervision and imposing tougher punishment standards. In 2011, we launched an education campaign to encourage loyalty, responsibility, strong work ethics and integrity. We improved operation and management systems of all kinds with significant achievements made in the supervision system of key areas including investment, purchasing, bidding and sales of oil products. We also carried out special supervision and inspection in project management, purchasing management and marketing management to prevent management loopholes. We also improved the level of corporate governance by implementing strict punishment regulations on management violations and also conducted special activities to prevent commercial bribery and strengthened punishment to other irregularities and violations.

HSE Management System

In 2011, we promoted the building of Health, Safety & Environment management system (HSE) to strengthen the management of safety and environmental protection. Safety and environmental protection has become stable and has been improving (see page 25).

Quality Management System

We have earnestly implemented the concept of “emphasis on the environment and safety, high quality and people-oriented” and adhered to the principle of “honesty and quality excellence” to achieve the goal of “zero defects, zero accidents, and being a leader in China and first-class in the world” to constantly promote the building of quality, measurement and standardization system. In 2011, we continued the foundation management building project with quality, measurement, standardization, process management and institutional improvement being the top priorities. We formulated the *Promoting Plan for Quality Management System Building* and launched quality management system certification and improved quality and measurement inspection agencies (see page 37).

Emergency Response System

With risk management as the core of the operation, we focus on enhancing the emergency response capacity of grassroots units to improve emergency response management. In 2011, we improved the emergency plan system from the headquarters to grassroots site based on the categorization of natural disasters, accidents, public health problems, and social security issues. Based on the plan model of “general + special items”, we improved emergency response plan, making on-site disposal procedures simpler and clearer. We continuously strengthened the emergency response system model, reinforced the building of the commanding agency and working agency so as to strengthen the working system that encompasses “unified leadership, divided accountability and departmental coordination”. We established an emergency response team dealing mainly with operational protection and rescue within the Company as well as in the community. We set up the emergency response centre for pipeline management and further reinforced the construction of corporate-level emergency rescue centers which can handle problems from fire control, hazardous chemicals, oil & gas pipelines, blowout control to offshore emergency rescues.

Scientific Innovation System

Science and technology constitute a primary productive force. We have been constantly improving the scientific and technological management system in order to provide a foundation for innovation. In 2011, we kicked off the implementation of “the 12th Five-Year” scientific plan to promote the building of a scientific and technical innovation system, launched on-site experiments for major national scientific and technical projects, strengthened project management to facilitate implementation of major projects. Through these efforts, the realization of the expected goals could be achieved. We established key laboratories/experiment bases, which provided a gateway for innovative capabilities. We enhanced cultivation, introduced scientific and technical talents, organized exchanges programs and attended important international conferences so as to better understand and learn the development trends of advanced technologies in the global energy industry.



SUSTAINED ENERGY SUPPLY

01

Energy is essential for human survival and development. As an integrated energy company, it is our mission to meet increasing energy demands, fuel economic growth and promote social progress. We strive to enhance energy supply capabilities and optimize the energy mix through technology and management innovation, so as to ensure stable energy supply and facilitate economic and social development.

1. Consolidating Resource Base

Oil and gas resources are the primary basis to safeguard energy supply and the foundation for the Company's sustainable development. Oil and gas exploration is our top priority. Since most of the world's remaining resources are constrained in economically marginal reservoirs featuring low permeability, ultra-thin, heavy oil and super heavy oil, we strengthened technology R&D, promoted management innovation, reduced costs and improved efficiency to further consolidate and expand the resource base so as to enhance energy supply capability.

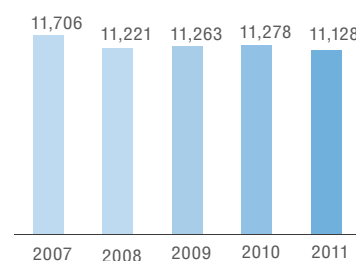
Major Exploration Achievements

In 2011, we continued to deepen comprehensive geological research, promote integrated exploration and development, strengthen oil exploration and highlight natural gas exploration. As a result, a number of major exploration achievements were made in Ordos, Tarim, Sichuan and Bohai Bay basins. According to independent reserve assessment agencies, our replacement ratio of oil and gas equivalent reserves was 103%.

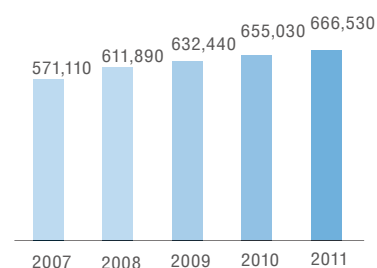


A major oil discovery was made in the Ordos Basin.

Proven Crude Reserves (10^6 barrels)



Proven Gas Reserves (10^8 ft³)



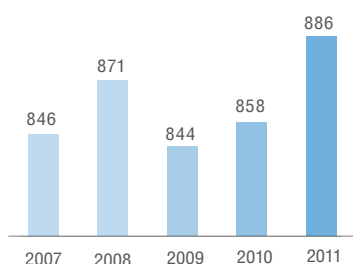
Stable Production in Major Oilfields

In 2011, we launched the Oilfield Development Year Campaign for the third consecutive year, with waterflood as the core development method to maintain stable production in mature oilfields. Focusing on Jiuyan in Changqing, Xinglongtai in Liaohe and Tazhong in Tarim, we accelerated the building of production capacity and pushed forward new field development. Over 1,000 horizontal wells were drilled, and the techniques for multi-stage fracturing of horizontal wells and multi-layer fracturing of vertical wells were improved to increase single well output in low permeability and extremely-low permeability reservoirs. As a result, our crude oil production maintained stable growth. Daqing Oilfield produced 40 million tons of oil for the ninth consecutive year, and Changqing Oilfield produced over 40 million tons of oil and gas equivalent for the first time.

Rapid Growth of Natural Gas Production

In 2011, we continued to strengthen the development of natural gas fields with a focus on six production capacity building projects including Sulige and Gaoqiao. Domestically, we produced over 2 trillion cubic feet of marketable natural gas.

Crude Oil Production (10^6 barrels)



Marketable Natural Gas Output (10^8 ft³)



Case Study Technological Innovation Enabled Daqing to Maintain Annual Oil Production at 40 Million Tons

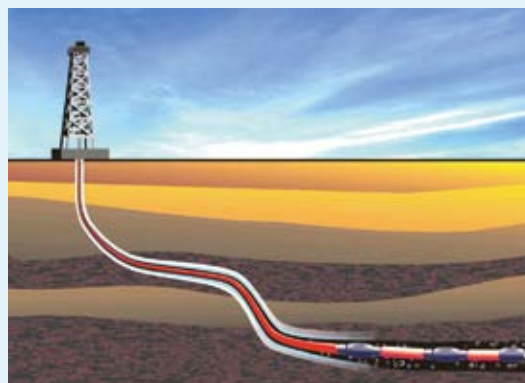
More than 50 years of exploration and development has pushed Daqing into its later development stage with an ultra high water cut and recovery percentage of reserves. To mitigate the production decline year after year, a series of key technological research projects, including waterflood, polymer flooding, and ASP flooding for heterogeneous multi-layer continental sandstone reservoirs, were carried out to help stabilize oil production.

In 2011, Daqing Oilfield achieved the goal to maintain its oil production at 40 million tons through fine reservoir description, sophisticated waterflood, carefully designed stimulation measures and fine management. Over the past 50 years, the cumulative proven oil reserves of Daqing Oilfield totaled over 6 billion tons, and the cumulative oil production of the field exceeded 2 billion tons, accounting for over 40% of the country's total. Since 1976, Daqing had maintained an annual oil production of 50 million tons for 27 consecutive years, and then maintained the figure at 40 million tons for nine years in a row. This is a miracle among peer oilfields worldwide and has greatly safeguarded China's energy security.



Case Study Large-Scale Application of Horizontal Wells Helped Changqing Produce over 40 Million Tons of Oil and Gas Equivalent

Most of the producible oil and gas at Changqing Oilfield is deposited in reservoirs with low permeability, low pressure and low abundance. A package of technologies, represented by multi-stage fracturing of horizontal wells, have been developed after years of study and testing, making it possible to tap these resources economically and efficiently from tight reservoirs with extremely low or ultra low permeability. In the past three years, 210 horizontal oil wells and 281 horizontal gas wells were drilled in Changqing. Multi-stage fracturing of these wells boosted the average single well output to 3~5 times that of vertical wells, saving 50% of land use. In 2011, Changqing produced 5 million tons more oil and gas equivalent than in 2010, including 13 bcm of natural gas yielded from Sulige, up by 30%, a considerable part of the field's 40 million tons annual oil and gas equivalent production.



Sketch map of a horizontal well

Separate layer fracturing of horizontal wells is a major stimulation measure in the development of low permeability thin reservoirs, which can increase single well controlled reserves and enhance per well productivity. Significant breakthroughs and mass application of this technology will convert those oil and gas reserves unrecoverable into recoverable, facilitate economically viable and efficient development of extremely low permeability oil and gas reservoirs, and provide technical support for the commercial development of unconventional gases such as shale gas and tight gas. In 2011, we fractured 2,634 layers in 503 horizontal wells, which lead to a reduction of 1,000 vertical wells and a saving of land use by over 133 hectares. The average production per fractured horizontal well is three times of that of a vertical well.



2. Optimizing Layout of Refining and Chemicals

Regionally, the distribution of China's refining and chemical business is uneven. Oil products supply in some regions relies on transportation from north to south or from east to west, pushing the cost to a high level. Additionally, more inferior crude oil and increasing demand for better quality oil products have posed growing challenges. These have forced us continue to optimize resource allocation and strategically adjust the layout and structure of our refining and chemical business.

In 2011, transformation and expansion of Liaoyang Petrochemical's refining project was put into operation, boosting its capacity to 10Mt/a. Karamay Petrochemical and Jinzhou Petrochemical completed their oil products quality upgrading projects. A number of projects, including refining and chemicals integration project at Sichuan Petrochemical, the 5Mt/a refining capacity expansion project at Hohhot Petrochemical, the refining upgrade project at Urumqi Petrochemical, Fushun Petrochemical's 10Mt/a refining project and 1Mt/a ethylene project, etc, were well underway. By the end of 2011, PetroChina had established

seven 10Mt/a refinery bases, four ethylene production bases, and two aromatic production bases, which further improve our supply capabilities in the refining and chemicals markets.



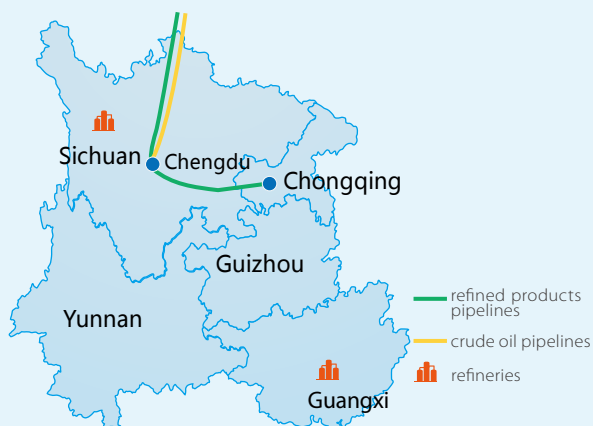
Guangxi Petrochemical fuels the economic growth of the Beibu Gulf.

Case Study Improving Energy Supply Pattern in Southwest China

With the implementation of China's western development strategy, the economy in southwest China has been developing gradually and energy demand has skyrocketed. To meet increasing demand for oil products and chemicals in the region, we have strengthened refining capacity building and the construction of oil and gas pipelines network in the region.

The 10Mt/a refining project at Guangxi Petrochemical, the first large-scale refining project in Southwest China, has processed over 12 million tons of crude, produced 11 million tons of refined products and paid approximately RMB 10.2 billion in taxes since it became operational in 2010. This effectively alleviated the oil product supply and demand issues in the regional market and promoted economic development in the Beibu Gulf area. After the refining and chemicals integration project at Sichuan Petrochemical and

the Lanzhou-Chengdu crude pipeline become operational, the energy supply pattern in Southwest China will be further improved.



3. Accelerating Construction of Pipeline Network

To tackle the bottleneck caused by uneven oil and gas resource distribution, and the long distance between resources and markets, we steadily pushed forward the construction of key oil and gas pipelines to establish effective links between resources and markets. In 2011, the construction of our oil and gas pipeline network progressed in an orderly manner, which further strengthened our capability in oil and gas transportation and allocation, and guaranteed the energy needs of civilians, public facilities and key industrial users.

Improved Domestic Pipeline Network

The trunk line of the Second West-East Gas Pipeline was completed, delivering natural gas from Central Asia to the Pearl River Delta region, which further improved China's energy supply structure. The operation of the Zhangshu-Xiangtan branch line eased the gas shortage in Hunan and Hubei. Natural gas pipeline networks in Shandong and Liaoning are about to be completed and deliver additional gas supply to the two provinces. Construction of the third Shaanxi-Beijing gas pipeline, Lanzhou-Chengdu crude pipeline, and Nanning-Liuzhou oil products pipeline was well underway. Furthermore, we have continuously strengthened the build of underground gas storage to enhance our capacity of peak shaving and mitigate supply imbalances among different seasons and regions (see page 35).

Diversified Resource Import Channels

We are building cross-border oil and gas pipelines and LNG terminals to diversify our resource import channels. Line C of the Central Asia-China Gas Pipeline was kicked off in an orderly manner. The Russia-China Crude Pipeline has delivered more than 15 million tons of crude oil to China since it became operational. LNG terminals in Jiangsu and Dalian were put into operation and began to supply gas to the West-East Gas Pipeline and Liaoning pipeline network, which serves as a new guarantee for energy supply to the Yangtze River Delta and Northeast and North China. Construction of the Tangshan LNG Terminal and its supporting projects has commenced.



A LNG carrier at the special terminal in Dalian harbor



Special Topic Energy Artery Propelling Economic and Social Development

Route of the Second West-East Gas Pipeline



With a length of 8,704 km, the Second West-East Gas Pipeline consists of one trunk, eight branches and 26 compressor stations. The pipeline travels across China from west to east and is designed to transport 30 bcm of gas each year. In 2011, the whole trunk was completed.

Building gas pipeline network and benefiting more people

The debut of the Second West-East Gas Pipeline will effectively balance supply and demand in the Pearl River Delta, Yangtze River Delta, and South Central China. Natural gas from Central Asia was delivered to Guangzhou in June and will arrive in Hong Kong in 2012. In addition, the Second West-East Gas Pipeline has been linked to the First West-East Gas Pipeline, Sebei-Xi'ning-Langzhou pipeline, Shaanxi-Beijing pipelines and Zhongxian-Wuhan pipeline, which form a gas trunk line network and benefit 15 provinces (cities, autonomous regions) and Hong Kong SAR.

Providing clean energy and improving atmospheric environment. With the full operation of its trunk and branches, the Second West-East Gas Pipeline will accelerate the improvement of energy mix of the 15 provinces along the pipeline, increasing the proportion of natural gas in China's primary energy consumption by 1~2 percentage points. Using natural gas would not only bring convenience to people's lives, but also improve the environment. Experts estimate that, every year, 30 billion cubic meters of natural gas imported from Central Asia could replace 76.8 million tons of coal, reduce CO₂ emissions by 130 million tons, and cut hazardous

substance emissions – including sulfur dioxide, nitrogen oxides and industrial dust – by 2.46 million tons.

Building a platform for innovation and driving investment in relevant industries.

The Second West-East Gas Pipeline project has provided a platform for technological innovation in relevant industries, and created new supply-demand balance in the market. The platform has brought direct investment of RMB 300 billion into domestic machinery, electronics, metallurgy, building materials, construction and natural gas utilization industries. During the construction of the pipeline, we coordinated with related research institutions, steel enterprises and pipeline manufacturers to conduct R&D, and realized domestic production of high grade steel line pipe such as X80. The project has also provided development opportunities for China's large equipment manufacturing industry.

Protecting the environment during project construction

PeroChina has always strived to be an environmentally friendly enterprise. We developed our own ecological restoration plans during pipeline construction, and our soil and water conservation efforts are leading among the nation's major construction projects. On March 1, 2011, the Second West-East Gas Pipeline (west section) was nominated by the Ministry of Water Resources as a "Model Project for Water and Soil Conservation", with its six soil and water conservation indicators for engineering construction reaching national standards.

4. Developing Alternative Energy

As conventional, easy-to-tap and superior oil and gas resources are depleting, unconventional energy such as CBM, shale gas and tight gas has become the most realistic choice to supplement supplies of conventional energy. With a view to future energy supplies, we strengthened the development and utilization of unconventional hydrocarbon resources and renewable energies so as to promote sustainable economic and social development.

Unconventional Energy Development

Domestically, we have stepped up our efforts in developing CBM and shale gas. In 2011, Fanzhuang CBM field in Shanxi Province was approved, the first large-scale digital CBM field in China. We produce 420 million cubic meters of commercial CBM in the year, up 49.5% year-on-year. Construction of shale gas demonstration areas in Changning of Sichuan Province and Zhaotong of Yunnan Province is well underway. China's first horizontal shale gas well – well Wei 201-H1 located in Weiyuan, Sichuan – was completed and tested for gas production. Five wells were drilled at the Fushun-Yongchuan shale gas project in Sichuan, a joint project with Shell. Well Yang 101, one of the five wells, produced 50,000 cubic meters of gas per day during formation test.

Abroad, we have invested in heavy oil projects in Venezuela, oil sands projects and unconventional gas projects in Canada, and develop CBM in Australia with Shell as our partner.

New Energy Technology Research

We have been strengthening R&D and utilization of unconventional energy technology. In 2011, we achieved major breakthroughs in the development of bio-kerosene for civil aviation, and launched a successful test using bio-kerosene. Subsequently, we signed cooperation memorandums with eight domestic enterprises to jointly promote the sustainable development of the aviation biofuel industry.

Shale gas, referring to gases extracted from shale beds, is an important unconventional natural gas resource. Currently, China is still at the resource evaluation and technology research stage for shale gas development. In 2009, PetroChina selected two blocks, i.e. Changning-Weiyuan in Sichuan Province and Zhaotong in Yunnan Province, to conduct pilot development of shale gas. Meanwhile, we launched shale gas evaluation at Fushun-Yongchuan block jointly with Shell. Two years of efforts have helped us successfully yield shale gas and testified that there are shale gas potentials in China. We will continue to explore supporting technologies and management methods to facilitate the mass development of shale gas.

Case Study Expanding the Development of CBM

Coal Bed Methane (CBM) refers to methane associated with coal and absorbed into the solid matrix of the coal. It is clean unconventional gas because of its lack of hydrogen sulfide. In the Qinshui basin in Shanxi Province, we have identified the resource base of CBM and realized large-scale development of CBM fields through digital measures such as remote data acquisition and transmission, remote control and video monitoring of wells and stations. In 2011, we delivered 580 million cubic meters of commercial CBM (including the 156 million cubic meters purchased). The cumulative CBM delivery to the West-East Gas Pipeline from Qinshui totals about 1 billion cubic meters.



Large-scale development of CBM in Qinshui Basin in Shanxi Province.

5. Extending International Cooperation

We respect energy policies of host countries and give full play to our advantages in funding, technology and management to participate in oil and gas development worldwide with our partners, making our due contributions to stabilizing global oil and gas market.

International Energy Development

In 2011, great progress was achieved in our international operations. In Iraq, the Rumaila project entered an efficient and progressive development stage and production capacity building at Halfaya oilfield proceeded as scheduled, helping increase oil production and exports in the country. We acquired INEOS' refining business in Europe, and made major progress in establishing an oil and gas operation hub in Europe. We also signed strategic cooperation agreements with Shell, Saudi Aramco, Rosneft, and Daewoo. In the Andes project in Ecuador, we maintained stable output of mature fields by applying our sophisticated and applicable technologies, and won the "Outstanding Petroleum Technology Development Award" granted by Ecuador's Ministry of Non-Renewable Natural Resources. In 2011, our overseas projects yielded a total net oil and gas production of 121 million barrels.

Domestic Cooperation

In China, we continue to deepen our cooperation with international partners in conventional oil and gas E&P, and meanwhile make efforts in the E&P of CBM, shale gas and tight gas. In 2011, domestic joint oil and gas E&P projects had a net output of 30.6 million barrels of oil and gas equivalent. In cooperation with Shell, the Changbei Project maintained stable production and the Fushun-Yongchuan shale gas project achieved breakthroughs. The Zhaodong project, with Australia's ROC Oil as our partner, has maintained its annual production at 1 million tonnes for eight consecutive years. And crude oil produced from offshore platforms at Zhaodong was successfully piped to onshore storages. The preliminary work for the South Sulige project commenced smoothly, with Total as our partner. The Chuandongbei natural gas project with Chevron and the Yuedong project in Hainan with Tincity Group Energy Resources Ltd proceeded as scheduled. Jointly with Qatar Petroleum International and Shell China, we signed a cooperation framework agreement on a refining and chemical integration project with Taizhou City, Zhejiang Province.

Case Study Helping Niger Realize Its 30-year Oil Dream

Niger has a vast territory and is rich in resources. However, energy development over the past decades failed to effectively promote economic and social development in the country. In 2008, the Company, together with CNPC, began to help Niger build an upstream and downstream integration project. A 1Mt/a crude oil production base, a 462 km-long pipeline and a modern refinery emerged in the hinterland of the Sahara desert. In November 2011, the Agadem integration project was completed and the Zinder refinery became operational. Oil products output from the refinery are sufficient for domestic use, meaning that Niger has established its own oil industry since then.

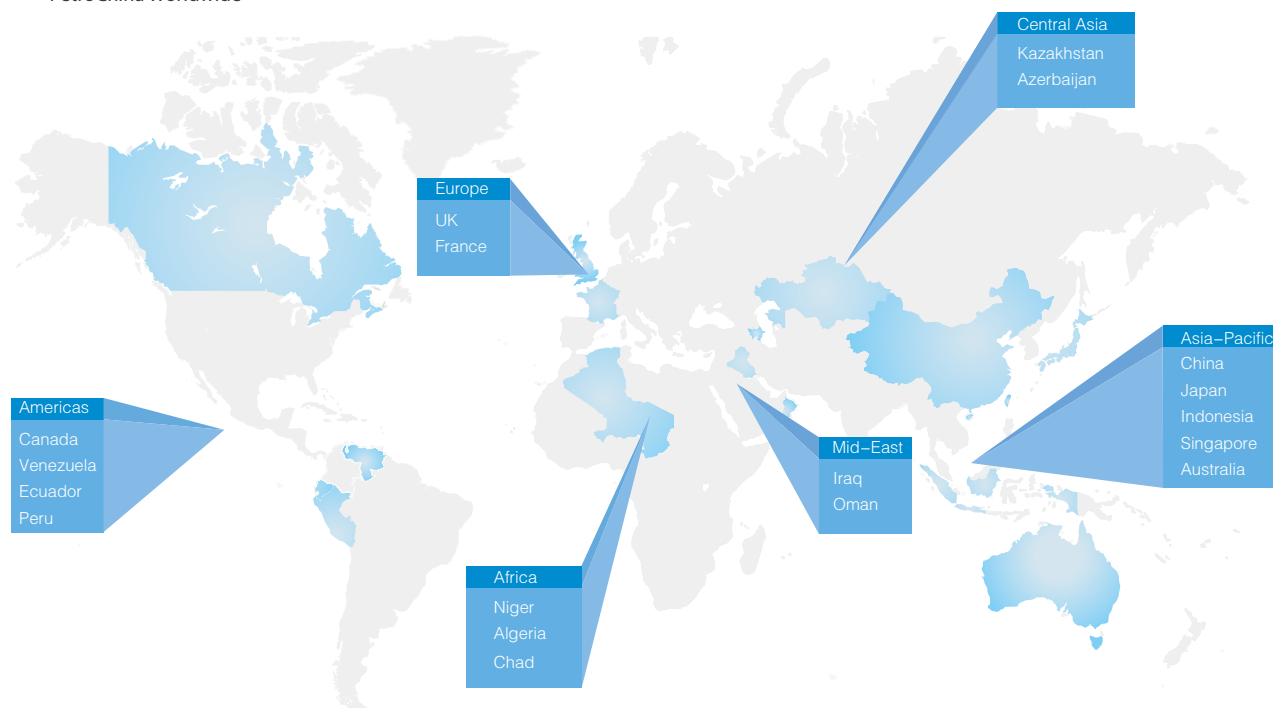


Participation in the construction of Agadem Oilfield in Niger.



Special Topic Mutually Beneficial and Common Development

PetroChina Worldwide



Since 2005, we have been accelerating the pace in international cooperation and have made due contributions to enhance global energy security and optimize resource and market allocation. By the end of 2011, we implemented oil and gas operations in 18 countries worldwide.

Assist host countries to develop oil and gas resources.

Together with BP and Iraq's South Oil Company, we have been providing exploration and development services for the giant Rumaila field since 2009. With the common efforts of the consortium, Rumaila exceeded production goals and became the first to enter the investment return stage since 2009 when Iraq first opened its oil and gas production to foreign countries. The Rumaila project plays an active role in boosting Iraq's crude oil production and exports, and helps to obtain win-win outcomes for investors and the host country.

Facilitate local economic and social development. As the first joint project between PetroChina and its Kazak counterpart, the Aktobe project rejuvenated mature oilfields in Kazakhstan by using a series of applicable exploration and development technologies. Aktyubinsk, where the project is located, is thereby developing into an emerging oil industry hub, contributing over 10% of Kazakhstan's GDP.

Take global resource and market allocation into consideration.

After acquiring Singapore Oil Company and Osaka refinery, we also acquired INEOS' refining business in Europe in 2011. Our three oil and gas operation centers in Singapore, London and New York City are taking shape, and our competence in coordinating resources and markets is increasing, making us capable to stabilize regional oil and gas markets.



SAFE AND CLEAN PRODUCTION AND OPERATION

02

The natural environment is our most important resource. The concept of “caring for life and protecting the environment” has been incorporated into our culture. We stick to principles that give weight to a people-oriented, prevention-driven approach, and advocate total participation and continuous improvement in the pursuit of zero injuries, zero pollution and zero accidents. We strive to establish a resource-saving, environment-friendly and safe production enterprise.

1. Improving HSE Management

We attach great importance to health (see page 45), safety and the environment (HSE), and have been constantly improving HSE management. In 2011, we continued to promote HSE system building, enhanced safety and environmental management, strengthened source control and process monitoring, and raised safety and environmental protection standards. The situation of safety and environmental protection has been improving.

Advancing Full-scale HSE System Building

In 2011, we launched the *Upgrade Plan of HSE Management System during the 12th Five-Year Plan Period*. 12 subsidiaries were instructed to implement the plan as a start. An inspection of HSE performance of our overseas businesses was conducted to strengthen the construction of HSE system. We formulated and revised 32 HSE standards, which was implemented through audit and training. We also developed HSE information system upgrade plans for the 12th Five-Year Plan period, organized the second round of HSE training for management personnel, and completed the HSE consultant training program where more than 100 people were trained and certified. In addition, we furthered the HSE training programs for front-line employees and promoted the HSE training matrix (see page 27).

Strengthening HSE Management

In 2011, we revised the *Safety and Environmental Accountability Pledge* and signed it with the affiliated companies for the 5th consecutive year. We deepened safety inspections and carried out 2 inspections throughout the year with a focus on 22 major production-operation units. We enhanced environmental risk management and distributed the *Management Method on Environmental Protection of Constructing Projects* to strengthen monitoring of key links like EIA approval and project design. We launched environmental risks inspection for plants and

facilities of storage and transportation near rivers and lakes as well as environmentally sensitive regions, and also proposed remediation measures. We organized the Hazard and Operability Analysis (HAZOP) for new projects, expansion projects and in-service equipment, established strict safety and environmental protection examination system and checking system during construction. In addition, we implemented methods, such as safety observation and communication, plans of personal safety, HSE assessment indicators and "lock-out/tag-out" action, to deepen risk management for front-line operations.

"Lock out/tag out" is a safety device which ensures equipments are powered off during maintenance or cleaning and cannot be moved. "Lock out" is to isolate and lock the cut-off energy to make sure that no one nearby would get hurt. "Tag out" refers to hanging out the warning sign while the "Lock out/tag out" is happening.

Established and revised
HSE standards

32

Over 100 people obtained
certificates as HSE consultants



Carrying out In-depth HSE Culture Building

The essence of safe production is to make employees more proactive in production safety. To this end, we organized knowledge contests on safety, environmental protection and energy-saving to improve employees' awareness, compiled an annual collection of excellent HSE papers and promoted experience sharing activities, and reinforced our employees' responsibility awareness to adhere to rules and regulations, changing from "being obliged" to "being voluntary".

Deepening Contractor Management

Contractors are our partners and part of our production and operation. We attach great importance to their safety, and have incorporated contractor into our HSE management. In 2011, we improved contractors' HSE qualification and performance evaluation criteria, based on which contractors are selected. Our affiliated companies have also formulated contractor safety management system to ensure healthy and safe operation standards.



Checking on the equipments

Case Study Cultivating Safety Culture to Ensure Essential Safety

Tarim Oilfield Company implemented "line responsibility" and "territorial management" with safety commitments and "felt leadership" management, improving employees' safety awareness and corporate management.

The company integrated new standards with existing institutions and the HSE system, issued 36 safety management standards, and proposed 27 key elements. It implemented "territorial management" and put in place an evaluation system based on performance, and launched campaigns to raise awareness of work safety, and reinforced the safety and environmental protection concept by creating shared values and behavior under "felt leadership". It set up the "Contribution Award for Safety Culture" to encourage employees to discover the potential dangers and risks. Thanks to the safety culture, production and operation safety has been improved and fatal accidents and major

well control accidents have been eliminated for five consecutive years. The company has won the title of Advanced Safety Unit of Production in Xinjiang Uygur Autonomous Region for the ninth consecutive years.

"Felt leadership" is for managing staff to make them an example in work safety related activities so that employees can truly perceive the importance of production safety. "Line responsibility" means that persons in charge need to bear HSE management responsibilities to achieve the objective of "those who manage, organize and perform tasks shall be held accountable". "Territorial management" refers to the fact that every manager, team leader and employee shall be responsible for their own and other employees' (including contractor employees and visitors) HSE safety.

Enhancing Safety Management

The accidents in Dalian since 2010 indicated that we must strengthen our safety and risk management. We have learned a lot from the accidents, and adopted many measures to ensure safety and stable production. First, we carried out accident investigation and disposal. An accident investigation team was set up and technical and management experts were dispatched to Dalian Petrochemical Company to help the accident investigation team of Dalian city under the guidance of the State Administration of Work Safety. We conducted in-depth accident analysis from technical and management perspectives and strictly punished relevant organizations and persons for the accident in accordance with laws and regulations. Second, we firmly implemented rectification advice. We strengthened the management of hazardous chemicals, carried out troubleshooting activities by immediately shutting down and repairing plants with hidden problems and operation risks. We organized professional departments to conduct a comprehensive investigation on large-diameter high-strength graphite gaskets,

and retreated 3 sets of risky plants in new production areas to safe status for repair so as to eliminate safety hazards. Third, we strengthened supervision and inspection and carried out safety checks in advance. We launched company-wide safety checks one month earlier than previous years and other safety and environmental protection inspection and acceptance, with the aim of identifying safety hazards and further strengthening the safety capacity building in new areas, new businesses and rapidly developing businesses.

Safe production is an important and long-term task. We will further deepen and fully implement the safe production responsibility system, comprehensively promote the HSE management system and focus on special remediation of safety and environmental risks. We will strengthen contractor management, emergency response management, risk management and incident management, and enhance safety supervision in key areas.

Case Study Jilin Oilfield Company Carried out Front-line Training Matrix to Improve Employees' Safety Awareness

Jilin Oilfield Company began to implement a new HSE training model since 2009, focusing on training front-line managers with HSE training matrix for front-line positions. It has boosted the integration of production operations and position training, effectively improving the safety quality among staff.

The company broke down 3 professions and 17 kinds of work into 54 operation positions and listed specific operation qualification of each position and corresponding training requirements into a unified table. In the table, the vertical line lists 4 categories including general safety knowledge, basic skills, management processes, and HSE knowledge, with each category

specifying a series of items. The horizontal line lists training requirements for each project. HSE training was provided to employees in small classes of different categories and schedule, to promote experience sharing and interaction, with incentives for employees with outstanding performance. Performance evaluation was based on on-the-spot operation and standard-reaching of individual items to eliminate blind spots of operational risk control. Since the launch of the primary matrix training, 7,623 employees have been trained with qualification rate increasing by 15 percentage points.

	Contents	Class hours	Period	Ways of training	Requirements	Teachers
1	General safety knowledge					
1.1	Safe use of electricity	20	3 years	classroom / on-site	Master	Team leader / HSE monitor officer
.....						
1.5	Identification of hazards	20	1 year	classroom / on-site	Master	Team leader / HSE monitor officer
.....						
2	Basic skills					
2.1	Maintenance of pumping units	20	1 year	classroom / notes	Master	Team leader / HSE monitor officer
.....						
2.12	Emergency control	60	1 year	classroom / on-site	Master	Team leader / other trainers
3	Management processes					
3.1	Permission for operation	20	3 years	classroom / on-site	Understand	Team leader / HSE monitor officer
3.2	Management of equipments	20	3 years	classroom / on-site	Understand	Team leader / HSE monitor officer
.....						

Diagram of training matrix

2. Reinforcing Safe Production

PetroChina advocates the principles of “people-oriented safety management” and “safety comes from responsibility, design, quality and prevention”. At the same time, we have taken production safety as the core value and implemented the concept in all sectors of production and operation. In 2011, the death rate related to accidents was 0.70 person/100 million working hours and the overall accident rate was 0.0326/1 million working hours.

Carrying out Safety Checks in Advance

Witnessing the peak of production, winter and spring are accident-prone periods and also the critical time for accident prevention. In September 2011, we carried out safety checks one month earlier than previous years to comprehensively check the production line and site from five perspectives such as safety awareness, system, and potential hazards to ensure safe production.

Long-term Mechanisms for Risk Prevention

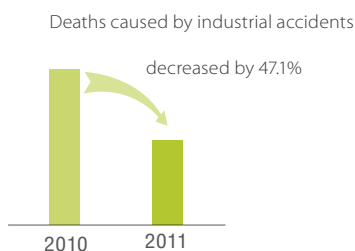
In 2011, the Company continued to control risks at source and enhanced potential hazard management. We carried out 186 environmental hazard control projects in 30 enterprises. By the end of 2011, we finished 158 hazard control projects.

Transport Safety Supervision

We further strengthened transport safety supervision and compiled guides on safe driving for coaches and trucks. We carried out investigation on vehicles status, which has greatly prevented severe traffic accidents for the whole year.

Improving Emergency Response Capacity

The oil & gas industry involves high risks and potential hazards, posing challenges to all businesses in production and operation. Though we have been constantly improving the HSE system and strengthening security management, security incidents cannot be avoided completely. We focus on the establishment of a sound and effective emergency rescue system to respond to accidents. In 2011, the Emergency Response Center for Pipeline Management was established, demonstrating the



complete establishment of five company-level emergency rescue centers. An emergency platform was put into use in May. We also held an emergency drill targeting refining devices to deepen emergency education. At the same time, we closely paid attention to natural disasters, organized activities to inspect and check unsafe factors to guard against flood, typhoon, wind storm surges and landslides. Affiliated Natural Gas & Pipeline Company compiled *Risk Management Report 2011*, developed risk management strategies and solutions in response to severe risks to ensure constant and stable transmission of oil and gas, and pipeline construction.

Case Study Strengthening Site Management and Achieving Safe Production

Adhering to the concept that “every accident could be controlled and prevented”, Ningxia Petrochemical Company adopted the 5S Management Model and introduced a performance assessment system with balanced scorecard, reducing the number of accidents by 36% compared with 4 years ago and workplace injuries by 46%, and achieving 10 consecutive years of no major accidents.

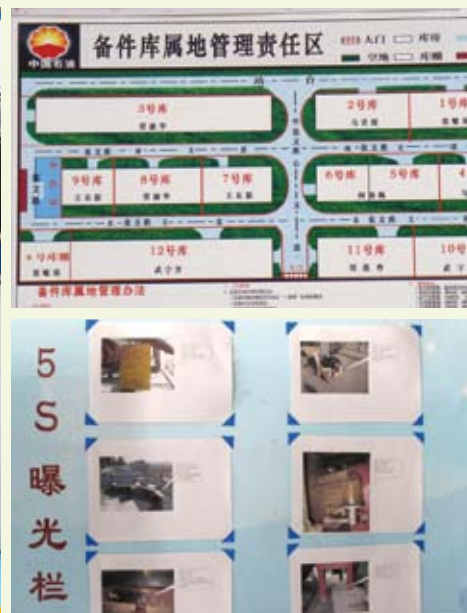
On the production site, the company used ground marks, guard fences, and security labels to highlight work areas or operation areas, and adopted uniforms of different colors, work permits and helmets labels to differentiate workers. It also ensured that tools and apparatus were in good conditions with up-to-date inspection labels, and used color codes and color circles to identify equipments, instruments and pipelines. These measures created an environment for safety management and improved on-site management standards.

While deepening the 5S On-site Management, the company introduced balanced scorecards as a management tool. After evaluating the management difficulty coefficient of all positions, the company prepared over 1,200 copies of position description, made the balanced scorecard for 65 units, and incorporated safety and environmental protection management into the new performance assessment system to improve management at all levels simultaneously.

“5S” On-site Management refers to the effective management of production factors such as people, machinery, material, and method, including sort (Seiri), set order (Seiton), sweep and shine (Seiso), standardization (Seiketsu) and sustain (Shitsuke). Ningxia Petrochemical Company has started implementing 5S On-site Management since early 2007. It has not only effectively improved the operating environment and reduced costs, but also enhanced operational efficiency and product quality.



Ningxia Petrochemical Company strengthens on-site management.



3. Energy Conservation and Emissions Reduction

Committed to the concept of “prioritizing environmental protection and putting safe production first”, we promoted the development and utilization of technologies related to energy and emissions reduction and optimal energy integration, and pressed ahead with our 10 Energy Saving Projects and 10 Emissions Reduction Projects.

Energy Conservation

In 2011, we continued to promote energy conservation and launched major energy saving projects. We made progress with the construction of key sample projects of optimal energy integration in the refining sector, and promoted and applied mature energy-saving technologies and equipment. We built and promoted market-oriented energy saving mechanisms with contract energy management as the major form. Tarim Oilfield Company and Ningxia Petrochemical Company have implemented contract energy management projects, achieving satisfactory economic and social benefits. We launched a promotion week with the theme of “energy saving delivers low carbon life” to enhance awareness of energy conservation among employees. Throughout the year, we saved 1.13 million tons of standard coal and 17.44 million cubic meters of water, exceeding our targets of 25% and 9% for the year.

Case Study Dushanzi Petrochemical Company Made Great Achievements in Clean Production

Dushanzi Petrochemical Company has implemented an environmental protection responsibility system to promote clean production and has made great achievements. A sulfur-containing sewage treatment plant with capacity of 250kt/a built in the ethylene plant can purify 2.76 million tons of sewage for landscaping. The wastewater treatment and reuse system with a designed capacity of 600 m³/h can save over 3 million tons of fresh water every year. The joint production plant with its capacity of desulfurizing 100kt/a by dry gas and recovering 3kt/a sulfur has met the national standard in its emission with a sulfur recovery rate reaching 99.5%. The dust-removal equipment of high efficiency was installed in coal-fired power plant to recover and utilize powder coal ash. The concentrated heating boiler and dust-removal & de-sulfur project was established to improve the surrounding environment. The central heating coal field of the wind and dust wall was established to reduce dust pollution. The flue gas desulfurizing and dust-removal device was retrofitted in boiler flue gas discharge system in thermal power plant to make flue gas emission meet standards.

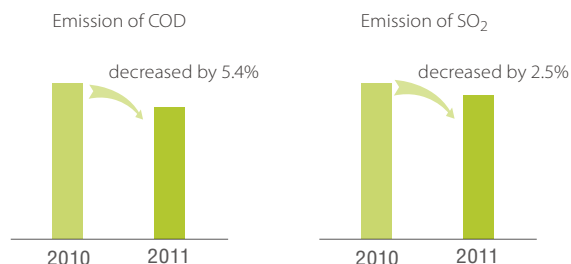


Emission Reduction

In 2011, we developed and implemented the “Pollution and Emission Reduction Implementation Plan during the 12th Five-Year Plan” to fulfill emission targets. We established sub-stations for petroleum and petrochemical environment supervision, as well as 8 environmental monitoring centers, further enhancing the environment supervision system. Our COD and sulfur dioxide emissions throughout the year decreased by 5.4% and 2.5% year on year respectively.



Jilin Oilfield Company realized harmonious development with the environment.



Case Study Daqing Petrochemical Company Promoted Energy Conservation and Consumption Reduction

In 2011, Daqing Petrochemical Company's efforts to strengthen detail management and build resource-saving enterprise helped save 48.6 thousand tons of standard coal and 875.9 thousand cubic meters of water.

Promoting digital energy management. The company established an energy consumption analysis evaluation system and energy consumption warning mechanism, and adhered to daily analysis of primary energy consumption, weekly estimation of energy and water conservation progress, as well as a monthly summary of energy and water saving achievements to analyze energy-saving measures and effects before taking any improvement measures.

Optimizing energy system structure. The company continuously improved technological processes, optimized operational methods, strengthened the monitoring of the equipment operation status, reduced furnace fuel con-

sumption, and saved 1,290 tons of standard coal per year. At the same time, it has phased out backward plants and high energy-consuming devices to improve overall energy efficiency.

Strengthening energy-saving technology utilization. The application of oil refinery wastewater reuse project has reduced fresh water consumption in producing 1 ton of crude oil by 0.56 tons. Completion of the ethane cracking furnace and quench oil viscosity reduction system improvement projects improved the operating environment of the quenching system, reducing ethylene energy consumption by 55.83kg SEC per ton compared to 2010, reaching the national advanced level.

4. Environmental Protection



Remarkable success has been achieved by the shelter-forest of the Tarim Desert Highway.

A diversified environment is a valuable resource for humanity. We attach great importance to minimizing our environmental impacts in the whole process of our operations. In 2011, we organized and carried out three-tier water pollution prevention and control inspection, and identified environmental risks near rivers and environmentally sensitive areas. We actively carried out environmental protection activities on the World Environment Day (June 5th) to deepen biological and environmental protection.

Case Study Protecting Arable Land for Ecological Restoration

As one of its efforts to protect the environment, Changqing Oilfield Company tries its best to minimize the occupation of arable land and to restore land to agriculture use. By the end of 2011, it has reclaimed a total of 25,333 hectares of land.

Since 2000, the company compiled reclamation plans for the land taken for oil wells in 4 provinces (autonomous region) through field research, extensive data collection and sorting out, and reclaimed 24,333 hectares of land. Since 2005, over 2,700 abandoned well sites in these four provinces (autonomous region) were reclaimed apart from completely blocking the sewage oil wells. They also took the measure of reclaiming land immediately after discovering the newly drilled wells without exploratory development value, which effectively improved the land utilization rate.



Changqing Ansai oilfield increased efforts to reuse idle land.

5. Addressing Climate Change

Climate change is a major global issue faced by all. As a responsible energy company, we actively support the policies and actions taken by China to address climate change and take the initiative to reduce carbon emissions and sequester carbon to contribute to the mitigation of global climate change.

Reducing Carbon Emissions

We have been constantly integrating and optimizing resources, eliminating inefficient and high energy-consuming equipment and processes, and increasing circulation of waste energy. We strive to achieve clean production and use wind and solar power in our operation in areas where the conditions permit, such as Sulige gas field and Tarim oilfield. At the same time, we strengthen R&D in energy saving technology and optimal energy integration technology to reduce carbon emissions in our production and operations (see page 30).

Environment-friendly Products

We vigorously develop natural gas and continue to strengthen the exploration and development of natural gas reserves, and drive the increase of storage with technology innovation while enhancing the storage and transportation facilities (see page

19 and 35). In addition, we continue to strengthen exploration and development of unconventional natural gas such as CBM and shale gas, and R&D of utilizing low carbon energy such as fuel ethanol and biomass (see page 21), to provide clean and environmentally friendly products.

Greenhouse Gas Emission Initiatives

We actively support GHG initiatives to promote a green lifestyle. In 2011, "China Green Carbon Sequestration Fund", launched by PetroChina and State Forestry Administration, together with Huadong Forestry Exchange, launched the first forestry carbon sequestration trading pilot in Yiwu, Zhejiang Province, to further boost the development of forestry carbon sequestration.



Kela-2 gas field uses solar energy in the Gobi Desert for illumination.



CUSTOMER-FIRST MARKET SERVICE

03

Petrochemical products are part of people's lives. We insist on the concept of "emphasis on the environment and safety, high quality and people-oriented", the principle of "honesty and quality excellence" in pursuit of the goal of "zero defects, zero accidents, and being a leader in China and first-class in the world". We try our best to provide clean, qualified and diversified products with management and technological innovation so as to deliver a satisfactory service for our customers.

1. Guaranteeing Market Supply

With the economy rapidly developing, demand for oil and gas in the market is sustaining strong growth. As one of the major oil & gas suppliers in China, we strive to stabilize and guarantee market supply to ensure stable economic and social development.

Construction of Storage Facilities

In order to adjust seasonal and various regional demands for oil and gas products, and enhance peak-shaving capacity of oil and gas supply, we have been constantly promoting the construction of oil and gas storage facilities. In 2011, nine underground gas storage projects including Hutubi project in Xinjiang, Xiangguosi project in Chongqing and Suqiao project in North China commenced construction. After completion, the peak-shaving capacity of the West-East pipeline system and Shaanxi-Beijing pipeline system would be further improved. The north zone of Dalian crude oil storage depot, Dushanzi and Lanzhou crude oil storage depots were completed and put into operation, enhancing supply capacity and market adjustment.

Guaranteeing Supply of Refined Products

In 2011, we adjusted and optimized the product mix in line with market demand and increased diesel/gasoline ratio appropriately. At the same time we strengthened market consumption forecast and followed market dynamics, providing over 140 million tons of refined products including 90 million tons of diesel, up by 20.4% and 18.0% respectively year-on-year.

In response to the oil product supply shortage during the drought, flooding and disasters period in some regions, we

started an emergency supply plan to deliver oil to these areas by optimizing resources allocation, improving the process load, purchasing from outside and increasing imports, etc., which ensured timely supply.

Satisfying Demand of Natural Gas

It is our strategy to accelerate development of natural gas and increase its supply to optimize energy mix, facilitate green development and build an environment-friendly society. In 2011, we comprehensively coordinated the production, transportation and sales of natural gas, and optimized operations of the pipeline network to satisfy market demand for clean energy. During the peak season of winter, we developed in advance the production of main oil & gas fields, made full preparation in resources saving, and coordinated with customers in key regions and companies. A total of over 75 billion cubic meters of natural gas were delivered in 2011, with a growth rate of 19.5%, which secured safe and stable gas supply for the public.

Provided over **140** million tons
of refined products

Delivered over **75** billion cubic meters
of natural gas



Case Study Stabilizing Oil Product Supply in Special Periods

In 2011, severe droughts in parts of China had caused short supply of oil products in these regions. In order to safeguard the supply, PetroChina took ten measures, including increasing production, strengthened resources coordination, and optimizing transportation, to ensure timely supply of oil products.

Our affiliated refining and chemical companies took effective measures to increase diesel production. Dagang Petrochemical Company maximized diesel production by optimizing process of refining equipments, and strictly controlled processes to ensure product quality. Lanzhou Petrochemical Company held coordination conferences to analyze all practical operations, so as to strengthen its production.

Our affiliated marketing companies delivered in-time services for key regions, helping agricultural production through multiple measures. Henan Marketing Company set up a senior management team to guarantee supply, established and improved service supervision mechanism to ensure quantities

and quality of oil product, established “green channels” for agricultural machineries for rapid refueling, organized over 650 employee volunteers to drive tank trucks or vehicles to deliver oil products to farming fields, and offering free help to gather wheat crops for farmers with difficulties.

In southern China hit by severe flooding, our affiliated marketing companies designed and improved supply plans. Guizhou Marketing Company had contacted the local governments as soon as the flood occurred, opened hotline for supply and prepared vehicles and oil products for immediate action. Hunan Marketing Company strengthened coordination and transport, increased storage and set up designated service stations to ensure effective supply for disaster relief.

PetroChina Adopts Ten Measures to Guarantee Supply

1. Refining companies run at full load with safe production, and arranged inspection and maintenance by peak-load shifting.
2. Marketing companies exert every effort to allocate resources and try to set up a stable and effective resources supply channel with the principle of “taking subsidiary refining as the primary, local refining as the supplement, swapping resources among companies, and coordination of imports and exports”.
3. Exert efforts in scientifically organizing resources allocation and regulating sales, so as to effectively meet emergency needs during special periods and in key regions.
4. Adhere to honest operation, guarantee quality of oil products, and especially strengthen management of imported resources and commission-based storage to protect customers’ interests.
5. Actively provide convenient services for “agriculture, rural areas and farmers”, including “providing oil for villages” and delivering small amount of oil to fields by small tank truck, etc.
6. Establish “green channels” for emergency and special cases so as to give priority to vehicles transporting oil products.
7. Enhance marketing network construction, strengthen on-site management at service stations, improve and ensure service quality even in times of emergencies and other special cases.
8. Strictly follow China’s price policy for refined products, comply with sales disciplines and ensure quality and quantity of products so as to sustain market order.
9. Ensure supply while making profit, fulfill our responsibilities according to our abilities, and provide oil products according to market demand.
10. Strengthen communication with local governments and work with peers to undertake the responsibility of ensuring supply and maintaining market stability.

2. Advancing Quality Management

Adhering to the principle of "quality first", we regulate quality management rigorously as a responsible petrochemical producer and supplier.

Strengthening Foundation Management

Since 2010, we have launched foundation management project with quality, measurement, standardization, process management and institutional building as priorities. Our affiliated companies improved management system based on their practical situation, upgrading management standards of quality, measurement, standardization, process management and institutional building. We launched "Quality Month" activities and organized various quality exercises to enhance the quality awareness of the overall employees to further advance quality management.

Improving Management System

We developed a *Promotional Plan for Building Quality Management System* and pushed forward quality management system certification. 96.8% of our affiliated companies established the system, and 92.4% passed the certification by a 3rd party. We carried out a quality management evaluation system for 29 affiliated companies, improving the overall management standards, and strengthened standard formulation and revision, with formulation and revision of 142 standards at the corporate level.

Quality and Measurement Management

In 2011, we started construction of large volume metering stations in Urumqi and Guangzhou and verification stations in Beijing, Wuhan and Tarim. We increased investment to manage quality risks, improve product quality and update quality inspection devices by management and technology innovation, and carried out refined product quality supervision and spot checks to ensure that the oil products are qualified. Daqing Oilfield Company strengthened quality management and won the award of "National Advanced Quality Management Unit (2009-2010)".

Demand for natural gas, a kind of clean energy, has been increasing drastically recently, as has for natural gas transferring-meters with the construction of pipelines. In order to meet the rapidly increasing requirements of natural gas flow measurement and verification, we have conducted research on a natural gas value transfer and traceability system. In addition, approved by the General Administration of Quality Supervision, Inspection and Quarantine of China, we set up large volume metering stations in Urumqi and Guangzhou, and verification stations in Beijing, Wuhan and Tarim based on our pipeline network.



Carried out quality management system evaluation for **29** affiliated companies

Formulated and revised **142** standards at the corporate level





Special Topic Sichuan Marketing Company Strengthening Quality and Measurement Management



Strengthening quality and measurement management to improve service quality.

Adhering to the principle of “quality first”, Sichuan Marketing Company constantly upgraded quality management standards by improving the quality and measurement management system, strengthening quality system building, and improving measurement inspection methods. In 2011, the company was sampled and inspected for nearly 300 times by quality and technical supervision agencies at national and provincial level with acceptability rating reaching 100%.

Assigning quality management responsibilities. We set up a quality management team and designated responsibilities relevant to departments and supervisors. In addition, full-time and part-time supervisors were assigned to the oil depots and service stations. Furthermore, a quality management assessment mechanism was put in place to ensure individual accountability.

Strengthening systems building of management and supervision. The company compiled 30 documents and 15 operation instructions, set up a sampling system for oil product quality supervision, and formulated the *Management Regulation on Oil Product Supervision and Sampling* etc. to carry out internal quality sampling and release reports each quarter.

Ensuring oil quality with strict checks and controls. The company strictly controlled purchasing channels, applied unified procurement, checked before placing purchases to eliminate unqualified oil, and conducted regular testing to prevent oil products from deterioration. In addition, it carried out technical process management and equipment maintenance, strengthened transport management to keep oil products from being contaminated in transportation, launched spot checks of oil products and established an archive of samples to secure the quality of products for our customers.

Reinforcing Metering Control and Carrying out Honest Metering. The company established three information systems including oil depot management information system and a horizontal tank volume calibration system, to improve metering precision and management efficiency, launched the activity of “Honest Metering at Service Stations” with quality supervision departments in Sichuan Province for two consecutive years, signed a letter of commitment, and promulgated “6 don’ts” to strengthen honest metering.

3. Focusing on Research and Development

We have been continuously improving R&D system building, and innovating new products to meet market demand through new technologies, processes, equipments, materials and upgrading existing production plants. At the same time, with our strong R&D team, constant reform of the R&D management system, and technological investment, we could provide customers with a diverse range of qualified products.

In 2011, together with the National Natural Science Foundation of China, we jointly established a United Petroleum and Petrochemical Fund to promote sustainable development of the industry and enhance independent innovation capability. We set up a vehicle lubricant joint research laboratory with Shanghai Jiaotong University for the research of lubricants for new energy vehicles. The project of "R&D and Industrial Application of Technology on Producing High End Products from Naphthenic Base Heavy Oil" won 1st prize in the National Award of Scientific and Technological Progress. The project of "High Yield of Light Oil, Heavy Oil Efficient Conversion of Catalytic Cracking Catalyst" won the Outstanding Project Award in the 5th Golden Bridge

Award of the China Technology Market Association. The aviation biofuel passed the certification with the test fly of Boeing 747-400 aircraft. The applications of these technologies will provide customers with more environment-friendly, energy-saving, and durable chemical products.



Research center at PetroChina Lubricant Company strengthening R&D.

Newly Developed Refined Products in 2011

Name	Purpose
Highly efficient and environment-friendly SODm urea	Help crops absorb nutrients, increase yields, improve product quality, raise nitrogen use efficiency, and reduce environmental pollution
Ultra low sulfur diesel hydrogenation catalyst	Produce clean gasoline meeting national IV emission standard , and clean diesel meeting State IV and State V emission standards
Polyethylene pipe material PE100	Corrosion resistant, anti-leaking at the connector, and highly adaptive to the uneven settlement of the base, PE100 is used for transmission of water and gas under high pressure.
Polyethylene pipe material PP-R	Corrosion resistant, heat resistant and easily machine-shaped, PP-R is used for hot and cold water pipes within the building
Environment-friendly oil-extended SBR	Meeting the REACH requirements of EU, oil-extend SBR is applied to the production of environment-friendly tires and other rubber products.

4. Providing High Quality Products

We have been optimizing the product mix and providing diversified and environment-friendly products with high quality, including crude oil, natural gas, gasoline, diesel oil, lubricants, and chemical products of different grades. Our products are widely used in many fields, such as automobiles, building materials, electronic products, pharmacy, printing, household appliances and daily chemicals.

In 2011, we provided adequate oil & gas products according to market demand (see page 35). We continued to upgrade quality oil products with the proportion of high-grade gasoline reaching 96.7%. All our gasoline products met the National III emission standard, and the proportion of diesel oil products meeting the National III emission standard reached 35%. In addition, we provided 22.62 million tons of chemical products, of which agricultural fertilizer reached 4.23 million tons, and developed 75 types of new chemical products, which provides high quality, environment-friendly and diversified products for customers.



Case Study Supplying LNG to Protect Blue Sky in Tibet

Lhasa, the capital of Tibet Autonomous Region, is located at an average altitude of over 4,000 meters. Gasoline, diesel, coal and LPG are mainly used as primary energy, and some local residents use wood, coal and cow dung, which is detrimental to the local environment.

In order to make clean and high-efficient natural gas available to local residents, we launched City Gas Project in Tibet that natural gas from Qaidam basin is transformed into LNG and transported to Lhasa. Phase one of the project includes 1 LNG receiving terminal and 2 filling stations providing 30 million cubic meters of natural gas for Lhasa, which would replace 36,000 tons of standard coal, reducing 70,000 tons of carbon dioxide and 24,500 tons of dust emissions, and meet energy needs of 1/3 of population for civil use, taxis and buses, and some enterprises. The LNG terminal was put

into operation in October 2011 and began providing clean energy in Tibet.



A taxi driver in Lhasa smiling after refueling his cab.

5. Delivering Thoughtful Services

We have been persistently improving our service and quality to offer a satisfactory consumption experience to our customers.

Expanding Services Categories

We constantly expanded our service network and improved management at service stations for the purpose of providing convenient services to customers. We set up uSmile convenience stores at service stations to provide a one-stop service. We also promoted the "speed engine oil change" service, provided services such as engine oil change, the three filter replacement and engine maintenance. We further promoted the fuel card service to realize "one unified card for nationwide service stations" and electronic sales of refined products, and established the 95504 hotline to provide convenient and rapid services. By the end of 2011, we had over 19,000 service stations and over 11,000 convenience stores.

Constantly Improving Service Quality

In 2011, we launched the activities of "serving the people and striving for excellence" to improve service quality by soliciting customer suggestions and carrying out satisfaction evaluations. We provided technical assistance and tracking service to help customers understand product specification, and undertook activities to protect customers' rights and interests, as well as helping customers identify inferior products. In addition, together with the Chinese Society of Automotive Engineers, PetroChina Lubricant Company formulated the *Commercial Vehicle Lubrication Guidelines* to help commercial vehicle users standardize utilization of lubrication products.



Case Study Striving for Excellence and Serving Society

Adhering to the principle of "customer first", our marketing companies have launched activities of "serving the people and striving for excellence" to provide qualified and thoughtful services for customers.

Providing thoughtful oil services. To improve work efficiency, staff from Shandong Marketing Company collected and memorized tank mouth locations of different vehicles to avoid wrong positioning with refueling machines when refilling. Thanks to their efforts, they guided vehicles efficiently and saved customers' time. Beijing Marketing Company carried out customer service investigation and collected feedback on service attitude, efficiency and quality so as to make proper improvements. Xinjiang Marketing Company launched the "smile service" to provide friendly services with smiles.

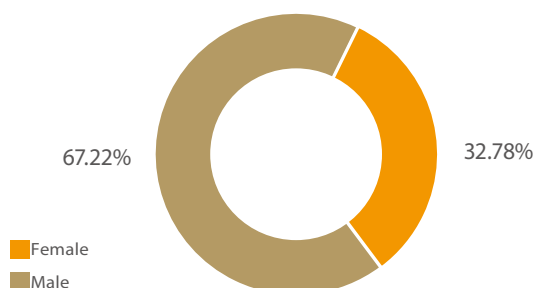
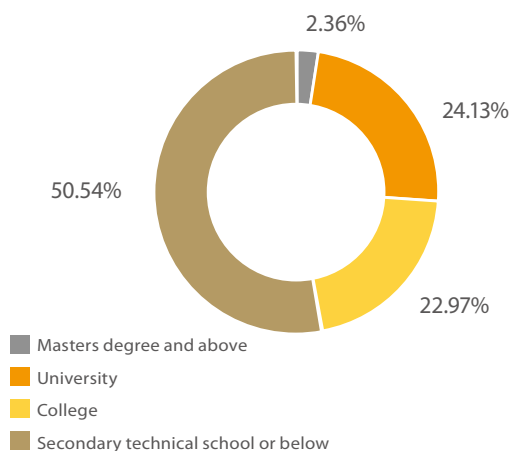
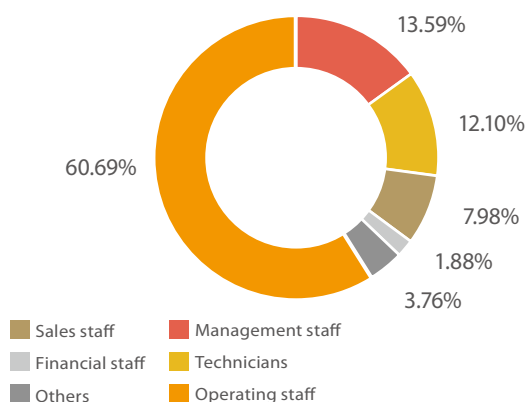
Offering a variety of non-oil services. Donghuan Service Station of Nanning Branch at Guangxi Marketing Company established a uSmile convenience store with tables and chairs, etc. where our customers can take a rest or do shopping. Our service zone on the Shanghai-Kunming expressway is equipped with 6 shower rooms to provide free showers for long haul drivers, which is dubbed as the "drivers' home". Zhangbenhe Service Station at Yunnan Marketing Company, located in the northern suburbs of Kunming, provides one-stop services including mobile phone chargers, ATM, coffee machines, etc. in the customers lounge area.



“PEOPLE-ORIENTED” - EMPLOYEE DEVELOPMENT

04

Employees are our most precious asset at PetroChina. Our values are based on a “people-oriented” approach and we take employees’ overall development as one of the key objectives of corporate development. We protect employees’ rights, build up a career development platform, promote the diversification localization of staff and strengthen the security of employees working overseas. We strive to achieve the optimization of both corporate values and employees’ benefits.



1. Protect Employees' Rights

PetroChina consistently adheres to the concept of being "people oriented". We respect and maintain the legitimate rights of our employees to promote the localization and integration of diverse cultures, and make efforts to solve the problems of great concern to employees. We aim to guarantee that all employees can share in the achievement of corporate development.

Fair Treatment

PetroChina strictly adheres to the *Labour Law of the People's Republic of China*, the *Labour Contract Law of People's Republic of China*, and the rules and regulations of the jurisdictions where our shares are listed, and we rigorously fulfill international conventions endorsed by the Chinese government, as well as the laws and regulations where we carry out our operations. We have established a well-developed employment management system composed of labor contracts, remunerations, insurance and benefits, performance evaluation, reward and penalties, vocational training and vacation. We place a high premium on employee's interests and make maximum efforts to protect the legitimate rights and interests of current and retired employees in a bid to develop an interest sharing mechanism for the company and employees.

We provide equal opportunities and fair treatment to all employees regardless of their nationality, ethnicity, race, gender, religion and culture. We strictly prohibit the employment and use of child labor and resist all forms of forced labor. Male and female employees enjoy equal rights in the company. Additionally, the Company has always aimed to promote the employment of local residents, women and ethnic minorities in an effort to increase job opportunities for local communities.

Democratic Participation

Attaching great importance to democratic management, participation and supervision, the Company established trade unions as well as the *Democratic Management System and Factory Affairs Publicity System* through employee representative associations. By clarifying all obligations and rights, organization system and working system of employee representative associations, we further standardized the content, process and forms of the *Factory Affairs Publicity System*, and continuously improve democracy in corporate governance.

The company and all its affiliates have developed a variety of channels of communication with employees and adhered to democratic procedures, through convening an employee representative congress and employee representative meetings. In this way, employees' opinions are solicited, and employees are encouraged to participate in the company's operations and management. In addition, the labor coordination mechanism has been improved to achieve harmonious labor relations.

Remuneration and Motivation

The performance measurement and remuneration system has been further improved, with the aim of building a remuneration structure that can highlight the value and performance of employees in different positions so that every employee can realize their self-worth. In addition, we carry on with the supplementary medical care and insurance system and an enterprise annuity system so as to ensure employees' interests. In recent years, the company has allocated resources towards employees working in the R&D area, on the frontline and in harsh environments, thereby gradually improving the salary for such positions.



Raising salaries for employees on the frontline.

Case Study Summer Camps Strengthening Family Relationships

More and more of our employees have opportunities to work overseas as the Company becomes increasingly international. At the same time, they are also plagued by loneliness away from their families. China National Oil and Gas Exploration and Development Corporation (CNODC) have organized two summer camps since 2010, which helped employees reunite with their families and strengthened their relationships.

In 2011, the second summer camp with the theme of "Family Love and Gratitude" was held in Qinhuangdao, Hebei Province, joined by 40 employees working in 15 countries with their families. The camp included 9 sessions. In the "ice-breaking" session, participants were divided into 3 teams. Each team had to communicate and decide on the leader, name, flag and song of the team within the time limit. In the "gratitude" session, every member closed their eyes and talked with each other with relaxing music. The "blind and

mute" session enhanced mutual trust, while the "Da Vinci code" session tested collaboration of family members. These activities strengthened the communication between dispatched employees and their families and enhanced family relationship.



Dispatched employees enjoying a happy time at the seaside.

2. Occupational Health

PetroChina attaches great importance to occupational health, putting employees' health and safety above everything. We implemented the *Occupational Disease Prevention Law*, follow the working laws of occupational health, and improve the working conditions to protect the physical and mental health of our staff.

Occupational Health & Surveillance

We have further standardized employees' occupational health surveillance, organized physical checks for employees working on the frontline, and strengthened occupational health surveillance for contractors and temporary workers who are exposed to hazards. We also improved occupational health surveillance files and 95% of employees have undergone physical checks.

Prevention of Occupational Diseases

We have proactively implemented detection, prevention and control of occupational hazards at workplaces. We further unified the evaluation management of projects under construction to ensure that the labor safety and health related facilities of these projects can be designed, constructed and put into operation with main projects simultaneously. We strengthened evaluation of occupational diseases for newly built and renovated projects, and launched research on occupational diseases causes, hazard detection, noise prevention, and occupational health services.

Health Service during Operation

We pay high attention to disease prevention and health protection of employees and strengthening health management and services in operations. We organized programs to prevent contagious diseases, intestinal infectious diseases and enhanced the quality of diet and drinking water hygiene according to the characteristics of different companies. We also advocate companies to carry out psychological health consultation services, and continued to provide occupational training and consultation to frontline employees.

Occupational Health Communications

With the active promotion of the *Code of Occupational Disease Prevention of the PRC*, we strengthened employees' awareness of disease protection and taught them knowledge on occupational diseases prevention and treatment. We also gave lectures on occupational health at our affiliated companies. In 2011, the Company conducted occupational health lectures and training for 400 managements and technicians.

Case Study Psychological Counseling for Frontline Workers

The west section of the West-East Gas Pipeline is located in Lop Nur, an area of adverse natural conditions in Xinjiang Uygur Autonomous Region. Employees working there suffer from being away from families and friends for a long period, which might lead to emotional problems.

In 2011, psychologists were brought in to provide counseling to employees in frontline offices. Counseling services were offered according to employees' individual situation. For managers, the experts helped them improve their communication skills to evaluate employees' mental health. For employees, the experts taught them how to deal with negative emotions and work pressure so that they can face their life and work more positively. Such counseling services helped employees to work and live happily.



Psychological counseling helps frontline employees work and live happily.

3. Growth Platform

Talent is the core competence for the Company. Applying the modern enterprise training concept, the Company improved its training centers and networks provide training to all employees with the purpose of developing a knowledgeable staff and a learning enterprise to achieve positive interaction between employee growth and corporate development.

Providing Training

We constantly provide training of various formats with the aim to improve capabilities of operation managers, professional technicians, skilled operatives and international talents.

In 2011, we continued to push forward the construction of training bases, curriculum and teaching faculties with a special focus on frontline employees, including engineers and operators, to improve their skills.

Every year, the Company selects a group of excellent managers and key technicians, and sends them to reputable universities and training agencies at home and abroad to get training in foreign languages, international business, business administration, law and other specialties. In 2011, over 300 employees were offered training opportunities in Session 6 of the “1,000-People Training Project”, a program dedicated to training international talents.

The Headquarters of the Company organized 114 training programs in 2011 with 20,000 attendants. More than 95% of the senior technicians and employees working in key positions received training in the year.

Growth Mechanism

In 2011, we continued to develop three talent teams of operation managers, professional technicians and skilled operatives in order to create a favorable environment in which all talent can thrive and grow. Through our efforts, the quality of the three teams was continuously enhanced. Sun Longde and Hu Wenrui were selected as academicians of the Chinese Academy of Engineering. Four employees, including Shu Binxia from Liaohe Oilfield Company, were selected to join the project to build the first 50 skilled masters’ studios at national level. At the end of 2011, the Company had 17 academicians of the Chinese Academy of Sciences and the Chinese Academy of Engineering, more than 740 experts entitled to the Government Special Allowance, 74 management experts, 213 senior technical experts, and 185 senior skilled experts. Apart from that, we are proactively introducing high caliber staff from other countries that 14 experts have passed the evaluation of the Thousand People Plan, a national program aimed at attracting outstanding talent from abroad.



Case Study Caring for Frontline Staff Welfare and Development

The No. 16 Station in Daqing Oilfield Company created a “big family” culture for its employees. A “Love Archive” was established to take note of each employee’s personality, health status, hobbies and interests so that congratulations or greetings could be sent to employees whenever they are ill, in family disputes, during holidays, etc. Apart from that, the station has set up special funds to encourage employees to keep learning, and chose employees as a “model of self-teaching” to encourage self-improvement. At present, 45% of its employees are senior workers, 35 employees have acquired dual operating certificates, 16 have passed skill accreditation for three posts and 26 have junior college qualifications or above.



The No. 16 Station encouraging employees to learn more.

Case Study Providing Equal Development Platform for Employees

Attaching great importance to employees’ development, Guizhou Marketing Company provides an all-round training program, including introduction training and professional skills to help employees get acquainted with the corporate culture and improve their capabilities. The company has designed career development plans based on employees’ hobbies, interests and abilities, and provided a platform for them to grow through fair recruitment and selection. Chen Wei, a post-1980 employee from Linquan Town, Qianxi County of Guizhou Province, joined the company in 2005 and passed the accounting test through her effort. In 2009, she won a promotion selection competition and became the manager of Jiuzizhai service station. At present, she is also responsible for the Qianxi service station and in charge of two service stations at the same time.



Chen Wei with her colleagues at Qianxi Oil filling Station.

4. Local Staff Training

We embrace an open corporate culture of respect and tolerance, and uphold the principles of localization, professionalism and market-orientation in managing overseas talent. While we are in the process of establishing ourselves as an integrated global energy company, we are also promoting employee localization.

Employee Localization

We proactively recruit local employees and provide training for them based on their capabilities and qualifications, and select local management personnel through fair competition. At the end of 2011, international and local employees accounted for 94% of our overseas workforce.

Management of Local Employees

We have formulated *Methods on Local Employees Management in Overseas Countries*, according to the laws and regulations in overseas countries where we carry out operations, which covers hiring, attendance, vacation, performance evaluation, incentives and punishment. We have also refined the rules for each management process and position, which help us attract and retain outstanding local talent.

Respect for Cultural Differences

We fully respect cultural diversity and local customs, and hold activities according to local traditions to enhance mutual understanding and strengthen cross-cultural cooperation. On the one hand, we encourage Chinese staff to learn local laws, history, culture and religious customs to better adapt to the local culture. On the other hand, we invite foreign employees to visit China, and learn the Chinese language and culture. In addition, we promote mutual understanding among international employees so that they could respect each other's cultures and customs.



Cultural diversity enhances communication and cooperation.

Case Study Local Employee Development in Indonesia

Our Indonesian project continuously improves the guidelines, rules and procedures of local employee management and has established an evaluation and incentive system for the hiring and training of local people. At present, local employees account for 98% of the workforce in the Indonesian project.

Improve training system. We provide training on petroleum technology and risk management for local staff every year according to job requirements and individual requests, selected key technicians and managers for international business training in other countries and employees for training courses in China University of Petroleum. Up till now, over 200 employees have attended the courses.

Rewards and incentives. We conduct annual evaluation and reward the staff based on their performance. We also hold annual conferences to show our appreciation for experienced employees.

Respect for cultural differences. We respect the religious beliefs of individuals from different countries or regions, and provide our staffs with various dining and living choices. In addition, we hold various parties to promote communication among employees with different background.

5. Security in Overseas Operations

We pay great attention to the safety and security of our overseas employees. Committed to the philosophy of “employees’ lives above everything”, we established a social security system for overseas business. We have founded the HSE Committee for International Cooperation, and the Office for Overseas Anti-terrorism, Security and HSE, established social security working teams in 10 countries where security situations were rather tense, introduced controlling system for social security risks, allocated emergency response resources and improved related plans, so as to manage and evaluate such risks. In addition, we have established partnership and joint emergency response mechanisms with the local governments, Chinese embassies and consulates, and security institutions in overseas countries to conducted trainings on knowledge of anti-terrorism, security and emergency response, as well as management and skills of overseas project security. We signed the *Safety and Environment Accountability Pledge* with overseas business units so that security responsibility would be implemented to each overseas project. No security accident occurred during 2011 in our overseas projects.



Overseas emergency response platform





GIVING BACK TO SOCIETY

05

As our wealth comes from society, it is also our duty to contribute back to the community. Holding social-economic development as our ultimate goal, we attach great importance to the well-being of the people and social advancement. We never waver in helping the poor, assisting students with financial difficulties, volunteering in community services, and participating in community building. Through our efforts, we strive to build a harmonious society.

1. Promoting Development of Local Economies

PetroChina's development is inseparable from the support of governments, communities and the public. In turn, our sustainable and stable energy supply has also boosted local socio-economic development. In addition, the development and construction of oil and gas fields, refining chemicals and pipelines also cultivate local suppliers and contractors, drive the development of relevant local industries and create a large number of jobs opportunities.

Case Study Tarim Oilfield Company Promoting Sustainable Development in South Xinjiang

As an important oil and gas production base in western China, Tarim Oilfield Company actively supports local development while providing sufficient and high quality energy resources, which laid a solid foundation for sustainable development in south Xinjiang.

With its strength in resources, the company actively promoted the development of local industries in southern Xinjiang, such as civil energy, gas generated electricity, and petrochemicals, and built petrochemical bases in Korla-Luntai, Kuche-Aksu, and Kashgar-Zepu around the Tarim Basin. Many oil-production auxiliary enterprises as well as large-scale refined chemicals projects have been introduced in cities including Korla, Aksu and Kashgar. It also supported infrastructure constructions and established "Petroleum Schools", "Petroleum Tunnels", and "Petroleum Clinics", etc.

Tarim Oilfield Company began to launch the project of "Gasification of South Xinjiang" in 1999, and constantly expanded the coverage of natural gas for civilian use, improved the ecological environment in South Xinjiang and created a favorable environment for business in the local area. The amount of gas transported to the 5 areas in South Xinjiang increased from 200,000 cubic meters to more than 7 million cubic meters currently, providing over 8.6 billion cubic meters of high quality natural gas for 450,000 families across 30 cities and counties.

Over the past 10 years, development of oil and natural gas in the Tarim Basin has increased local fiscal revenue. Bayingolin Mongol Autonomous Prefecture and Akzo Area witnessed a GDP increase of over 30 times over the past 20 years. In 2011, the oil industry accounted for over 70% of the added industrial value in these regions.



Petrochemical development bringing job opportunities to local residents.



"Petroleum Clinics" bringing convenience to local people.

2. Poverty Alleviation

Poverty is an important constraint on sustainable development and natural disasters tend to aggravate poverty. The Company supports and promotes poverty alleviation through promoting poverty alleviation projects, supporting the development of local industries and increasing job opportunities.

Guided by the *Outline for Development-oriented Poverty Reduction for China's Rural Areas (2011-2020)*, we have been vigorously participating in poverty alleviation efforts in some poverty-stricken counties and villages in Xinjiang, Henan, Tibet, Qinghai, Chongqing, Guizhou and Jiangxi. In 2011, all our poverty alleviation projects were put into operation. We provided 13 training sessions for 540 people on more than a dozen of courses on plastering, automobile repair, cooking, etc. The C4

aromatization technique, which we offered to Taiqian County in Henan Province for free, was hailed by the state as one of the National Programs in the Key Industry Rejuvenation and Technological Renovation in 2011. We volunteered to assist two old revolutionary areas of Hengfeng County in Jiangxi Province and Xishui County in Guizhou Province. In 2011, we donated over 37 million RMB for poverty alleviation.

Case Study Bringing Benefit to Remote Dashui Village

China Southern Petroleum Exploration & Development Corporation has launched several poverty alleviation projects for Dashui Village in Qionghua District, Haikou City, Hainan Province. In 2011, it invested more than RMB 500,000 in infrastructure construction and local economic development projects. Now Dashui Village began to take on a new look.

Improving living conditions. The company participated in local infrastructure construction including dilapidated houses repairing, sewage facilities construction, etc., mended 1,100 meters of roads and 1,500 meters of alleys, dug a 30-meter-depth well with large diameter, and set up a water storage tower with a capacity of 30 tons.

Cultivating local industries. The company helped build a cultural square, lake-side docks, fishing platforms and wood houses according to local conditions, to establish a rural tourism industry. In addition, it helped farmers construct a

water dam to channel water into the village and dug a lake to develop the fishery sector, to improve local capacity of sustainable development.

Building a culturally rich village. To enrich people's cultural life, the company constructed a cultural hall with 2 book shelves and more than 500 books. Apart from that, employees also made generous donations to local senior and disabled people.

Ji Wenlin, Mayor of Haikou city, commented that the company "carries social responsibility, and these contributions really benefited local villagers." To express their gratitude, villagers also gave the company a wood inscription saying "immeasurable kindness to Dashui".



The original look of the main road of Dashui Village



Newly built cement road leading to all homes of the village



Special Topic Ten-Year Aid into Northern Tibet



PetroChina's medical team offering medical service to local residents.

Shuanghu Special Zone, a remote place in Naqu area of Tibet with an average altitude of 5,000 meters, is an area with the lowest population density. Since 2002, PetroChina, together with CNPC, focusing on the capacity building of sustainable development in Shuanghu, carried out poverty relief projects and improved the living conditions of local residents. Over the past decade, local fiscal revenue increased by almost 3 times and net income per capita nearly doubled.

Improvement in local livelihood. We built villages and houses to help strengthen their abilities of disaster prevention. Investment was made in PV Lighting projects so that electric lights and TV sets could be accessible to local farmers and herdsman. We participated in developing infrastructure such as service stations, radio and television centers, and renovating electric lines. We further enhanced public service facilities including nursing homes, kindergartens and clinics. Over the past 10 years, we supported 84 projects dedicated to improving local people's livelihood. These projects have improved local infrastructures and the living standard for farmers and herdsman.

Dispatch of management staff. In all, 8 management staff in 5 batches have been sent to Tibet to carry out tailor-made programs. The third batch, after exchange with local government, decided to shift their focus to pasture regions with over 80% of the funds and projects targeting local villages while giving consideration to infrastructure development at the same time.

Training and education. We held 9 training sessions for local officials and invited over 200 officials and technicians to inland cities to update their knowledge. Meanwhile, we donated more than 1,800 books and helped establish a library.

Health care service. We organized medical teams to provide physical examinations to local residents. In 2011, the 3rd mobile clinic team with 6 members was sent to 3 villages of two counties, offering free health diagnosis and medicines to local residents. On September 28, a special article was published in Tibet Daily appreciating PetroChina's efforts in medical treatment.

3. Support for Education

Supporting educational initiatives is an important part of our contribution to social development. By establishing various scholarships and fellowships, donating funds to build primary schools and subsidizing poor teachers and students, we actively contribute to educational development in China.

Since 2010, our affiliated companies in Xinjiang Uygur Autonomous Region have established a special education fund of RMB 50 million every year for local elementary education. In 2011, we introduced a new round of China Petroleum Scholarship with 13 colleges and universities including Peking University, Tsinghua University and China University of Petroleum (Beijing) increasing its total amount and giving more favorable treatment to impoverished students and lower-grade students. Apart from that, we sponsored two schools for immigrant students in Zhongning County and Xixia District of Yinchuan in Ningxia Hui Autonomous Region. We donated over 110 million RMB for educational activities in 2011.



PetroChina Scholarship Award ceremony

Case Study Building a New School for Local Pupils

A new primary school was built by PetroChina in Baota District, Yan'an City, where it was wild and isolated three years ago, with modernized equipment, which is convenient for local pupils.

Before the establishment of this school in 2008, there were only primary schools in remote villages with outdated facilities and only a few teachers, and the number of students kept declining. Nowadays, after several years of development, this primary school, with its brightly lit classrooms, is equipped with science laboratories, counseling rooms, audio-video rooms, dancing rooms, music classrooms, and multi-media facilities. At present, there are more than 1,200 students studying in 23 classes. The school provides local pupils with a good studying atmosphere with enhanced facilities and teaching faculty, which inspired students to be more passionate with their studies.



Children in a new school studying and living happily.

4. Volunteer Activities

In areas where we carry out our business operations, lots of volunteer teams composed of our employees carry out volunteer actions all year round. They voluntarily help employees with difficulties, help poor students, take care of widowed seniors and disabled people, plant trees, and protect the environment.

Volunteers from Lanzhou Petrochemical Company offered help to seniors, provided free tutorship for pupils, and gave financial support to poor students. During the 8th National Games of Disabled People, volunteer teams from Zhejiang Marketing Company, provided their top services to players and audience. The volunteer Association of Ningxia Petrochemical Company organized volunteers carried out initiatives protecting the Yellow River and assisting people in difficult situations, and earned the Award for Excellent Organization of Volunteers bestowed by the Central Committee of the Communist Youth League of China. In 2011, the number of volunteer teams exceeded 5,000, with over 140,000 volunteers, and more than 1 million people benefited from their initiatives.



A young volunteer encourages a student to study hard.

Case Study Employee Volunteers of Urumqi Petrochemical Company Extend Helping Hands

Volunteers of Urumqi Petrochemical Company have been taking the initiative to serve local communities.

Services for local communities. They constantly delivers convenient services every year, including home appliances repair, laundry, and leather polishing, which has benefited more than 30,000 people over the past ten years.

Caring for the disadvantaged. Volunteers visit nursing homes, orphanages, schools for the blind and the SOS Children's Villages on a regular basis, taking care of seniors and children. The company even established a special mechanism in order to take good care of a senior widow. During the

past decade, volunteers have been visiting her every day to help her cleaning snow, sweeping the floor, and maintaining her house.

Voluntary Blood Donations. There is a voluntary blood donation in the company which keeps helping patients in danger. In 2011, over 300 volunteers donated a total of 80,000 c.c. of blood, enriching the inventory of the local blood bank.

5. Contributions to Overseas Communities

PetroChina has been adhering to the principle of “cooperation for mutual benefit and joint development” for a long time, and devoted to developing long-term partnerships with the countries where it operates.

Local Procurement

Localized procurement has not only reduces our operation costs, but also boosts the development of local SMEs, thus creating job opportunities for local communities. Therefore, PetroChina puts great emphasis on the procurement of local products and services. For example, we rely on local resources as much as possible and conduct technical cooperation with local enterprises and work with local SMEs for logistical support in Indonesia.

Environmental Protection

We focus on environmental protection while developing our projects. By optimizing processes and applying energy-saving and emissions reduction technologies, we protect local ecological environments and minimize the impact on the environment. In Peru, we apply low pressure, high volume sewage re-injection supporting technologies to monitor sewage treatment so as to protect the tropical rainforest effectively.

Community Construction

We actively carry out activities of infrastructure construction, poverty alleviation, disaster relief, professional training to improve living standards for local people and realized common development with local communities. In Kazakhstan, we initiated a scholarship program in Qyzylorda which funded 88 local high-school students to study at colleges in China, Canada and Kazakhstan since 2005, and offered support for local low-income families, disabled children and veterans.



Indonesian project supporting local farmers' development

Case Study Green Operation in Chad

Chad is an inland country located in central Africa on the southern edge of the Sahara Desert. With its dry climate and vulnerable ecological environment, it is listed as one of the least developed countries in the world by the United Nations.

While carrying out operations, we pay strong attention to environmental protection. Strictly adhering to the laws and regulations of Chad, we invited special agencies to identify the potential effects of our operation on the environment, including plants, wild animals and historical relics, to minimize negative impacts. We also conducted environmental

analysis and compared water, soil and atmospheric samples extracted before drilling with that after the operations. We constructed waste treatment facilities and recycled waste to reduce the impact. Galen Jones, a Canadian environmental protection expert, commented that “PetroChina adopts high environmental protection standards and adheres to these standards strictly.”



Special Topic Community Development in Kazakhstan



Petroleum cooperation has driven local economic development.



Emba-Zhanazhol Railway has brought convenience to the villages along it.



Helping talented Kazakhstan youth to get college education.

Since its cooperation with Kazakhstan, PetroChina has boosted local economic development, fostered local talents and participated in public welfare undertakings, which promoted common development for enterprises and local communities.

Local economic development. For more than a decade, we have invested more than USD 6.5 billion in oil and gas projects in Kazakhstan, contributed over USD 3 billion tax to local governments and created more than 30,000 job opportunities. The Aktobe Project has accomplished the construction of oil and gas plants and facilities for its production, storage and transportation. In addition, it has also provided over 9 billion cubic meters of natural gas to local citizens and 406,000 tons of diesel at preferential prices, thus promoting socio-economic development.

Fostering local employees. We send employees from Kazakhstan for training in China or other countries each year. We convened a three-week training sessions for Kazakh employees at the China University of Petroleum in Beijing for the past seven consecutive years and arranged site visits to Dagang and Shenzhen during their stay in China to learn about Chinese experience of oilfield management. Due to its outstanding quality of training, the Aktobe Project won the "Excellent Social Contribution Awards of Enterprises Training". Currently, over 20,000 employees in Kazakh projects are local, which accounts for more than 97% of the total, while 60% of the administrative personnel are local.

Infrastructure construction. We built natural gas pipelines and power stations for remote villages and invested in the construction of the Emba-Zhanazhol Railway, which brought convenience for villagers along the route. We donated over USD 6 million to Kyzylorda and South Kazakhstan to help with road repairs, community park construction, civilian electricity and gas utilization, and sponsored football clubs, schools, libraries, orphanages and hospices. The Aktobe Project has funded local medical and health services continuously for many years, providing over 60 ambulances to medical agencies in the autonomous prefecture, cities and regions, which improved local healthcare standards.

Public Welfare. Through the MMG project, we have proactively supported development in sports, culture and education in Kazakhstan, protected its cultural relics, established the Zhetibay Sports and Cultural Center, and sponsored the Seventh Asian Winter Games. We signed a Memorandum of Cooperation with the Kyzylorda State Government, donating USD 6.4 million for public welfare, with most of which used for projects related to peoples' daily lives. In 2011, we were granted the "Enterprise with Sustainable Development Award" from the Kazakhstan Energy Association, and the "Presidential Gold Award for Corporate Social Contribution", signed by the President of Kazakhstan.

OBJECTIVES AND PLANS

In 2012, the Company will fulfill three responsibilities for the sake of the economy, the environment and society by implementing three main strategies in the areas of resources, the market and the internationalization of operations through scientific approaches. We will focus on enhancing capabilities in independent innovation, consolidating the basis of business management and promoting the transformation of our development model, so as to further strengthen sustainability in all aspects.

Item	2012 Targets	Action Plans in 2012
Oil/Gas Production and supply	Stabilize the supply of oil/gas and petrochemical products	<ol style="list-style-type: none"> 1. To continue to promote “high growth in oil/gas reserves” projects, scientifically organize oil/gas production, adhere to the comprehensive study of fine geological research, focusing on exploration programmes and deployment, the integration of exploration and development, oil exploration and natural gas exploration. To stabilize and increase well-wise output and coordinate oil/gas field development. 2. To organize refining and chemical production to boost profitability, adhere to the principle processing suitable products for the markets, strengthen organization of production and scientifically allocate production load; and put emphasis on the construction and operation of key projects. 3. Speed up the development of the sales network and adopt targeted marketing strategies to enhance retail competence and ensure market supply. 4. Further develop oil/gas pipelines and domestic pipeline networks and maintain rapid growth of natural gas business; and enhance emergency peak capacity to ensure safe and stable gas supply. 5. Continue to consolidate and expand international oil/gas cooperation and maintain sustainable growth of overseas businesses; organize the implementation of major new projects; work on the exploration and development of existing projects; select oil/gas assets for mergers and acquisitions; and enhance the regulatory role of international trade in supply. 6. Strengthen technological innovation to support the development of core businesses; strengthen the implementation of major technological projects based on production needs and promote use of new technologies to further improve the company's capabilities in innovation.
Safety and Environmental Protection	Give prominence to operational safety, energy efficiency and emissions reduction; eliminate major or severe accidents and reduce the fatal accident rate	<ol style="list-style-type: none"> 1. To perfect our safety and environmental responsibility systems, strengthen the contract management of safety and environmental protection, improve our accountability system for production safety and environmental protection and enhance the level of HSE management. 2. To reinforce the implementation and improvement of the HSE system; strengthen the whole process of monitoring and contractor safety. 3. To strengthen production safety controls and transition management in the construction, maintenance and temporary operations. 4. To improve emergency response mechanisms, in particular, to enhance the contingency response and handling capability of frontline workers; to further improve the security mechanism in overseas projects. 5. To strengthen the prevention and control of environmental risks posed by facilities close to waters and other environmentally sensitive areas. 6. Focus on energy-saving projects to accelerate the implementation of energy management contracts, with a focus on promoting the use of energy-saving technologies and products.

Item	2012 Targets	Action Plans in 2012
Employee Development	To enhance team building among employees and frontline construction workers and further improve the overall quality of the team	<ol style="list-style-type: none"> 1. To consider the improvement of the quality of employees as an important basis for long-term corporate development; and to push forward business management, professional techniques and technology; and build teams of high-skilled talents, especially high-quality international talents. 2. Carry out job training, highlighting the key positions and training of employees overseas. 3. Strengthen development of ordinary staff members and teams and carry out team development characterized by technical competence, high efficiency, professional management, innovativeness and harmony. 4. Enhance examination and testing on occupational hazards, strengthen occupational surveillance, improve work conditions and further enhance occupational healthcare.
Public Welfare	To actively undertake social responsibilities in support of public welfare and the development of a harmonious society	<ol style="list-style-type: none"> 1. To actively support and participate in public welfare activities and strengthen and improve management of charitable donations to maximize their effect. 2. To strengthen communication with local governments and integrate the company's development with local economic development. 3. Continue to carry out various forms of poverty alleviation efforts, including disaster relief, donations towards education, volunteer activities, and alleviation of poverty by strengthening technology and education. 4. Develop a long-term poverty alleviation mechanism, ensure financial input, improve alleviation methodology, and care for those facing difficulties.
Anti-corruption	To strengthen leadership building, ensure the integrity of the management to build an international energy company.	<ol style="list-style-type: none"> 1. To enhance awareness and promote the fight against corruption. 2. To strengthen integrity and risk prevention controls to promote the punishment and prevention of corruption. 3. To set up role models among the management team to showcase integrity and self-discipline. 4. To continue to strengthen investigation and punish violations and irregularities resolutely. 5. To enhance investigations into accountability to ensure implementation of integrity.

APPENDICES

Performance Statistics

Category	Indicator	2007	2008	2009	2010	2011
Economic	Total assets (RMB 10 ⁸)	10,696	11,962	14,503	16,565	19,176
	Turnover (RMB 10 ⁸)	8,375	10,726	10,193	14,654	20,038
	Net profit (RMB 10 ⁸)	1,468	1,145	1,034	1,400	1,330
	Taxes (RMB 10 ⁸)	1,722	2,227	2,045	2,870	3,744
	Proven crude reserves (10 ⁶ barrels)	11,706	11,221	11,263	11,278	11,128
	Proven gas reserves (10 ⁸ ft ³)	571,110	611,890	632,440	655,030	666,530
	Oil equivalent production (10 ⁶ barrels)	1,117	1,182	1,196	1,228	1,286
	Crude oil production (10 ⁶ barrels)	846	871	844	858	886
	Marketable natural gas production (10 ⁸ ft ³)	16,277	18,642	21,122	22,212	23,964
	Total length of crude oil pipelines (km)	10,559	11,028	13,164	14,782	14,782
	Total length of refined products pipelines (km)	2,669	5,656	8,868	9,257	9,334
	Total length of natural gas pipelines (km)	22,043	24,037	28,595	32,801	36,116
	Crude runs (10 ⁶ barrels)	824	850	829	904	985
	Ethylene production (10 ⁴ tons)	258	268	299	361	347
Safety	Death rate caused by accidents (person/100 million working hours)	0.25	0.50	0.36	1.02	0.70
	Total accident rate (incidents/million working hours)	0.03	0.03	0.0264	0.0120	0.0326

Category	Indicator	2007	2008	2009	2010	2011
Environ- ment	Oil discharged in waste water (tons)	1,001	779	701	698	642
	Energy conserved (10 ⁴ TCE)	124	176	171	173	113
	Water conserved (10 ⁴ cubic meters)	4,700	5,336	3,188	2,865	1,744
	COD discharge in wastewater (tons)	23,427	19,751	16,949	18,741	17,731
	SO ₂ discharge in waste gas (tons) *	127,498	123,500	105,044	114,200	111,321
Employee	Number of employee (10 ⁴)	46.7	47.8	53.9	55.3	55.3
	Percentage of employees receiving occupational health checks (%)	97%	96%	96%	96%	95%
	Percentage of non-Chinese nationals in overseas hires (%)	92%	92%	94%	94%	94%
Public welfare	Contribution to poverty alleviation (RMB 10 ⁴)	14,957	12,272	5,828	6,308	3,706
	Educational donations (RMB 10 ⁴)	4,549	12,968	3,782	3,458	11,928
	Donations to disaster relief (RMB 10 ⁴)	2,483	9,009	935	4,499	595
	Environmental protection (RMB 10 ⁴)	—	876	569	5,588	75

* SO₂ emissions from the movable sources were included in 2010 and 2011.

Note: measurement unit

1 BOE=1 barrel of crude=6,000 cubic feet of NG=169.9 cubic meter of NG

1 cubic meter of NG=35.315 cubic feet of NG

1 metric ton of crude=7.389 barrels of crude (API=34)

Glossary

Name	Definition
Recovery	The percentage of oil (gas) produced from underground oil (gas) reservoirs in the oil (gas) in place.
Reserve replacement ratio	The result of dividing annual net incremental reserves by annual oil and gas production. It can be further classified into oil reserve replacement ratio, natural gas reserve replacement ratio and oil and gas equivalent reserve replacement ratio.
Proved reserves	The estimated quantities of crude oil and natural gas which the assessment and exploration demonstrate with reasonable certainty to be recoverable and economically beneficial in future years from known reservoirs, during reservoir assessment, in accordance with the standards of China, with relative error within $\pm 20\%$. Proved reserves include proved geologic reserves, proved technically recoverable reserves, proved economically recoverable reserves and proved sub-economically recoverable reserves.
Volume of marketable natural gas	The volume of natural gas that can be sold in the market, excluding natural gas flared, consumed in re-injection and lost in the course of production.
Liquefied natural gas (LNG)	Liquefied natural gas is formed after the natural gas produced from gas field goes through the processes of dehydration, de-sulphuration, drying and converted to a liquid from gaseous state at low temperature and high pressure.
Ethylene	The simplest member of the olefinic hydrocarbon series and the intermediate feedstock for producing synthetic resin, synthetic rubber, organic products, etc.
Primary Energy	Primary energy is energy found in nature that has not been subjected to any conversion or transformation process. It is also named as natural energy, which includes: fossil fuel (such as raw coal, crude oil and natural gas), nuclear fuel, biomass, water, wind, solar energy, geothermal energy, ocean energy and tidal energy, etc. Primary energy can be classified into renewable energy and non-renewable energy; the former refers to natural energy which can be re-generated, such as solar, wind, water and biomass energies, all of which come from the sun and are renewable; the latter cannot be re-generated, which mainly includes various fossil fuels and nuclear fuels.
Renewable energy	Renewable energy is energy found in nature that is inexhaustible and can be regenerated and replenished. It does little or no harm to the environment, with widely-distributed resources, and is suitable for on-site development and utilization. Renewable energy includes: solar, wind, water, biomass, geothermal and ocean energies, etc. The Renewable Energy mentioned in China Renewable Energy Law refers to the non-fossil energies such as wind, solar, water, biomass, geothermal and ocean energies, etc.
HSE	HSE is the abbreviation of Health, Safety and Environment. HSE management system integrates the elements of organizational structure, responsibility, method, procedure, process and resource, which are necessary for implementing HSE management. These elements are integrated in an advanced, scientific and systematic running mode, which are interconnected and interacted, forming a dynamic management system.
Serious accident	An accident which has caused the death of 10 to 30 persons, or the serious injury of 50 to 100 persons, or the direct economic loss of RMB50 million to RMB100 million.

Name	Definition
Million work hours	One million work hours approximately equals to the total work hours of 500 workers in a year. The total working hours of an employee includes those for training and overtime, yet holidays, sick leave and other absences are excluded.
Environment	The appearance of actions and activities of organs, including air, water, soil, natural resources, plant, animal and human, as well as their relationships.
COD	Chemical Oxygen Demand. The consumption of oxidants while processing water samples with strong oxidants. It serves as a composite index for pollutants discharged into the water body and their potential impact on the environment. A higher COD represents heavier pollution of reductive substances in the water body.
Greenhouse gas	Greenhouse gases are gases in the atmosphere that absorb and emit solar radiation, such as vapor, CO ₂ , and most refrigerants. They function as the greenhouse to absorb solar radiation and heat the air inside, which make the Earth surface warmer. The greenhouse gases in nature include: H ₂ O, CO ₂ , O ₃ , CH ₄ , N ₂ O, CFC _s , PFC _s , HFC _s , HCFC _s and SF ₆ , etc.
Carbon sequestration	Carbon sequestration refers to the process, activity and mechanism of removing CO ₂ from the atmosphere. Forestry Carbon Sequestration is one of effective measures to reduce greenhouse gases, which absorb CO ₂ in atmosphere through photosynthesis of trees and other plants, by adopting afforestation and forest management measures, and sequester CO ₂ in the woods and soil in the form of biomass.
Occupational diseases	Ailments caused to a worker by exposure to occupational health threats in his/her working environment, such as dust, radioactive substances and other poisonous or harmful substances.
Occupational health surveillance	A series of health examinations for professionals in an industry aimed at preventing occupational health threats and improving the health of employees. Occupational health surveillance includes occupational health checks, management of occupational health archives, etc. Occupational health examinations are conducted before filling the position, during work, and while leaving the position. It also includes follow-up health examinations and emergency health examinations.
Stakeholder	A person, group or organization that has a direct or indirect stake in an organization because it can affect or be affected by the organization's actions, objectives, and policies. In a narrow sense, stakeholders include investors, employees, customers, and suppliers, etc. Along with social development, stakeholders in a broad sense include: creditors other than shareholders, employees, consumers, suppliers and other trading partners; government authorities, local residents, local communities, media, and environmental campaigners; and even the objects that are directly or indirectly affected by the enterprise's activities such as the natural environment, future generation, and non-human species.
Low-carbon economy	An economic development mode to minimize the consumption of coal, oil and other high-carbon energies and achieve a win-win effect between socioeconomic development and environmental protection, through technical innovation, system innovation, industrial transition and new energy development, guided by the concept of sustainable development.

Feedback Form

Your opinions will help to improve our sustainability performance and the subsequent reports. Thank you for your attention and support.

1. What is your appraisal of the *2011 Sustainability Report of PetroChina*?

☐ Very Good ☐ Good ☐ Fair ☐ Poor

2. Which part of the *2011 Sustainability Report of PetroChina* are you interested in?

☐ From the Chairman of the Board ☐ Dialogue with the President
☐ About Us ☐ Operation with Credibility and Compliance
☐ Sustained Energy Supply ☐ Safe and Clean Production and Operation
☐ Customer-first Market Service ☐ "People-Oriented" - Employee Development
☐ Giving Back to Society ☐ Objectives and Plans

3. Which improvements would you like to be made in the *2012 Sustainability Report of PetroChina*?

4. Do you have any advice on the further performance of social responsibilities by PetroChina?

5. Your occupation or identity?

☐ Public Official ☐ Consumer ☐ Employee ☐ Investor
☐ Scholar ☐ Partner ☐ CSR-related Institution ☐ NGO
☐ Media ☐ Community Representative ☐ Other

6. If a reply is required, please give the contact information (Your personal information will be used for contact only)

Name
E-mail

Tel.
Mailing address

You may also log on the website of the Company and download the electronic version of reports for previous years



2006 Corporate Social Responsibility Report



2007 Corporate Social Responsibility Report



2008 Corporate Social Responsibility Report



2009 Sustainability Report



2010 Sustainability Report



2011 Sustainability Report

About This Report



PetroChina Company Limited (PetroChina, also hereinafter referred to as the “Company”, “we” and “us”) has published its annual Sustainability Report since 2006. This is to present our stakeholders and the public with a clear picture of our commitment and performance in pursuit of scientific, safe, clean, economical and harmonious development. We also hope the Company can win wider support from various social communities.

The report represents what we did to honour our commitments to the economy, environment and society in 2011. All information disclosed in the report was sourced from PetroChina's official documents, statistical reports and from statistics gathered from the Company's affiliated enterprises, and has been reviewed in accordance with the Company's Rules for Information Disclosure Control and Disclosure Procedures. Given continuity and comparability, the report provides historical and future explanations on certain issues.

The report is formulated according to the principles of accuracy, standardization and transparency. We also referred to the Guideline on Preparing the Report on Performance of Corporate Social Responsibility by the Shanghai Stock Exchange and continue to consult the Sustainability Reporting Guideline released by the Global Reporting Initiative and the Oil and Gas Industry Guidance on Voluntary Sustainability co-published by the International Petroleum Industry Environmental Conservation Association and the American Petroleum Institute. As a participant in the United Nations Global Compact (UNGC), we also introduce our progress in compliance with the Ten Principles and will submit the report to the website of UNGC (<http://www.unglobalcompact.org>).

The report includes a set of Forward-Looking Statements. Except historical facts, all events that may or will occur (including, but not limited to, premise, objectives, estimation and business plans) and descriptions of such events are categorized into the Forward-Looking Statements. Due to the presence of external uncertainties, actual outcomes or trends in the future may differ from those expected in the statement. The Forward-Looking Statements were made before December 31, 2011, for which PetroChina holds no responsibilities or liabilities for any modification thereof.

We sincerely hope that this report will increase your awareness of the issues concerning sustainable development of the whole society such as challenges in energy scarcity, climate change, environmental protection, poverty and underprivileged groups. These issues have a direct impact on the sustainable development of PetroChina and the prosperity and progress of society and the economy as a whole. We welcome any comments and suggestions. Your feedback will encourage us to do better. This report is published, along with the Company's Annual Report in March 2012 in simplified Chinese, traditional Chinese and English. The simplified Chinese version shall prevail in case of any discrepancy. Please visit our website (www.petrochina.com.cn) for more information or downloading the electronic version of this report.

The Board and all directors of the Company warrant that there are no misrepresentations or misleading statements in or material omissions from the report and will jointly and severally accept full responsibility for the truthfulness, accuracy and completeness of this report.

Note: Please visit www.petrochina.com.cn to check PetroChina's compliance with Ten Principles in the Global Compact, Sustainability Reporting Guidelines (Version 3.1) released by the Global Reporting Initiative and Oil and Gas Industry Guidance on Voluntary Sustainability (2010).





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