



The Auto Project on Energy and Climate Change
汽车能源与气候变化—中国项目

MONTHLY NEWS BRIEFING

<http://www.autoproject.org.cn>

AUTO/ENERGY/POLLUTION

Volume III, Issue 12, December, 2006

*The APECC monthly newsletter is prepared by the
Innovation Center for Energy and Transportation (iCET)*



TABLE OF CONTENTS

GENERAL ENERGY ISSUES	4
Shared energy challenge	4
China to impose tariffs on more resource-intensive products	4
China signs on to energy project	5
China to provide subsidies to bio-energy sector	5
Ethanol output has corn prices popping	6
Policy takes the wind out of investors' sails	7
ADB funds Gansu hydropower program to boost clean energy	9
AUTOMOBILE AND TRANSPORTATION.....	10
China to license auto exports	10
Gov't to control auto capacity.....	11
Individual buyers spur booming car market	11
China's auto sales expected to exceed 8 million in 2007	12
Beijing scraps 13,000 outdated, polluting taxis.....	12
Chery to build small cars for Chrysler	13
Auto after-sales market is booming	14
OIL AND GAS	15
Oil pricing to gain flexibility.....	15
China seeks energy negotiations with OPEC	17
New gasoline standard to reduce sulfur levels to 150 ppm	18
Oil analysts say deregulation will increase players.....	19
China, Kazakhstan sign energy deal	20
BP, CNOOC to invest US\$100m in S. China Sea gas.....	21
Sinopec given State subsidy of US\$639m.....	21
CLIMATE CHANGE AND AIR POLLUTION	22
Environment tops agenda for science co-operation.....	22
Global warming could wreak havoc in China	23

World's most extreme case of climate change revealed.....23
Global warming threatens plateau24
2006 set to be the 6th warmest worldwide: UK report25
Antarctica, a living global warming laboratory.....26
SEPA opens southwest centre27

Disclaimer:

The opinions and statements expressed in the articles are those of authors from cited sources, thus do not represent the opinions of APECC.

iCET Beijing Office:

Ms. FAN Yue
Managing Director
Phone: 86-10-65857324 ext. 212
e-mail: yuefan@icet.org.cn
Room 1904, e-Tower Building
No.C12 Guanghua Rd.
Chaoyang District 100020, Beijing

iCET USA Office:

Dr. Feng An
President and Executive Director
Phone: 626-500-9647
e-mail: fengan@icet.org.cn
www.icet.org.cn
www.autoproject.org.cn

General Energy Issues

Shared energy challenge

Dec. 18 (China Daily) -- Energy chiefs from China, India, Japan, the Republic of Korea and the United States nations that consume nearly half the world's oil gathered in Beijing last Saturday to seek solutions to their shared concern on energy issues.

The five key countries made clear their willingness to strengthen mutual co-operation in front of the common challenge of energy security, stability and sustainability. The message they sent at the energy meeting is important and positive for themselves and the world.

The meeting came at a time when world oil prices keep fluctuating and energy demand continues to grow.

Oil prices have been particularly buoyant in recent years, soaring from some US\$20 per barrel in 2002 to more than US\$70 per barrel early this year. Though oil prices have currently fallen from the peak of US\$79 per barrel to about US\$60, they are still more than 50 per cent higher than that in 2004. It is believed that global energy demand will only increase.

The reasons behind the oil price volatility are complex and manifold: Growing demand for oil; concerns over the adequacy of investment in oil production capacity in the long-term; current low levels of spare production capacity; refining capacity bottlenecks; prolonged political instability in some oil producing regions, and market speculation.

However such fluctuations and increases in international oil prices have exerted a negative impact on the world economy, in particular for developing countries.

Hence, this energy meeting was aimed at safeguarding the steady and sustainable development of the global energy industry

and building a new concept of energy security featuring mutual benefit and diversified development.

The agreement reached by the five leading energy-consuming countries to enhance their energy co-operation in a number of areas is a welcome start. To ensure global energy security, all countries of the international community are called on to join in.

As a fast-developing country, China is keenly aware of the necessity to adjust its energy policy in line with its pursuit of environment-friendly, energy-saving, and sustainable development.

Extensive economic growth has increasingly tested the limit of the country's energy supply and environment. It has become a national consensus that the country can no longer afford to achieve high-speed economic growth at any cost.

In fact, China has already made improvement of energy efficiency a top priority in its new development plan. Between 2006 and 2010, the country will cut the use of energy per unit of gross domestic product by 20 per cent.

Nevertheless, the grim reality that the country has not made much progress on the reduction of energy intensity so far this year, shows that more efforts are needed to bring in place policy incentives to encourage energy saving. On the other hand, it highlighted the importance to narrow the energy efficiency gap between China and developed economies.

China to impose tariffs on more resource-intensive products

Dec. 27 (Xinhua) -- The Chinese government is to impose tariffs on exports of high-polluting, energy-consuming and resource-intensive products from January 1 next year.

They include stainless steel ingots, preliminary processed tungsten, manganese, molybdenum and chrome, said the Ministry of Finance on Tuesday.

China is running short of natural resources, making it difficult to fuel the high economic growth. The government has taken a slew of measures to prevent low value-added resource-intensive products from going abroad.

The government would maintain export tariffs on coal, crude oil and stone next year, according to the ministry.

The ministry also said Tuesday China would continue to lower import tariff under its WTO commitments next year.

Forty-four products including strawberries will enjoy lower tariffs on entering Chinese market.

China will see its average import tariff level drop by 0.1 percentage points to 9.8 percent next year, according to the ministry.

China signs on to energy project

Dec. 16 (China Daily) -- China will join the Government Steering Committee of FutureGen, a programme initiated in 2003 by US President George W. Bush to build a giant zero-emission, coal-fired electric and hydrogen production plant.

Slated to be a 10-year effort, the programme plans to collect an international fund of about US\$950 million. Under the scheme, each signatory needs to contribute US\$10 million.

Li Xin, an official with the Ministry of Science and Technology, said the government was expected to sign a formal agreement of its participation next year.

"We haven't started negotiations about the details," he said.

According to Gong Zhongming, a domestic energy technology researcher, discussions may revolve around China's access to technology from the project, and how FutureGen's results could help both China and the United States solve their respective energy woes.

"In the long run, the new technology to be brought by the coal-based programme will help China improve our energy efficiency," said Gong, who works at the National Research Centre for Science and Technology for Development.

He said the country, a big coal producer and consumer, should apply more of its coal reserves to power generation to make the best use of it.

India and the Republic of Korea were the first two participants in FutureGen. China Huaneng Group, the country's leading power corporation, was a step ahead of the government as it joined the programme last year as a company member.

China to provide subsidies to bio-energy sector

Dec. 1 (xinhua) -- The Chinese government has issued a package of policies, including risk reserves, subsidies and tax breaks, to encourage the development of the bio-energy and bio-chemical industries, the National Development and Reform Commission (NDRC) said Thursday.

Under the new policies, enterprises should set up risk reserves, which will be used to offset their losses when the oil price is low.

When the oil price is low for a sustained period, a government subsidy regime will be triggered to cover the losses of enterprises.

The new policies were jointly issued by the NDRC, the ministries of finance and agriculture, the State Administration of Taxation, the State Forestry Administration.

The government will also provide subsidies to developers of raw material supply bases for the bio-energy and bio-chemical industries, particularly those using non-arable land.

Subsidies will also be available to model projects with significant technical innovations.

The bio-energy industry was important for environmental protection, rural development, in addition to being a new source of growth for the economy, an NDRC official said.

After years of trials in selected provinces, the government has begun pouring huge investment into the bio-energy sector.

The country produced 1.02 million tons of bio-ethanol from corn and other raw materials in 2005. The ethanol is added to petrol at a ratio of 1:10 for use in automobiles.

The government estimates that by 2010, ethanol-mix petrol will account for half of China's petrol consumption.

Large firms, such as the China National Petroleum Corporation (CNPC) and the China National Cereals, Oils and Foodstuffs Corp (COFCO), have announced ambitious plans for bio-energy investments.

CNPC has signed an agreement with the government of Sichuan Province in southwest China to develop facilities to produce 600,000 tons of automotive-grade ethanol from sweet potatoes each year and 100,000 tons bio-diesel made from the seeds of the *jatropha curcas* tree.

COFCO said in October it would invest one billion yuan (126 million U.S. dollars) to

build a major ethanol plant in Guangxi region, also in southwest China.

The plant, with a capacity of 400,000 tons, will lift 1.1 million farmers out of poverty by growing cassava as the raw material for the plant, said Yue Guojun, head of COFCO's bio-chemical and bio-energy division.

Ethanol output has corn prices popping

Dec. 6 (China Daily) -- For the first time in China's history, grain prices are rising not due to a poor harvest or increasing demand but because of soaring international oil prices.

To feed the nation's increasing appetite for energy, a huge amount of capital including from overseas is chasing corn, soy and wheat for biofuel production; and pushing up prices to record highs.

Wang Jinmin, a professor in agricultural products economics at the Chinese Academy of Agricultural Sciences, said: "The rise in corn prices is a strong factor driving up the prices of other food products.

"And with its increasing role as a crude-oil substitute and environmentally-friendly energy, prices are unlikely to drop in the long run."

Analysts say that while industrial use only accounts for about a sixth of overall corn consumption, it is expanding at up to 15 per cent a year, fuelled by high crude oil prices.

Official estimates are that annual corn consumption by processing industries would rise to 20 million tons from 16 million tons last year; and reach 40 million tons by 2010. Total consumption is expected to be 125 million tons this year.

Ethanol is the main biofuel produced in China with output hitting 1.02 million tons in 2005 and corn accounted for 76 per cent of the raw material. The others are mainly wheat and sorghum.

The country plans to produce about 6 million tons of ethanol by 2010 and 15 million tons by 2020 in addition to 5 million tons of biodiesel.

In comparison, the United States produced an estimated 15.1 million tons last year, while Brazil the world leader had an output of 16.9 million tons.

Ethanol can account for up to 10 per cent of refined products, whose total production was 48 million tons last year. But the gap between the potential demand of 4.8 million tons and actual output of about 1 million tons last year, is huge.

The markets have been quick to take advantage.

The price of corn in Shenyang, capital of Liaoning Province, stood at 1,400 yuan (US\$175) per ton yesterday, a jump of 50 yuan (US\$7.5) or 3.7 per cent, within a week.

In the futures market, wheat and corn prices have also seen big boom.

Sources at the Dalian Commodity Exchange said corn prices have jumped 19.5 per cent in the two months ending November, a 10-year high.

In East China's Shandong Province, wheat prices have risen from below 1.4 yuan (US\$17 cents) per kilogram in September to 1.6 yuan (US\$19 cents).

"We predict that agricultural products will be as hot as petroleum in the future," a futures agent surnamed Wang from the Dalian Commodity Exchange told China Daily.

The National Development and Reform Commission said in June that biofuels would make up 10 per cent of all fuels by 2010, the figure rising to 16 per cent by 2020.

The country's top economic planner also said in August that ethanol-mixed gasoline was being sold in nine provinces.

Policy takes the wind out of investors' sails

Dec. 27 (China Daily) -- China needs to change from a wind-power auction pricing system to a feed-in tariff to protect investors in developing renewable energy, the chairman of the Global Wind Energy Council said at a recent conference in Beijing.

"The price volatility and uncertainty caused by the current regulation harms foreign and domestic private manufacturers and developers, who are discouraged by a pricing pressure they cannot sustain," Arthouros Zervo said.

The Inner Mongolia Autonomous Region has China's richest wind power resources, and more than 100 foreign investors showed interest in developing wind farms. But about half of the enterprises gave up the investment plan, and in the end, only about 10 foreign wind companies launched their projects, according to a report in the Chinese newspaper 21st Century Business Herald.

"Most of the enterprises withdrawing from Inner Mongolia have already completed the procedures but still chose to suspend the investment, including Adxia from Switzerland, EHN (Acciona Group) from Spain and the Golden State Group from the United States," the report said.

High cost and a low electricity price are the major barriers for wind power development in China, a study report on the country's pricing policy by the Chinese Renewable Energy Industries Association, Greenpeace and the Global Wind Energy Council showed.

It is also said that the solution depended on either a reduction in cost or at least an increase in the electricity price to cover the existing cost. Wind power is a new and growing industry that needs support, but the current practice of bidding for contracts is in conflict with the aim.

"China is faced with a great opportunity for developing wind power, but the development relies heavily on an enabling pricing system," said Steve Sawyer, climate and energy policy adviser for Greenpeace International.

Investors in wind power development in China fear that their investment will vanish because they just experienced a roller-coaster ride in the wind power pricing policy amendment. They went from the expectation of a high price supported by preferential policies to a low price, which resulted from bidding.

Their dream began in January 2006, when the Renewable Energy Law took effect and provided a legal framework for the development of renewable energies in China.

The law stated that the price management department of the State Council, China's cabinet, would determine the feed-in-tariffs for renewable energy generation projects.

Insiders and investors in the wind power industry said the feed-in-tariff set by the government would be fixed at 0.25 yuan (3.2 US cents) per kilowatt-hour more than the coal-fired power price.

However, also in January, the National Development and Reform Commission (NDRC) released the implementation rules of the Renewable Energy Law, stating that bidding, which has been in effect since 2002, should determine the grid feed-in rates of wind-sourced power.

And it is also said that to encourage a domestic turbine manufacturing industry, more than half of the equipment in the first phase of construction must be made in China. And in the later phases, the domestic manufacturing percentage should be increased to 70.

"The main reason to continue the auction system is to lower the wind-power cost and protect domestic equipment producers and

investors," said Shi Lishan, director of the Renewable Energy Division, Energy Bureau of the NDRC.

But this approach has drawn criticism from industry players who fear that the practice will lead to low prices that deny investors a reasonable profit. In fact, during bidding, some shockingly low bids have been made.

In 2004, bidding opened for the Huitengxile Wind Farm in Inner Mongolia. The bid of 0.38 yuan (4.8 US cents) per kilowatt-hour, made by Beijing International Power New Energy Co Ltd and Beijing International Power Development Co Ltd, shocked all the bidders because the basic cost of wind power seems to hover around 0.6 yuan (7.6 US cents) per kilowatt-hour, whereas the coal-fired power generation cost is 0.3 yuan (3.8 US cents) per kilowatt-hour.

"The bidding system is sensible in line with the market rule," said Li Junfeng, Chinese Renewable Energy Industries Association (CREIA) secretary-general. "But many wind power industry players did not make good use of the market rule."

Until September of this year, the NDRC organized four rounds of bidding for 11 wind-source power projects, each designed to have an installed capacity of more than 100 megawatts.

Most of the projects were awarded at bids of 0.4 yuan (5.1 US cents) to 0.5 yuan (6.4 US cents) per kilowatt-hour to the country's big five power companies, such as China Huaneng Group, China Guodian Corporation.

"The big five power companies are using the profit they made from coal-fired power generation to make up for losses in wind-power projects," Li said.

In addition, the big five power companies, which are registered as joint ventures, benefited from some preferential tax policies, thus helping them get refunds of 0.1 yuan (1.2 US cents) per kilowatt-hour, Li said.

From that perspective, the de facto price of their wind-power project is very reasonable. "But it is not fair to other investors, especially small, private ones," Li said.

Therefore, the call has been made to amend the policy to create a fair environment for all potential investors.

However, although many small investors have complained loudly about concession bidding in general, they have had opportunities on a smaller scale.

"They have licences from local governments to build wind-power projects at a reasonable price," Li said.

For example, in Inner Mongolia, the installed capacity of wind-power projects approved through bidding by the NDRC was 1,000 megawatts. But the total amount of wind-sourced electricity generation in the autonomous region is more than 4,000 megawatts.

"The rest of the projects are granted by local governments, accounting for a very big part," Li said. "The pricing mechanism will gradually be sensible. The government will make some adjustments if the regulation is not rational."

He did not specify how the mechanism would be adjusted, however.

A report released by CREIA, Greenpeace and Global Wind Energy Council (GWEC) in October called on the Chinese Government to change the auction system for wind-power pricing to a feed-in-tariff system, which means the price is regulated directly by the government. The practice is considered successful in Germany, making it the leading wind-power country in the world.

The report said that four bidding rounds have established the basis for a shift from the auction system to a fixed tariff. Under the feed-in-tariff system, China would be divided into high, medium and low

categories according to how well the wind can be exploited for power purposes.

The price should be adjusted in a timely fashion, the report said, but it would always be higher than for coal-fired power.

China has taken great strides in wind-power development in recent years. By the end of 2005, it had built 61 wind farms with a capacity of 1,260 megawatts, ranking seventh on the list of the world's major wind players. Last year the Chinese Government raised its wind-power goal for 2020 from 20,000 to 30,000 megawatts, and the report said the goal can be reached earlier if appropriate policies are in place.

ADB funds Gansu hydropower program to boost clean energy

Dec. 20 (xinhua) -- The Asian Development Bank (ADB) will help provide cleaner and more reliable energy in northwest China's Gansu province by lending up to 50 million U.S. dollars to support two medium-sized hydropower projects in the remote, impoverished area near Zhangye City.

ADB's China office said on Tuesday that the loan would help finance construction of a 50.5 megawatt power plant in Erlongshan and a 60 MW power plant in Dagushan, part of the Heihe river hydropower development scheme, which began construction in 1996.

The scheme involves seven medium-sized hydropower plants that together will produce 645.5 MW of hydropower, said the ADB.

Two power plants are already in operation and two more will be in operation by next year, one of which--the 102 MW power plant in Xiaogushan--was funded by ADB.

With more than 80 percent of Gansu's electricity produced by coal-fired power plants, 13 of the province's 14 cities fail to meet air quality standards.

According to the ADB, Lanzhou is on the list of the 50 most polluted Chinese cities. Not only is air pollution in Gansu dire, some parts of the province, such as the Hexi corridor, suffer from chronic power shortages.

"The project, an integral part of the provincial government's plan to expand power generation at low cost, will help alleviate power shortages in Zhangye and the Hexi corridor," says Ashok Bhargava, an ADB Senior Energy Specialist.

On completion, the project will economize about 1 million tons of coal per year. It is expected to be eligible for certified emission reductions under the Clean Development Mechanism, a market-based financial instrument that helps developing countries achieve sustainable development and industrialized countries meet their emission reduction targets.

The Erlongshan project is expected to be one of the first projects eligible for carbon financing through the Asia Pacific Carbon Fund under the recently ADB-approved Carbon Market Initiative.

The total project cost is estimated at 110 million dollars, of which 37.86 million dollars will be financed by domestic commercial bank loans, and 22.14 million dollars by the city government and the Heihe Hydropower Development Company.

Automobile and Transportation

China to license auto exports

Dec. 31 (Xinhua) -- China has decided to license auto exports next year to prevent domestic car makers getting into cutthroat competition and to weed out companies that cannot make the grade, Xinhua learned in Beijing on Saturday.

The Ministry of Commerce did not provide details of the license quotas or the qualifications required.

According to the 2007 Catalogue for Export License Management, no company will be able to export automobiles, full sets of car spare parts or car chassis without prior authorization.

Automobiles are a new item on China's export license management catalogue which covers products like live poultry, farm produce and mineral and energy resources like coal and crude oil.

Licensing of automobile exports will start on March 1.

The revision of the catalogue comes just days after the National Development and Reform Commission, the top policy setter, raised the threshold for investment in new auto projects to curb emerging overcapacity.

The country's production capacity reached 8 million units in July 2005, and is expected to hit 10 million in 2007. But demand was only 71.5 percent of capacity in 2005.

Customs figures show China's car exports surged 120 percent from 78,000 units in 2004 to last year's 173,000 units. This year, the figure is expected to top 300,000 with sedans accounting for 90,000, more than double the figure from a year ago.

A problem China must face is that about 600 of the 1,025 firms that exported vehicles -- whether they are manufacturers or trading agencies -- exported less than 10 units. A staggering 160 firms exported only one car per year.

In introducing licensing, China hopes to weed out firms with minimal exports as well as companies that fail to guarantee product quality or provide solid after-sale service. Such firms will be prohibited from exporting automobiles to prevent further damage to the reputation of the indigenous car industry.

In August, the Chinese government designated Changchun, Shanghai, Tianjin, Wuhan, Chongqing, Xiamen, Wuhu and Taizhou as the sites of the country's major

auto factories and its major export production base.

China-made automobiles are mainly sold to emerging markets such as the Middle East, Latin America and Russia. The goal of China's auto industry is to account for 10 percent of the world's auto trade in 10 years, in other words to achieve export orders worth more than 120 billion U.S. dollars.

Gov't to control auto capacity

Dec. 27 (China Daily) -- The National Development and Reform Commission, China's top industry watchdog, yesterday issued measures to prevent the development of excessive production capacity in the country's auto industry.

If an automaker operating in China wants to build a new plant in another location, its sales in the previous year must account for more than 80 per cent of its existing production capacity approved by the government, the commission said.

It said evidence is emerging of excessive auto production capacity in China, adding that the situation is likely to worsen.

While the industry has a current annual production capacity of 8 million vehicles, facilities capable of producing a further 2.2 million vehicles a year are currently under construction.

The commission warned that China's total auto production capacity will exceed market demand if automakers proceed with their plans to construct new production facilities in the years to 2010,

Sales of domestically made vehicles are widely expected to exceed 7 million units this year and reach 10 million units in 2010, up from 5.7 million units last year.

The commission urged local governments to speed up trans-region consolidations between automakers to create "big and internationally competitive" groups.

China's auto sector, although ranking No 2 in the world in terms of production volume, has more than 100 vehicle manufacturers.

Last year, the three biggest Chinese groups First Automotive Works Corp, Shanghai Automotive Industry Corp and Dongfeng Motor Corp controlled 46.1 per cent of the nation's total vehicle output, down from 49.3 per cent in 2003.

The regulator urged local governments to support the development of domestic automakers with their own brands, without revealing what measures should be taken.

It said the government will launch specific policies to aid the development of fuel-efficient and environmentally friendly vehicles, especially those from home-grown brands.

The commission also said government departments at all levels should buy such kinds of vehicles or new-energy automobiles, especially those from Chinese brands, in order to "set an example to ordinary customers."

Individual buyers spur booming car market

Dec. 28 (Xinhua) -- Individual purchases will account for 77 percent of China's sedan sales in 2006, spurring the booming market, according to the China Association of Automobile Manufacturers (CAAM).

Sedan sales will exceed 3.8 million at the end of this year, which means individual buyers will drive about 2.9 million sedans out of the showrooms.

As prices fall, incomes rise and new economy models enter the market, individuals have overtaken governmental institutions and enterprises as major purchasers of sedan cars.

In the late 1990s, when the cost of a sedan was beyond the reach of common people,

governmental institutions and enterprises accounted for 60 percent of car sales.

With domestic manufacturers boosting production and finding ways of cutting costs, sedan prices will drop further, said an expert with the State Information Center.

A peak is expected around the year 2009 as more middle-income Chinese families realise their dream of owning a car.

This year the Chinese government reduced taxes and eased restrictions to promote the development of compact cars.

From January to November, sedan sales notched up a year-on-year increase of 38.52 percent to more than 3.41 million units.

China's total auto sales will exceed seven million in 2006, overtaking Japan to become the world's second largest domestic auto market, according to CAAM statistics.

China's auto sales expected to exceed 8 million in 2007

Dec. 22 (Xinhua) -- China's auto sales will exceed eight million in 2007, continuing its rapid growth this year, Jiang Lei, an official with China Association of Automobile Manufacturers (CAAM) said on Friday.

The CAAM, an important source of industry information, earlier predicted that both China's auto production and sales would exceed seven million this year.

By the end of the year, China will overtake Germany to become the world's third largest auto manufacturer after the United States and Japan, according to the association.

Jiang attributed the constant expansion of auto-making industry to the booming economy, improvement of the industry's production capacity and fast development of home-brand manufacturers.

Meanwhile, auto manufacturers will work to improve product quality and services to expand the market, instead of counting on lowering prices in the next year, Jiang said.

During the first 11 months this year, China's auto production reached 6.59 million, a year-on-year increase of 27.92 percent, while sales scored a growth of 25.49 percent to 6.45 million, statistics from the CAAM showed.

Beijing scraps 13,000 outdated, polluting taxis

Dec. 13 (Xinhua/CRIENGLISH.com) -- Beijing has shunted 13,000 outdated, polluting taxis onto the scrap heap since the beginning of 2006 to reduce air pollution, the local legislature was told yesterday.

The taxis are cheap models with high emission levels, said Liu Xiaochen, secretary general of the municipal government at the 33rd session of the Standing Committee of the 12th Beijing Municipal People's Congress. They will be replaced by new taxis that meet the Euro-III emission norm, said Liu.

Some 2,000 outdated buses will also go to the wreckers this year and 2,760 clean gas-driven buses will go into service.

The city replaced 28,000 old taxis and 3,900 diesel-engine buses in 2005.

Automobile emissions containing sulfur dioxide have become a major factor in urban pollution. Sulfur dioxide emissions increased by 4.2 percent in the first half of the year over the same period in 2005 in Beijing.

Statistics show that Beijing has 2.8 million registered motor vehicles, including 67,000 taxis.

Chery to build small cars for Chrysler

Dec. 30 (AP) -- DaimlerChrysler AG's Chrysler Group and China's Chery Automobile Co. have agreed on a plan for the Chinese manufacturer to build small cars to be sold worldwide.

The cars, which already are being designed, would be based on an existing model but will be modified jointly by Chrysler and Chery engineers, Chrysler spokesman Jason Vines said Friday. Chrysler is taking the lead on the design and will ensure that the vehicles meet high quality standards, he said.

They will be sold at Chrysler dealerships in the U.S., Europe and elsewhere under a Chrysler Group brand as either a Dodge, Chrysler or Jeep.

Chery will build tiny cars known in the industry as "B-cars," but it also may build something larger for Chrysler, Vines added.

The deal needs to be approved by Chrysler's supervisory board, which meets next month, and by the Chinese government.

The move gives Chrysler a relatively quick entry into a growing segment of the car market where it now has no significant product, and it prepares the company in case gasoline prices escalate again to above \$3 per gallon (80 cents a liter), said David Cole, chairman of the Center for Automotive Research in Ann Arbor. The average retail price of gasoline in the U.S. ended 2006 at around \$2.34 a gallon (62 cents a liter), or 14 cents higher than a year ago.

Alan Helfman, general manager of River Oaks Chrysler Jeep in Houston, said the pact will give dealers coverage in all segments of the car market. "I think that's an incredible deal," he said.

Chrysler has been seeking a Chinese partner to build small cars, saying it cannot

make money by manufacturing them in the United States due to high labor and other costs.

"We can't build one here in that segment. You can't make any money on it. That's why we need a partner," Vines said.

He said Chrysler would unveil a prototype "fairly soon," although no date has been set. Production will not start until sometime after 2007, Vines said.

Chrysler would not say how many cars Chery would build or how much they would cost. It also would not reveal the financial terms of the agreement. The letter of intent was signed about two weeks ago, Vines said.

Chery had plans to begin exporting vehicles to the U.S. as early as next year in a joint venture with U.S. entrepreneur Malcolm Bricklin's Visionary Vehicles, but the deal fell apart in November.

"Both sides agreed a joint venture was not a good idea," said Visionary Vehicles spokeswoman Wendi Friedman Tush, adding that Chery wanted to modify existing cars and Bricklin wanted totally new products.

Visionary Vehicles is now pursuing other Chinese manufacturers and will announce an agreement soon, she said.

The deal with Chery will help Chrysler in the U.S., but it also gives the company small vehicles to sell in growing global markets such as India and China, Cole said.

To be successful, automakers have to be ready with cars and trucks for different economic and fuel price situations, Cole said.

"If you don't have that entry-level small car and we see \$3.50 or \$4 per gallon, that could be a huge problem of really not having a product in a segment that would be very hot with high fuel prices," Cole said.

Energy analysts predict the \$3 level could be within reach in some parts of the U.S. next summer, but that prices in 2007 should mainly be lower than in 2006, when they averaged \$2.38 a gallon nationwide.

The agreement also helps Chery by giving it access to design, engineering and manufacturing skills that it doesn't currently have, Cole said.

The Chery-produced cars likely would be sold for \$8,000 (euro6,074) to \$10,000 (euro7,593), and would have to be high quality to compete with Chevrolet, Honda, Nissan, Toyota and other automakers that already are selling B-cars, Cole said. Chrysler likely would give Chery more credibility than it would have had selling the cars on its own in the U.S., he said.

Cole said the Chrysler-Chery deal likely will not be the largest one between a U.S. automotive company and a Chinese manufacturer. General Motors Corp. and Ford Motor Co. already have significant manufacturing deals with Chinese companies that could be larger, he said.

GM spokesman Tom Wilkinson said the Chery cars certainly would compete against Chevrolet's Aveo small car, which is built by GM Daewoo in South Korea. But he questioned whether the Cherys would be able to carve out a niche in a competitive market.

"The car would have to be good enough to earn its way into the segment," Wilkinson said.

The United Auto Workers union, which has been critical of companies that move manufacturing jobs overseas, would not comment on the Chrysler-Chery deal.

Last year, GM settled several legal disputes with Chery over allegations that it had stolen GM's design of the Spark minicar, which looks similar to the Chery QQ.

GM had sued to prevent Chery from selling the car in various markets, including Asia and Eastern Europe.

Terms of the settlement were not fully disclosed, but Chery agreed not to market its vehicles under the Chery name in the United States. GM and Chery also agreed not to take further legal action against each other.

Auto after-sales market is booming

Dec. 13 (China Daily) -- China's roaring automobile market over the past five years has ushered in a boom for related businesses: the auto after-sales and maintenance sector, especially for foreign auto firms.

In 2005 in China, the total value of auto related products reached 42 billion yuan (US\$5.25 billion) in China, and the maintenance industry hit 40 billion yuan (US\$5 billion).

By 2005, there were 300,000 registered auto maintenance enterprises and more than 9,000 auto decoration companies in China.

A survey shows that at present, more than 60 per cent of high-end sedan owners take their cars for regular maintenance and decoration. Over 30 per cent of economy car owners bring their cars in for services.

The boom has mainly helped foreign players in China, many operating through joint ventures. Since 2005, the auto after-sales sector has been fully open to foreign firms due to China's World Trade Organization (WTO) commitments.

Auto giants such as Volkswagen, Ford and Mercedes-Benz, have all authorized distribution and maintenance to local partners by launching 4S stores, dealing with sales, spare parts, services and surveys.

US auto repair giant ACDelco will have 242 maintenance centres in China by the end of the year, and aims to have at least 1,000 centres before 2010.

ACDelco is the after-sales products and service suppliers under the auto giant General Motors.

World leading diversified technology company 3M is planning 700 professional high-end auto decoration centres and 500 stores in China before 2007. It entered the country in 1994 as an auto-related products supplier.

The US company's products, especially auto glass adhesives, sealants and accessories, are used in most professional Chinese maintenance factories and some 4S stores.

Autobacs, Japan's biggest auto after-sales service supplier has also gained a foothold in this huge potential market.

The company established the wholly owned Autobacs (China) Auto Products Co, Ltd in Beijing last July to better manage its business in China.

By 2005, the company had opened more than 500 stores in Japan. It is planning to open 100 stores in China in five years and hopes to grow further by launching a franchise model.

German-based Bosch, the world's biggest auto spare parts provider, also regards the service network as a shortcut to expand its distribution.

Bosch hopes to expand its maintenance network to 1,500 stores by 2013, covering the whole nation.

Analysts said global operator's expansion in the auto after-sales sector can help stabilize the domestic repair and maintenance market and introduce world-leading technology to China.

Oil and Gas

Oil pricing to gain flexibility

Dec.28 (China Daily) -- In 2006, deregulation and pricing mechanism reform defined China's oil market. With 2007 on the horizon, downstream oil enterprises which have long suffered heavy losses refining crude oil, such as Asia's top refiner Sinopec, expect a more agile pricing mechanism sooner than later.

"While wholesale deregulation policies for oil products have been released, the pricing reform for oil products is still under discussion and evaluation," Cao Xiaoxi, chief engineer of Sinopec Economic and Development Research Institute, told China Daily.

"After the oil market opens up, the authorities must make pricing more flexible. But when? Timing is the key issue here."

An industry insider who refused to be named told China Daily that the new oil product pricing mechanism is subject to final approval by the State Council and could be available for public review very soon. But the National Development and Reform Commission (NDRC), China's top economic planner, refused to make any official comment.

Immediately after China's trade and business watchdog MOFCOM unveiled two sets of rules deregulating domestic oil product wholesale in December, Chinese media reported that the NDRC would loosen the pricing peg between local oil products and that of three major markets in Singapore, Rotterdam and New York.

Current reports, however, say that MOFCOM is instead considering linking

local oil products' pricing to crude oil prices in Brent, Dubai and Minas.

Eventually, pricing for domestic oil products will be based on a formula that takes into account the average international price, tariffs, logistics and refineries' costs and profits.

"I anticipate that if international oil prices stay high, the new pricing system will be adopted early next year to lessen losses for major refineries," Cao said. "However, since the new mechanism hinges on global prices' fluctuations, grass-roots consumers may find this unacceptable when global prices are too high. Authorities must also bear this in mind."

Angelina Lee Mei Leng, chief analyst of Platts' Beijing office, believes that the new pricing mechanism should provide State subsidies for low-income individuals, such as farmers, and sectors of public interest, such as public transportation. Platts is the world's largest provider of energy information and market research.

"The much-talked about new pricing mechanism is indeed more scientific. It better reflects the true value of oil products and the relationship between demand and supply. However, the government should protect underdogs such as low-end consumers," Lee said.

Soaring international oil prices have boosted the profitability of China's oil exploration and production business. However, the rigidity of the current pricing mechanism for local oil products causes the refining sector to run at huge losses.

Currently, the government maintains a tight grip on the pricing of major oil products, keeping it below the global average in order to steady inflation and supply fluctuations.

The NDRC raised the domestic oil price twice this year in March and May in response to surging global oil prices.

Deregulation

While the long-anticipated new pricing system could to some extent free the State from subsidizing the deficits of State-owned refineries, it may also lead to further deregulation.

"The much-awaited new pricing mechanism will help better tune the business operations of major refineries. Moreover, it may pave the way for further wholesale deregulation," a senior analyst with BP (China) Holding Ltd, told China Daily on condition of anonymity.

The market will soon open to foreign and private competition, but newcomers might find it difficult to enter the wholesale business. It is because the oil supply and pricing mechanism are still under the dual control of the existing monopoly and the government.

Also, many analysts are concerned that lower local prices will prompt refineries to focus on selling oil products abroad once the wholesale market opens up next year.

"Because of this, we believe authorities should make pricing more flexible and give more space for all players to perform," an anonymous industry source said.

Han Xuegong, a veteran analyst with CNPC, China's top oil producer, said that wholesale deregulation would actualise pricing reform and lift import controls. "The new pricing proposal is better, but pricing reform does not necessarily go with wholesale deregulation. That is a principle followed by many countries," Han said.

Han didn't believe the entry standard for oil product wholesale is too high, because every country tightly controls its oil industry.

Zhao Youshan, who as director of the Petroleum Flow Committee (PFC) of the China General Chamber of Commerce represents 138 private oil firms doing business in China, agreed.

The newly appointed director said that thorough market deregulation won't happen overnight. He believes that the local oil business should be subject to adequate State control and regulation because it is a strategically important sector of the national economy.

Market rules

Under MOFCOM's "Oil Products Market Administration Rule," new wholesalers must have a minimum registered capital of 30 million yuan (US\$3.8 million) and operate through a China-registered entity. They must also have a one-time annual crude processing capacity of over 1 million tons and a combined gasoline and diesel production capacity of 500,000 tons.

Companies with a license for importing oil products can also apply. Those applying for a sales license for indigenous and imported crude must be China-registered entities with a minimum registered capital of 100 million yuan (US\$12.8 million), according to MOFCOM's "Crude Oil Market Administration Rule."

Eligible companies must also have a stable crude supply and base of sales sources, MOFCOM noted.

Lee from Platts believes raising the threshold for newcomers fends off market speculation and risks.

"The entry criteria are indeed raised in terms of registered capital, stable oil supply and sales channels. But they are quite necessary to filter out unqualified players and ward off market chaos," Lee said.

Cao from Sinopec said that in the long run, further deregulation of the market segment is unavoidable. "Companies of all types may find it relatively easy to apply for an import license in the future," he said.

China seeks energy negotiations with OPEC

Dec. 6 -- (China Daily)China wants to establish a dialogue with the Organization of Petroleum Exporting Countries (OPEC) to secure a stable oil supply and ensure global energy needs, according to Foreign Ministry officials.

Assistant Foreign Minister Zhai Jun said on Monday that China seeks direct negotiations with OPEC. "Only through this can we maintain security and stability of our oil imports," Zhai was quoted as saying by AP at the Arab Strategy Forum in Dubai, United Arab Emirates.

"To foster negotiations and co-operation between China and OPEC is conducive to developing a stable and healthy global energy market," Foreign Ministry spokesman Qin Gang told a news briefing in Beijing yesterday.

Some energy strategy analysts agreed that it is necessary to have co-operation and co-ordination with OPEC to ensure a more stable global energy market.

"Information exchanges between oil producers and consumers can help reduce misunderstanding and misjudgment of the market," said Chen Fengying, a senior researcher with the China Institute of Contemporary International Relations.

Chen said oil producers need stable market demand; while consumers need stable supplies. Rational prices and a stable market are essential for both parties. Diversified oil suppliers and markets are vital to guarantee energy security, said Chen.

China has built a strategic dialogue mechanism with the International Energy Agency, an energy policy advisor to mainly rich member countries.

Chen said China now needs to reach out to OPEC to make energy co-operation more comprehensive.

Co-operation benefits both China and OPEC since the two sides rely on each other, said Zhou Dadi, a senior researcher with the Energy Research Institute affiliated to the National Development and Reform Commission.

Zhou told China Daily that co-operation can improve transparency in the oil market and stabilize price fluctuations.

During a visit by OPEC President Sheik Ahmad Fahad Al Ahmad Al-Sabah to China last year, the two sides discussed "institutionalizing" a dialogue, acknowledging China's increasing importance as an importer of oil and gas.

China is the third largest oil importer in the world, and OPEC is the largest oil exporter. It accounts for 30 per cent of global oil production and 70 per cent of the world's oil reserves.

New gasoline standard to reduce sulfur levels to 150 ppm

Dec. 8 -- (Xinhua)The Chinese government will reduce sulfur levels of lead-free gasoline to 150 parts per million (ppm) in the revised gas standard.

The move would help improve air quality, an environmental official said.

The revised lead-free gas standard, to be announced by the end of this year, will drive gas with sulfur levels of 500 ppm out of market on December 31, 2009, said Li Xinmin, deputy director of the pollution control department of the State Environmental Protection Administration (SEPA), at a symposium on automobile pollution control.

The new standard would meet the Euro-III emission norm, which constrained sulfur levels to 150 ppm maximum.

"Automobile emissions have become a major factor of urban pollution," Li said.

Statistics from the SEPA show China produced almost 6.21 million cars in the first ten months this year and it is expected the country's automobile output will exceed seven million for the whole year.

In the first half, sulfur dioxide emissions increased by 4.2 percent, from the same period a year earlier.

Sinopec, the China Petroleum and Chemical Corporation, one of the major petroleum companies in China, announced plans to invest 30 billion yuan (3.75 billion U.S. dollars) in reducing the sulfur levels in gasoline.

Xu Hui, deputy director of Sinopec's technology development department, said some companies were already capable of producing gas with sulfur levels less than 150 ppm.

It would take a lot of effort to meet the new gas standard, Li Xinming said, adding that currently only gas provided in Beijing and Guangzhou contain low levels of sulfur.

Xu said gas producers would find it difficult to reduce sulfur levels as the sulfur levels in imported crude oil were high: an average of 1.11 percent of the imported oil by Sinopec in the first ten months, whereas sulfur levels of imported oil in 1999 was only 0.17 percent.

The high sulfur level of crude oil would pose a challenge to making clean auto fuel, Xu said.

China banned the sale of gasoline containing lead in July 2000. Experts estimate the move reduced lead emissions by 1,500 tons each year.

Oil analysts say deregulation will increase players

Dec. 8 (China Daily) -- As China deregulates oil products and crude oil wholesaling in line with its WTO commitments, analysts foresee an accelerated opening-up of the local oil market.

China's new policies to deregulate oil products and the crude oil wholesale market will bring in new market entities, who will serve as "agents" to facilitate further reform and liberalization of the segment, said David Ernsberger, Asia editorial director of Platts, an energy information and market research provider.

"Based on this fact, the deregulation is surely a shot in the arm for the industry," Ernsberger said.

The Ministry of Commerce (MOFCOM), China's business and trade watchdog, published two rules the Processed Oil Products Market Administration Rule and the Crude Oil Market Administration Rule on its website on Wednesday, granting foreign and private capital access to oil products and crude oil wholesale. The two rules will take effect from January 1, fulfilling China's commitment to the World Trade Organization (WTO).

In line with its accession rules, China had to deregulate the wholesale of oil products the business of distributing petrol and other oil products from refiners to filling stations by the end of this year. The wholesale business has long been dominated by two State-owned conglomerates China Petrochemical Corp, or Sinopec, and China National Petroleum Corp (CNPC), parent of US-listed PetroChina Co.

Zhao Yuanheng, BP (China) spokesman, told China Daily that deregulation of the oil

market is expected to diversify oil product supply and facilitate the availability of energy for China.

The wholesale deregulation will enhance market-oriented competition, which can help enhance product and service quality, and benefit customers at the grass-roots level, the BP (China) spokesman said.

More freedom?

While analysts hailed the new policies, some potential new comers appealed for more market freedom.

"The oil product and crude oil market will be opened up soon. We are eager to learn whether and when the import license control can be lifted simultaneously," said a Dalian-based oil trading company official on condition of anonymity.

"Since we have to meet certain criteria for applying for the wholesale license, it is absolutely a difficult mission for newcomers to enter the segment without import licenses or refinery support," the industrial source said.

According to MOFCOM's regulations, new applicants should have either an import licence or refineries in order to engage in the oil product wholesale business. For the crude oil wholesale business, they have to either own an exploration licence or have an import licence, plus storage facilities. If companies are not eligible for these requirements, they can only co-operate with qualified partners, such as Sinopec or CNPC.

The international trade division of MOFCOM did not elaborate as to whether or when import and export controls on oil products and crude oil will be lifted.

Under the circumstances, import permissions do not automatically come along with the wholesale deregulation. Ernsberger said that newcomers would

have to face an awkward situation figuring out where to get oil products.

However, the deregulation will certainly motivate them to think about how to enter the segment.

"Now companies with new wholesale licences will be motivated to facilitate import control lifts and reform the pricing mechanism of the oil business," he said. "They will serve as agents to lobby for further deregulation of the sector, because they have every incentive to do so."

Local oil makers, traders and refineries will be more enthusiastic than those foreign oil giants in facilitating further liberalization. "That is because global oil giants can always start business by relying on close connections with Chinese market leaders, such as Sinopec and CNPC," Ernsberger said.

Cao Xiaoxi, chief engineer of Sinopec Economic and Development Research Institute (EDRI), said although the wholesale market needs deregulation, it also has to be regulated, to some extent, to fend off speculation.

This phenomenon should not be taken as a continuation of monopoly or even market protectionism, given the nature of the energy industry, Cao argued.

"Even in market-oriented Western countries, the oil industry is under the control of several giants and does not boast full competition," he said. "This is because the oil business is capital- and technology-intensive."

The Sinopec EDRI analyst foresaw that after the wholesale deregulation, there would be more foreign, State-owned and private enterprises tapping the wholesale business.

"But there won't be many new players in the short term, because of the restraints on oil

imports and the difficulty of setting up refineries," Cao said.

In the long run, the market segment will be fully deregulated, Cao said. "People may find it not so difficult to apply for import licenses in the future."

China, Kazakhstan sign energy deal

Dec. 21 (China Daily) -- China and Kazakhstan will expand collaboration in the oil and gas sector, according to an agreement signed by President Hu Jintao and his visiting Kazakh counterpart Nursultan Nazarbayev in Beijing yesterday.

The document on "China-Kazakhstan Co-operation Strategy for the 21st Century" agrees to support cross-border construction of oil and gas pipelines and work closely on oil and gas processing, building new power facilities and providing electricity to third countries.

It encourages mutual investment and pledges to create favourable conditions for enterprises that invest in industries such as machinery manufacturing, foodstuffs and textiles. The two sides will try to expand trade volume to US\$10 billion by 2010 and to US\$15 billion by 2015.

The nations also pledged to strengthen collaboration to crack down on border crimes.

"The two sides will continue to have co-operation between law enforcement departments to fight against drug smuggling, weaponry and explosives trafficking, money-laundering and transnational organized crime," it says.

The crackdown on terrorism, separatism and extremism is also highlighted in the document.

It said both sides will boost the volume of rail freight and explore new railway routes between the two countries.

They will simplify formalities at Customs and address any problems in import-export inspections.

The two countries also signed 12 documents on the economy, energy, finance, education, and culture, including one on the launch of a Confucius Institute in Kazakhstan.

The 15th anniversary of diplomatic relations will be celebrated this year and the "Kazakh Culture Festival" will be held in China next year, Hu said.

China and Kazakhstan are members of the Shanghai Co-operation Organization, a regional body which also groups Kyrgyzstan, Russia, Tajikistan and Uzbekistan.

Nazarbayev is in Beijing for a five-day state visit, the first since he won a re-election last December. He is scheduled to meet top legislator Wu Bangguo and Premier Wen Jiabao; and the visit will also take him to Hong Kong and Macao.

BP, CNOOC to invest US\$100m in S. China Sea gas

Dec. 15 (AFP) -- British energy giant BP and China National Offshore Oil Corp (CNOOC), have invested 100 million dollars in a gas drilling deal in the South China Sea, a press report has said.

The Yacheng 13-1 gas field off China's Hainan Island, co-developed by CNOOC and BP, pipes natural gas to Hong Kong's Black Point Power Station, the China Business News said, citing sources.

CNOOC and BP will work on five natural gas wells and are also in further talks to provide about 250 million cubic meters (8.8 billion cubic feet) per day to Hong Kong Black Point Power Station until 2015, it said.

Black Point is 40 percent owned by CLP Holdings, a major power producer in the

former British colony, and US Exxon Mobil Corp owns the other 60 percent.

Michael Zhao, a spokesman for BP in Beijing refused to confirm the agreement, while CNOOC was not immediately available for comment.

The paper did not say when the new drilling program would start.

Sinopec given State subsidy of US\$639m

Dec. 28 (China Daily) -- China Petroleum & Chemical Corporation (Sinopec) disclosed yesterday that it would get State subsidy of 5 billion yuan (US\$639 million) to cover its losses from oil refining.

Asia's top refiner announced in a statement that "the one-off compensation" from the government was to shore up its money-losing refining sector.

The country's oil exploration and production business reaped high profits as a result of soaring oil prices in the international market this year. But the refining segment suffered huge losses because the current pricing mechanism does not reflect price fluctuations on the world market.

About 70 per cent of Sinopec's crude oil for refineries comes from imports. It supplies oil products to the home market at government-fixed prices to fend off supply fluctuations and inflation.

"The compensation will help reduce our losses stemming from the refining business. It also indicates the current pricing mechanism is not fair for refiners," a senior official surnamed Wu with Sinopec told China Daily.

Strict controls over oil product prices have caused distortions in prices of refined and crude oil. "This has led to serious losses for many refinery enterprises", Sinopec said in a statement yesterday.

Sinopec's loss from processing almost doubled to 12.6 billion yuan (US\$1.6 billion) in the third quarter from 6.6 billion yuan (US\$844 million) a year earlier, the company said in October.

Cao Xiaoxi, chief engineer of Sinopec's Economic and Development Research Institute, agreed, saying the subsidy should not be dubbed as "protective."

"The loss is caused by policy flaws, so it should be covered by the State. It has nothing to do with market protectionism," Cao said.

The compensation to Sinopec's refinery business was 10 billion yuan (US\$1.28 billion) last year.

Han Xuegong, a senior consultant for China National Petroleum Corp, said the State financial support would decline as price-mechanism problems are fixed, noting that this year's subsidy is only half of last year.

Although the government raised prices for major oil products twice this year, "it is not enough to make up for the deficit of Sinopec's refining business," Han said.

The fundamental solution is to reform the current pricing system, he added.

A fully market-oriented pricing mechanism, however, will take time, Han Wenke, director of the Energy Research Institute affiliated to the National Development and Reform Commission, told China Daily.

"It will not happen overnight. It will depend on market circumstances and the ups and downs of the global oil prices," he said.

Climate Change and Air Pollution

Environment tops agenda for science co-operation

Dec. 4 (China Daily) -- Energy, environmental protection and water

resources technologies top the agenda for China's international science co-operation in the 11th Five-Year Plan (2006-10), according to a document released by the Ministry of Science and Technology yesterday.

The Outline of the 11th Five-Year Plan of International Science Co-operation states that technologies in the three areas have become bottlenecks in China's economic development, according to Minister of Science Xu Guanhua.

"Breakthroughs in the three sectors are also urgently needed for building a harmonious society," he told China Daily.

"Clean" energy technologies such as clean coal and the comprehensive utilization of oil and gas are given top priority in the outline.

Shang Yong, the vice science minister, told China Daily that China is poised to join FutureGen, an initiative by US President George W. Bush to build a giant coal-using, emission-free electricity plant.

International nuclear energy development, such as the US\$12.8 billion International Thermonuclear Experimental Reactor as well as collaboration in energy and resource saving, are stressed in the outline.

Environmental protection technologies are given an unprecedented emphasis in the outline, such as those dealing with urban air pollution, heavily polluting industries and refuse recycling.

The focus of water resource technologies will include those for water conservation, use of sea water and prevention of river pollution.

The country is facing a critical water shortage partly as a result of rising pollution accidents. Severe toxic spills into rivers occurred several times in the past year.

A chemical leak into the Songhua River in Northeast China last November forced

water supplies to be cut off for millions of people along the river.

Besides technologies in the three areas, the outline gives emphasis to food safety, development of an environment-friendly agricultural industry, and medical solutions for chronic and epidemic diseases.

"The improvement of people's health is a primary goal," said the outline.

Global warming could wreak havoc in China

Dec. 27 (China Daily) -- Global warming could have a major effect on the health of the Chinese people and the country's agriculture, according to a National Assessment Report on Climate Change.

Temperatures could rise 1.3-2.1 degrees by 2020.

The report, China's first authoritative and comprehensive review compiled by multiple departments and experts over four years, was released in Beijing yesterday by the Ministry of Science and Technology (MOST), the China Meteorological Administration (CMA) and the Chinese Academy of Sciences (CAS).

The report is a study of global warming and its influence, and recommendations on the protection of society and the economy.

"The report will serve as the country's scientific and technical reference in policy making and international co-operation," said Li Xueyong, vice-minister of MOST.

"It also shows China's attention to the global issue and its resolve to work together with the international community."

A synopsis of 2050 shows that China's population would exceed 1.5 billion with a gross domestic product per capita of US\$10,000. Consumption of primary energy would stay between 3.9 billion to 4.9 billion tons of coal equivalent.

According to the report, the rise in temperatures would worsen the water shortage problem in North China, which already is serious.

It warned heavy rainfall in the upper reaches of the Yangtze River, could trigger landslides or mudflows in the area of Three Gorges Dam.

The change could also affect with an increase in heart and blood diseases, malaria and dengue fever.

World's most extreme case of climate change revealed

Dec. 5 (Chinadaily) -- School teacher Sherbahadur Tamang walks through the southern Nepalese village of Khetbari and describes what happened on September 9.

"During the night there was light rain but when we woke, its intensity increased. In an hour or so, the rain became so heavy that we could not see more than a foot or two in front of us. It was like a wall of water and it sounded like 10,000 lorries. It went on like that until midday. Then all the land started moving like a river."

When it stopped raining Tamang and the villagers barely recognized their valley in the Chitwan hills.

In just six hours the Jugedi River, which normally flows for only a few months of the year and is at most about 50 metres wide in Khetbari, had scoured a 300 metre-wide path down the valley, leaving a 3-metre-deep rockscape of giant boulders, trees and rubble in its path.

Hundreds of fields and terraces had been swept away. The irrigation systems built by generations of farmers had gone and houses were demolished or were now uninhabitable. Tamang's house was left on a newly formed island.

Khetbari expects a small flood every decade or so, but what shocked the village was that

the two largest have taken place in the last three years.

According to Tamang, a pattern is emerging. "The floods are coming more severely and more frequently. Not only is the rainfall far heavier these days than anyone has ever experienced, it is also coming at different times of the year."

Nepal is on the front line of climate change and variations on Khetbari's experience are now being recorded in communities from the freezing Himalayas of the north to the hot lowland plains of the south. For some people the changes are catastrophic.

"The rains are increasingly unpredictable. We always used to have a little rain each month, but now when there is rain it's very different. It's more concentrated and intense. It means that crop yields are going down," said Tekmadur Majsi, whose lands have been progressively washed away by the Tirshuli River.

He now lives with 200 other environmental change refugees in tents in a small grove of trees by a highway. In the south villagers are full of minute observations of a changing climate.

One notes that wild pigs in the forest now have their young earlier, another that certain types of rice and cucumber will no longer grow where they used to, a third that the days are hotter and that some trees now flower twice a year.

Anecdotal observations are backed by scientists, who are recording in Nepal some of the fastest long-term increases in temperatures and rainfall anywhere in the world.

At least 44 of Nepal's and neighbouring Bhutan's Himalayan lakes, which collect glacier meltwater, are said by the UN to be growing so rapidly that they could burst their banks within a decade.

Any climate change in Nepal is reflected throughout the region. Nearly 400 million people in northern India and Bangladesh also depend on rainfall and rivers that rise there.

"Unless the country learns to adapt then people will suffer greatly," said Gehendra Gurung, a team leader with Practical Action in Nepal, which is trying to help people prepare for change.

In projects around the country the organization is working with vulnerable villages, helping them build dykes and set up early warning systems. It is also teaching people to grow new crops, introducing drip irrigation and water storage schemes, trying to minimize deforestation which can lead to landslides and introducing renewable energy.

Global warming threatens plateau

Dec. 30 (China Daily) -- The environmental condition of the Qinghai-Tibet Plateau, seen as a barometer for the world's health, is worsening due in large part to global warming, according to a geological survey.

The survey, conducted by the Remote Sensing Department of the China Aero Geophysical Survey, showed the plateau has shrinking glaciers, a rising snow line, dwindling wetlands, and more serious desertification compared with 30 years ago.

The Qinghai-Tibet Plateau, which accounts for nearly one quarter of China's landmass, stretches into the Tibet Autonomous Region, Qinghai, Sichuan and Yunnan provinces and the Xinjiang Uygur Autonomous Region.

It is the highest and youngest plateau in the world and has been dubbed "the third pole." It is also home to the source of many big rivers in Asia, such as the Yangtze, Yellow and Lancang rivers, giving it the nickname the "water tower" of China.

"As the 'thermometer' of the global environment, any slight environmental

change in the plateau is a reflection for the globe," said Zhang Hongtao, deputy director of the China Geological Survey.

The survey, which used remote sensor technology, is intended to provide an overview of the plateau's geological conditions and help its future economic development, Zhang said.

"The direct harm is the threat of the loss of the country's fresh water resources," said Fang Hongbin, senior engineer at the Remote Sensing Department. "Furthermore, we won't have any shield to protect ourselves from the sand blowing from the plateau if the desertification trend is not checked."

Fang suggested speeding up a project called "return the land to green" in the western part of the country, as well as strictly controlling the raising of livestock and mining activity on the plateau.

Even if the world's global climate does not continue to get warmer, researchers estimate the plateau's glacial areas will shrink to 72 per cent of the current area by 2050 and 50 per cent by 2090, Fang said.

"The melting of the glaciers and snow has provided huge water resources for the plateau and its surrounding area and led to a temporary increase of wetlands and lakes in some regions," said Fang. "But with the constant decrease of glaciers and the raising of the snow line, the total water reserve of the plateau keeps declining."

The glaciers on the plateau show an obvious trend of diminishing, especially on the edge of the plateau. The trend has gained momentum in recent years, the survey showed. The snow line on the edge of the plateau also saw drastic reduction, with an average retreating distance of 100 to 150 metres, with the largest being 350 metres.

Although the desert region of the area is just slightly changed, areas of medium and

heavy desertification saw a huge increase, which means more desertification in the future.

2006 set to be the 6th warmest worldwide: UK report

Dec. 15 (chinadaily) -- This year is set to be the sixth warmest worldwide since records began, stoked by global warming linked to human activities, the British Meteorological Office and the University of East Anglia said yesterday.

As England basks in unseasonably warm December weather two weeks before the end of the year, the Met Office said data from January to November made 2006 the warmest on record for central England.

"Worldwide, the provisional figures for 2006 using data from January to November, place the year as the sixth warmest year" since records began in the 1850s, the report said.

The previous warmest years were 1998 and 2005, according to the World Meteorological Organization (WMO). The WMO was due to release its own 2006 figures later yesterday (local time).

"The top 10 warmest years have all occurred in the last 12 years," it said, adding that 2006 could have been warmer but for La Nina, a cooling of parts of the Pacific Ocean.

"The figures support recent research from David Karoly of the University of Oklahoma and Peter Stott at the Met Office which showed links between human behaviour and the warming trend," said Met Office scientist David Parker.

Most scientists now agree that world average temperatures may rise by between two and six degrees Celsius this century due to emissions of so-called greenhouse gases like carbon dioxide from burning fossil fuels for power and transport.

They say this would cause polar ice caps to melt and sea levels to rise, causing floods, famines and violent storms and putting millions of lives at risk.

Former World Bank chief economist Nicholas Stern said in October that urgent action on global warming was vital.

He said the cost of curbing greenhouse gas emissions now would be about 1 per cent of global economic output a figure that rises 20-fold if action is delayed.

In Britain, temperature records have tumbled month by month, it said.

"2006 has been quite extraordinary in terms of the UK temperature, with several records broken," Parker said.

This year saw the highest average temperature recorded since the Central England Temperature (CET) series began in 1659.

"The rise above the average is significantly higher than that for the two hottest years we have experienced," Phil Jones, of the University of East Anglia's Climatic Research Unit, said.

The report said last July had been the warmest on record in Britain with an average temperature of 19.7 C, and it had been the warmest April to October period with a mean temperature of 14.6 C.

The autumn has already been declared the warmest on record with an average temperature of 12.6 C.

At that rate, 2006 "is very likely to be the warmest year in terms of CET" the Met Office said.

The joint warmest years currently are 1990 and 1999, which recorded a mean temperature of 10.63 C.

Antarctica, a living global warming laboratory

Dec. 11 (chinadaily) -- For scientists at this ice-encircled outpost, global warming is not a matter of debate. It is a simple fact and crucial research questions centre on what its consequences will be.

Antarctica is a prime place for this research because it serves as an early warning system for climate change and is a major influence on global weather.

As about 90 per cent of the world's ice volume and 70 per cent of its fresh water is on the southernmost continent, any substantial warming could cause a rise in sea levels around the globe.

"It's a bellwether for the planet," Tom Wagner of the US National Science Foundation said in an e-mail interview. "Its ice sheets are the main player in sea level rise; there is already evidence that they are shrinking."

It was easy to imagine melting ice sheets this week around McMurdo Station, the biggest US science centre in Antarctica, with temperatures in the relatively balmy range of -2 C and the 24-hour-a-day spring sunshine causing pools of melted water atop a 3-metre layer of ice around the base.

Much of the sea ice is cracked and the nearby Barne Glacier has had several major collapses onto the sea ice in recent days. Still, heavy tracked vehicles can navigate the ice on designated pathways.

While these are not specifically signs of global warming, Antarctica and the Arctic are key places to look for such signals because even a slight rise in temperature can precipitate melting ice, which would have dramatic effects on living things and land, as well as global climate implications, Wagner said.

Reading ancient rocks

For Ross Powell, an environmental geologist, one way to figure out what the future of climate change might be is to look some 10 million years back in to Antarctica's past.

"We want to go back through time and see the changes that the Antarctic has been through," said Powell, who is based at Northern Illinois University but is working on an international geology project here.

"And one of the key things is finding the warm periods, because we are going into a warming phase now."

Powell is one of the chief scientists on the ANDRILL project shorthand for Antarctic Geologic Drilling Programme where a massive drill burrows down about 260 feet (78 metres) of sea ice, 2,700 feet (810 metres) of ocean water and then into the sediments beneath to see what clues earlier warm periods left behind.

"We need to read the rocks to understand when the ice was there and when it wasn't and what the conditions were in the marine environment associated with the movement of the ice forward and backwards," Powell said in an interview.

So far, ANDRILL researchers have found tantalizing clues about periods when the Antarctic ocean was swarming with marine algae called diatoms, which still exist as one of the most basic links on the planet's food chain.

The glimpse back in time could examine a period in Antarctica's history when levels of the greenhouse gas carbon dioxide were high, but perhaps not as high as scientists predict it will get in the coming decades due to human activity.

If the ice sheets around Antarctica shrink substantially, that would not by itself cause the world's seas to rise, just as an ice cube melting in a glass of water would not cause much of a rise in the level of liquid in the glass.

But the ice sheets perform an important function by slowing down the flow of glacial ice. If the ice sheets go away, many scientists believe that glaciers will flow more swiftly, adding their ice to the oceans, and that could cause sea level rise.

SEPA opens southwest centre

Dec. 6 (China Daily) -- The Southwest Environmental Protection Supervision Centre of the State Environmental Protection Administration (SEPA) formally went into operation yesterday in this capital of Southwest China's Sichuan Province.

Its launch demonstrated the government's determination to reinforce regional environmental protection supervision, said SEPA deputy chief Zhang Lijun.

The centre will monitor Southwest China's Chongqing Municipality, Sichuan, Guizhou and Yunnan provinces and the Tibet Autonomous Region.

The area covers nearly 2.4 million square kilometres, accounting for about one-fourth of the country's total land area, and is home to 200 million people, or about one-sixth of the country's population.

Centre Director Ma Ning said during the launching ceremony the centre has a difficult job ahead as the region has more State-level nature reserves and more borders than the eastern, southern, northwestern and northeastern parts of the country.

Southwest China has 49 State-level nature reserves.

Forty-four per cent of the country's hydropower resources originate from the upper reaches of major rivers such as the Yangtze River and Pearl River. It also has the country's major alpine lakes.

In addition, the area has a concentration of metallurgical, chemical, energy and mining industries.

In July this year, the government decided to set up five environmental protection supervision centres in the eastern, southern, northwestern, southwestern and northeastern regions.

The southwest centre is the second one to start operations following the opening of the northwest centre in Xi'an, capital of Northwest Shaanxi Province, on October 25.

The discharge of waste materials and environment-related paroxysmal incidents is high nationwide. Launching the five centres is aimed at coping with the situation, Zhang said.

The centres will supervise how local governments implement State policies and regulations on environmental protection, how they handle major cases of environmental pollution and how they take emergency measures to respond to environment-related major paroxysmal incidents, the deputy chief said.

Before its official launch, the southwest centre had discovered an incident of dishonesty in a diesel oil leakage case in Luzhou in Sichuan.

On November 6, the Luzhou Power Plant polluted the Yangtze River after a machine leaked diesel oil, cutting off water supply in the city.

Some of the oil was carried by the Yangtze into Sichuan's neighbour Chongqing.

On November 15, the plant reported that 0.38 tons of diesel oil leaked into the Yangtze.

However, thanks to the supervision of the southwest centre, it was found that nearly 17 tons of diesel oil had leaked into the Yangtze, and that the plant had submitted a false report.