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General Energy Issues

China 'not pushing for Africa oil deals'

Oct 19 (chinadaily) -- China relies mainly on domestic resources for energy supply and is not pushing for more oil imports from Africa, a senior planning official said yesterday.

Asked if a summit with African nations early next month would produce more oil deals, Zhang Yuqing of the National Development and Reform Commission said: "Whether China will increase oil imports from Africa will be determined by mutual business consultations."

The Beijing Summit of the Forum on China-Africa Co-operation will be held on November 4-5.

Zhang, deputy chief of the commission's energy bureau, told a news briefing that imports constituted less than 10 per cent of China's total energy consumption, and those from Africa accounted for less than a third of the imports.

Collaboration between energy-hungry China and resource-rich Africa is based on commercial considerations, Zhang said. About 38 million tons, or nearly 30 per cent, of oil imports came from the continent last year, he said.

"The scale of China-Africa co-operation in the energy sector is very limited at the moment," he added.

In the course of energy collaboration, China has helped the African industry in exploration, production and processing; and donated to the construction of roads and bridges, Zhang said.

He rejected US criticism of China's oil investments in African countries, such as in Sudan.

Chinese oil companies have sought to invest in the US, he pointed out, but oil giant CNOOC last year had to withdraw a bid to buy US producer Unocal in the face of political pressure.

The company said in July that it was looking at opportunities in Africa.

The country needs energy to fuel further development, but China itself is also a large producer, Zhang said.

"Our self-reliance is more than 90 per cent at present, and we will primarily rely on domestic production for energy supply," he said.

Officials have earlier said that in addition to overseas sources, China would develop clean, alternative energy resources and improve energy efficiency.

As this year marks the 50th anniversary of the beginning of diplomatic ties with the continent, China has invited leaders of the 48 members of the Forum on China-African Co-operation to further advance bilateral relations, a Ministry of Foreign Affairs official said yesterday.

Five nations which do not have diplomatic ties with China have also been invited as observers, Xu Jinghu, chief of the ministry's Africa Department, told the same news briefing.

The five countries are Burkina Faso, Swaziland, Malawi, Gambia and Sao Tome and Principe.

The Beijing summit is expected to adopt a political declaration and a plan of action on social and economic development, she said.

The third ministerial conference of the forum will be held on November 3, a day before the summit.

US releases strategic plan to address energy challenges

Oct 3 (xinhua) -- The US government on Monday released a five-year strategic plan to address energy challenges.

Under the plan, the US government will seek to deliver results along five strategic themes that include energy security, nuclear security, scientific discovery and innovation, environmental responsibility and management excellence.

"The plan addresses overall goals for developing and deploying new clean energy technologies, reducing our dependence on foreign energy sources, protecting our nuclear weapons stockpile, and ensuring that America remains competitive in the global marketplace," the Department of Energy (DOE) said in a statement.

"The thrust of the plan is founded on innovation through science-driven development of new technologies," said the statement.

The plan, that has been outlined in President George W. Bush's Advanced Energy initiative, again outlines commitments to energy diversity and efficiency through a host of clean fuels and new technologies, including bold new initiatives in nuclear, coal, biomass, and solar energy.

It also renews and extends the DOE's commitment to the environment, both resolving legacy nuclear waste and supporting a future of cleaner energy.

To meet the pledge to the national security interests of the United States, the DOE's plan details a path that will ensure a reliable and responsive nuclear weapons stockpile and advance the goal of global nuclear non-proliferation.

"The Department of Energy's strategic plan outlines a path forward to enhance our clean energy options and advance national security interests while protecting the health and safety of our workers and the public," said Secretary of Energy Samuel W. Bodman on Monday.

"Building on the Department's rich and diverse history and the President's initiatives, this plan details the steps necessary to keep our commitments, embrace innovation, and work together to ensure safe, secure, and environmentally responsible operations," he added.

Bio-energy to account for 4% of China's renewable energy

Oct 15 (xinhua) -- Bio-energy will account for one percent of China's renewable energy consumption by 2010, and four percent by 2020, said sources with the Ministry of Agriculture (MOA) on October 13.

Bai Jinming, an official with the science, technology and education department of the MOA, said at the start-up ceremony for the project of strategic development of bio-energy in rural China that bio-energy will help China meet its rising demand for energy.

The project is jointly launched by the Asian Development Bank and the MOA.

Developing bio-energy in rural China will promote the development China's agriculture, along with the rural areas and Chinese farmers, said Bai.

Bio-energy has been developing rapidly in China. According to statistics, by the end of 2005, more than 18.07 million peasant households are using methane gas for fuel.

More than 3550 bio-energy projects are producing nearly seven billion cubic meters of methane each year, according to the statistics.

According to the MOA, China's installed capacity of bio-energy electricity will reach

5.5 million kilowatts by 2010, and 30 million kw by 2020.

The annual use of methane gas will be 19 billion cubic meters in 2010 and 40 billion in 2020.

BP to quadruple capacity of Xi'an solar energy facility

Oct 19 (chinadaily) -- BP Plc, the world's second-biggest oil company, plans to invest "many million dollars" to quadruple the current capacity of its solar energy joint venture in Xi'an, the capital of Northwest China's Shaanxi Province.

In a drive to cash in on the booming renewable energy market in China, BP wants to expand the capacity of its Xi'an-based BP Sunoasis Co Ltd fourfold to 100 MW (megawatts) by 2010, said Mark Twidell, regional director of BP Solar's Australian and Asian business.

"We would like to take a fair share in China's expanding (solar energy) market," Twidell told China Daily yesterday in Xi'an.

In terms of investment in the new project, Twidell said "many million dollars" could be shelled out for BP Sunoasis, which now has a capacity of 25 MW and is minority-owned by BP.

China's surging energy demand and environmental concerns have prompted the Chinese Government to step up efforts to boost the use of alternative energy sources such as solar, wind and biomass, and industry analysts have predicted huge potential for these clean energies to fuel electricity generation.

According to the BP official, China's solar-based power generation market will reach 200 MW, from only 20 MW last year.

BP Sunoasis' increased capacity of 100 MW by 2010 will target both the Chinese market and other countries, Twidell added.

"There will be a balance between exports and domestic use (in China) from the Xi'an Sunoasis production," he said.

BP Solar last November signed a contract with China Xinjiang Sunoasis Co Ltd to set up BP Sunoasis in Xi'an, which is 51 per cent controlled by Xinjiang Sunoasis and 49 per cent by BP.

The new venture has a registered capital of over US$10 million and represents a strategic move by BP Solar to bet on China's booming new energy market, BP said. It focuses on the manufacturing of both panels and panel automation equipment for the use of solar power generation.

Following the operational start-up in January, Twidell said the Xi'an plant would be able to make profit before 2010. "It is not likely for a joint venture to gain profit in the first year," he said.

BP has announced that it plans to spend up to US$8 billion in the next 10 years on renewable and low-carbon power generation technologies.

The plan would double the company's current investment in alternative power and focus on wind, solar, hydrogen and combined-cycle gas-turbine technologies, BP said. It is expected to generate revenue of around US$6 billion per year within the next decade.

China's solar energy equipment manufacturing market is heating up as both foreign and local firms jostle for a share.

The country's flagship local company is Jiangsu-based Suntech Power Holdings Co Ltd. The company made its initial public offering debut last December and will

increase the company's production capacity by almost tenfold in the next five years to reach 1,000 MW

Nation to increase input in alternative energy

Oct 4 (xinhua) -- The Ministry of Finance has decided to increase input in projects involved in developing bio-energy and other alternative energies between 2006 and 2010.

The move aims to ensure China's energy security as the country fears that the soaring world oil prices would have a negative impact on its economic growth, said sources with the ministry.

But the ministry did not elaborate on the investment figures, saying only that it would earmark more funds for bio-energy, solar and wind energy projects, as well as for coal-to-liquid fuel projects over the next five years.

The ministry has listed the development of renewable energy a top priority in the coming five years. It would also encourage consumers to save energy and make efforts to build energy reserves.

The problem of energy shortage has been plaguing China's fast economic development. In the first half of this year, China's economy grew year on year 10.9 percent.

Data showed that China's dependence on foreign oil reached 43 percent last year. Departments concerned forecast that China's oil consumption would hit 450 million tons in 2020, with 250 million tons to be imported from abroad.

China, Indonesia sign MOU on energy cooperation

Oct 29 (xinhua) -- China and Indonesia signed a memorandum of understanding (MOU) on Saturday concerning cooperation in the energy and mineral resources sectors.

Chinese Vice Premier Huang Ju and visiting Indonesian President Susilo Bambang Yudhoyono attended the signing ceremony held at the second Sino-Indonesian energy forum, which opened in Shanghai on Saturday.

Huang said the forum will create a favorable environment for strengthening bilateral energy cooperation and the improved dialogue mechanism will help deepen mutual understanding and expand cooperation.

Win-win economic cooperation is the foundation of the strategic partnership between China and Indonesia, he said.

Both China and Indonesia have made remarkable achievements in the energy sector since the first energy forum was held in Bali on September 25, 2002, the vice premier added.

Huang said the Chinese and Indonesian peoples have a long history of friendly relations. Bilateral ties have progressed remarkably since the two countries established diplomatic relations 56 years ago.

Bilateral ties entered a new phase after Chinese President Hu Jintao signed a strategic partnership with his Indonesian counterpart Susilo during a state visit to Kuala Lumpur last year, Huang pointed out.

He noted that as two major developing nations in Asia, the friendly cooperation of the two sides is not only in their own interests but also conducive to peace, stability and prosperity in Asia and the world.

The Indonesian president said energy security is a key factor in allowing China and Indonesia to achieve peace, stability and development.

He said there is great potential for the two sides to explore energy cooperation and the

pace of cooperation should be further accelerated.

The two countries have agreed that, beginning in 2009, Indonesia's Tangguh gas field will provide 2.6 million tons of liquefied natural gas (LNG) annually to east China's Fujian Province for a period of 25 years.

Indonesia is the largest economy in the Association of Southeast Asian Nations (ASEAN), and China is its fourth largest trade partner.

Wind energy pricing policy must be overhauled

Oct 28 (xinhua) -- China's current wind power pricing mechanism must be overhauled, according to a report released jointly by the Chinese Renewable Energy Industries Association (CREIA), Greenpeace and the Global Wind Energy Council (GWEC).

The report, titled "A Study of the Pricing Policy for Wind Power in China", reviews the development of wind power and its pricing system in China. It looks closely at state-sponsored wind concession projects. The report says the tendering system used for wind power pricing is unclear and has had a negative impact on investment.

China's Renewable Energy Law came into effect early this year. Electricity pricing implementation rules state that the grid feed-in rates of wind-sourced power should be determined by tender. This has drawn a barrage of criticism from industry players, who fear that the practice will lead to low prices that deny investors a reasonable profit.

The report calls on the Chinese government to change the tender mechanism for wind power pricing to a fixed tariff system, so as to build a fair environment for competition that will serve the long-term development of the Chinese wind industry.

"Wind power is a new industry which needs support. The current pricing policy does not support wind power development, and must be changed," says CREIA secretary general Li Junfeng, a leading author of the report.

GWEC chairman Arthouros Zervos points out that "price volatility and uncertainty caused by the current regulation harms foreign and domestic private manufacturers and developers, who are discouraged by pricing pressure they cannot sustain."

Steve Sawyer, the Climate and Energy Policy Advisor of Greenpeace International, says, "China has a superb opportunity to develop wind power, but the development relies heavily on an enabling pricing system. We hope that this report will provide the basis for discussions on how to improve the pricing policy for Chinese wind 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 power generating capacity of 1,260 MW, ranking seventh on the list of the world's major wind players. Last year the Chinese government lifted its wind goal for the year 2020 from 20,000 MW to 30,000 MW. The target can be achieved ahead of time, if appropriate policies are in place, the report says

Automobile and Transportation

Metro technology speeding up

Oct 12 (chinadaily) -- Shanghai is expected to come up with 20 new technologies for subway construction and operation in the next five years.

According to the municipal government's 11th five-year plan, the city will have built a metro network as long as 400 kilometres by 2010, in time for the World Expo.

At present, the city has five operating subways with a total length of 123 kilometres. The expansion will give Shanghai the third biggest metro network in the world. It will probably handle 5.8 million passengers a day in 2010.

The technologies will be researched and developed by local universities, design institutions, manufacturers and construction companies.

Ying Minghong, deputy director of the Commanding Headquarters of Shanghai Metro Construction, said the campaign "scientific creations in metro transportation" will get the city to a key national position in most areas concerning metro technology, and to an international level in some fields.

In a conference with the same theme held yesterday, he said there are plans to develop automatically-operating metro trains and low-speed maglev technology.

He also said they would research energy-saving and environmental-protective material and technology applicable to metro construction, tunnelling techniques and an automatic monitoring system .

"The monitoring facility will keep scanning the condition of metro tunnels underground. For example, it will detect whether a pipeline is leaking or broken. Whenever it discovers a problem, it will immediately tell technical staff who can carry out repairs," said Bi Xiangli, vice-CEO of Shanghai Shentong Rail Transit Research & Consultancy Co, Ltd.

He said an important task on the 20-technology list is to develop metro trains where the Chinese own the intellectual property rights. Nearly all such trains operating in the city were purchased from abroad and China is still far from mastering the key technologies needed to manufacture them, he said.

"We also plan to introduce the 3G system into the city's entire metro network when it is in shape in 2010. Passengers will then be able to enjoy wireless services to access the Internet at subway stations," he said.

Bi also revealed that such services would first be offered on the No 10 Metro Line, on which automatic trains will operate without any drivers.

Constructing an auto and machinery centre

Oct 30 (chinadaily) -- Currently as one of the largest industrial zones in the Guangxi Zhuang Autonomous Region, the Yanghe Industrial Development Zone aims to become the largest research and production centre of automobiles and related parts in the region.

The zone, located in the east of the industrial city of Liuzhou in Guangxi, has a planned area of 90 square kilometres.

It was officially launched by the local government in July 2003, aiming to become another "industrial Liuzhou" in the near future.

Based on Liuzhou's well-developed industrial advantages, the zone will focus on several key industries, including automobile and auto parts manufacturing, machine tool manufacturing, environmental protection equipment, the high-tech bio-pharmaceutical industry and mechanical and electrical integration.

To this end, the zone has been divided into four parks, including the Automotive Industrial Park, the Guting Comprehensive Service Park, the Guantang New Park and the Luorong Heavy Industrial Park.

Situated near the Jinlan Exit of Guilin-Beihai Expressway, the Automotive Industrial Park has an area of more than 10 square kilometres, of which the first phase of construction is 3.5 square kilometres.

Mainly focusing on automobile and auto parts manufacturing, the park has seen most of the infrastructure construction finished and put into operation.

A total of 15 enterprises, of which nine are newly added this year, have been put into production in the park.

The Guting Comprehensive Service Park, with an area of about 30 square kilometres, will focus on developing tourism and residential communities.

In the 50-square-kilometre Guantang New Park, the high-tech industry will be given priority.

Meanwhile, the Luorong Heavy Industrial Park will favour investment from traditional manufacturing sectors.

Officials from the zone's administrative committee indicated that its strategic situation has helped it develop a series of advantages for foreign investment.

Geologically, Liuzhou has seen a well-developed industrial structure as it has been the traditional industrial centre of Guangxi, which neighbours ASEAN (Association of Southeast Asian Nations) countries.

The well-developed industrial structure of Liuzhou will by all means help the Yanghe Industrial Development Zone strengthen its production and processing capacity.

And as Liuzhou is situated in the centre of Guangxi, it has developed a sound transportation network, which is helpful for exporting and importing.

In addition, Liuzhou has abundant human resources, with nearly 400,000 skilled workers. Moreover, infrastructure has also been well developed in the city.

China's auto sales to make up 10% of world in 2006

Oct 2 (xinhua) -- China's automobile sales is expected to reach 6.8 million to 7 million this year, making up one-tenth of the world's total, analysts said.

The figure will climb to 10 million in the year 2010, and 20 million in 2020, overtaking the United States to become the world's top first-hand automobile market, according to a forecast of the State Information Center.

The center predicted that more middle-income Chinese families can afford a car in the coming years thanks to rising income and falling car prices.

Since China joined the World Trade Organization five years ago, Chinese consumers' demand for sedans has been growing on an average of 37.5 percent annually, the center said.

This year, the sale of sedans is estimated to hit 4 million, compared with 800,000 units in 2001.

China's automobile sales stood at 3.24 million units in 2002, ranking the fourth in the world. The position rose to third in 2004.

China will overtake Japan this year to become the world's second largest automobile seller.

'One axis, three belts' mapped out

Oct 23 (chinadaily) -- Distinct development belts and an integrated transport network are at the core of a plan for co-ordinated regional development of Beijing, Tianjin and Hebei.

Wu Liangyong, an academician of the Chinese Academy of Engineering and professor at Tsinghua University, put forward the proposals at a press conference to release the plan over the weekend.

The region will consist of four development links, divided geographically into "one axis and three belts."

The axis is the line linking Beijing and Tianjin that sustains the core functions of technology research and development.

The three belts are:

The mountain belt that runs through the cities in the Yanshan Mountains and Taihangshan Mountain areas in the region;

The traditional industry belt that threads through cities which are home to traditional industries such as steel; and

The Bohai Rim that includes ports, cities and the Binhai New Area development zone.

The proposals for the three belts are:

For the mountain belt in the north of Hebei Province, building an ecological corridor that circles Beijing and Tianjin and provides the two municipalities with environmental protection and ensure the region's balanced development.

For the industry belt, a restructuring of traditional industries in cities including Shijiazhuang and Baoding, both in Hebei, and supplying energy to other development zones.

For the Bohai Rim, greater co-ordination between ports and protection of the maritime environment.

In addition to the axis and belts, Wu also suggested small economic hubs be formed around counties to develop small- and medium-sized enterprises.

Wu and his colleagues also proposed that the region upgrade its transportation system by developing an integrated network.

For instance, Wu said the long-awaited second international airport for the capital should be based in the Beijing-Tianjin corridor, which is the core of economic development in the region with a dense population and a robust economy. Taiziwu Village in Tianjin's Wuqing County is an ideal location, he said.

Wu also proposed that Beijing's planned seventh ring road be extended into Hebei, and pass through Zhuozhou, Gu'an and Langfang cities in the province and Beijing's Pinggu District.

The towns on the seventh ring could become new development destinations and ease the pressure on existing centres by attracting investment.

The plan by Wu, a renowned expert in urban planning and architecture, is expected to serve as reference for government decision-making with several ministries already collaborating on regional planning for the Beijing-Tianjin-Hebei zone.

Wu's plan has won the backing of regional economic researchers, who, however, warned that the proof of the pudding lies in implementation.

Chen Liangwen, a researcher at the Chinese Regional Economics Research Centre affiliated to Peking University, said Wu's plan might help clearly define the role of different cities in the region as they are now all integrated into their own development zones.

"With clear orientation, the cities can avoid repetitive construction, find their competitive edge and facilitate each other's development," Chen told China Daily.

Weaving all the cities, counties and towns into one economic framework will help to change the region's current status of "a rich core surrounded by poor neighbours," he added.

But Chen warned that smooth implementation of any co-ordinated regional development needs the combined efforts of all local governments.

In a major step in that direction, Beijing and Hebei earlier this month signed a milestone co-operation agreement on, among other things, water resources and energy supply.

Other experts said they welcome systematic planning for the region, which has been lagging behind other economic entities such as the Pearl and Yangtze river deltas in co-ordinated development.

Capital set to become international air cargo hub

Oct 21 (chinadaily) -- China's first airport-based bonded logistics centre will begin operation in the first quarter of next year and is expected to make Beijing an important Northeast Asian air cargo transportation hub.

The bonded area is a key part of a 3-square-kilometre airport logistics park to be completed by the end of next year. The Beijing Airport City Logistics Park will involve a total investment of 3.6 billion yuan (US$456 million).

"The logistics park, together with the ongoing third expansion of the Beijing airport, will serve the 2008 Beijing Olympic Games," said Desmond Shum, chief executive officer of the Airport City Logistics Park Co Ltd (ACL). ACL is responsible for planning, developing and managing the park.

The logistics park is expected to improve the cargo transport competitiveness of the Beijing Capital International Airport, challenging South Korea's Incheon and Tokyo's Narita airports.

"Beijing could rank No 1 in terms of air transport connectivity in major airports of Northeast Asia, but it falls behind airports in South Korea and Japan in terms of cargo transportation," said Shum, indicating the main reasons are scattered logistics-related services, complicated customs clearance procedures and labour inefficiency.

South Korea's Incheon International Airport handled 2.15 million tons of cargo last year and was ranked the fifth-largest cargo airport by the Airports Council International. But more than half of the cargo, of which China was a major source, did not come from South Korea and was transferred to other parts of the world via Incheon.

Beijing airport transported 782,066 tons of cargo last year.

"We want to bring that cargo back," Shum said.

The logistics park, located at the north end of the airport's second runway, has five functional areas: a bonded zone, cargo terminals, an express cargo centre, an import/export air cargo customs surveillance zone and a comprehensive office complex.

The bonded zone, the first to begin operation, is like a free port in which imported goods can be held or processed free of customs duties before they are re-exported.

The logistics park will provide "one-stop customs clearance" for companies doing international trade, ACL said. It aims to help goods flow more smoothly by reducing red tape and setting up efficient co-ordination mechanisms among foreign trade-related agencies in customs, quarantine, warehousing, transportation and financial services.

Shum said the Chinese Government's initiative to create a new economic growth engine in North China rivalling Shenzhen and Shanghai brings unprecedented opportunities and will generate huge cargo traffic for Beijing airport.

Analysts said the airport logistics park would serve as an engine for the economic growth of Beijing.

"The logistics park would directly create 7.4 billion yuan (US$937 million) in gross domestic product (GDP) for Beijing and the

airport-related economy would contribute 5.49 per cent of Beijing's GDP in 2015," said Zhang Junkuo, a senior researcher at the Development Research Centre of the State Council.

ACL is a joint venture between Capital Airports Holding Co (CAH) and the Shunyi district government.

CAH, the biggest shareholder in Beijing airport, is China's largest airport group.

Beijing improves transportation

Oct 9 (cctv.com) -- The Beijing Municipal Transportation Committee is hoping the Olympics are just the beginning of a better transportation system for the capital.

When bidding for the 2008 Olympics, Beijing promised the International Olympic Committee that it will take less than half an hour for athletes to get to any venue from their living quarters.

A test drive from the Olympic village to the boxing venue, about 11 kilometers, shows it takes 56 minutes during rush hour, compared to 28 at other times.

So how does the committee intend to shave off around 30 minutes to hit the promised time?

Liu Xiaoming, from Beijing Transportation Committee, said: "It's very normal to have a big difference between rush hour and other times. We have set up around 300 kilometers of Olympic special lanes on 107 roads, between Olympic villages and venues. The designated speed is 60 kilometers per hour. So we think we can honor our promise."

According to the official, Beijing will use the 2008 Olympics as a chance to speed up construction of a skeleton for the public transportation system. It will consist mainly of rail lines and express bus ways. Only 28% of Beijing's commuters use public transportation, far behind the 58% in other large cities in the world.

When the new system is completed, city officials hope it will not only work for the Olympics, but keep the public moving long afterward.

Five-year leap outlined in railway development

Oct 7 (xinhua) --Powerful engine pulled passenger compartments for the first time into Lhasa, the remote capital of Southwest China's Tibet Autonomous Region, on July 2. The train had traveled along the 1,956-km Qinghai-Tibet Railway at a speed of 120 km per hour to conquer the "roof of the world".

The maiden train run on the world's most elevated tracks, 5,072 meters above the sea level at one point and more than 4,000 meters above the sea level for 960 kilometers, was hailed as an engineering marvel in world railway history and a dream-come-true for China's railway constructors.

But for Chinese railway planners, this is only the beginning of a new five-year drive to modernize the country's railway transportation systems that serve one fifth of the world's population.

Ambitious plans

China's Minister of Railways Liu Zhijun says that in the five years from now to 2010, China will build 19,800 kilometers of new railway lines, modernize 15,000 kilometers of existing railway lines, boost passenger train speed to 200 km per hour with fast trains traveling at more than 300 km an hour, and increase the load of freight trains with a single engine hauling over 5,000 tons.

Under the railway development plan approved by the Chinese government, every year 4,000 kilometers of new tracks will be laid, 3,000 kilometers of existing tracks electrified, and more fast passenger

trains, including the maglev trains, and large capacity freight trains introduced.

Liu says he hopes that by 2010, China's railway networks will be able to carry 30 percent more passengers and 30 percent more freight to alleviate the heavy demand for railway transportation.

As a developing country, China relies heavily on railways -- the cheapest means of mass transportation. Statistics show that in China, the energy consumption ratio of transportation by air, road and railways is 11:8:1. So at present, the transportation of 75 percent of coal, 66 percent of ore, 62 percent of iron and steel, as well as 56 percent of grain is done by the railways in the country.

China now has 75,000 kilometers of railways, with 6,500 kilometers built in the last five years. China's economy has been developing at an annual rate of more than 9 percent on average, but the length of its railways grows at a 9.5-percent increase in five years.

"We have been using 6 percent of the world's operational railways to move 23 percent of the total people and freight transported by the world's railway systems each year," Liu says.

Speed Raises

To increase railway transportation capacity, China has continuously increased the speed of both its passenger and freight trains. Since 1997, China has raised its train speed for five times, boosting passenger train speed on 22,100 km of tracks to 120 km/hr, on 14,000 km of tracks to 160 km/hr and on 5,370 km of tracks to 200 km/hr. The speed of freight trains on the above-mentioned tracks has also been raised to 120 km/hr.

Before the speed raises, China's trains used to travel at 60 km/hr.

Liu says that the fifth speed raising launched in 2004 alone has increased the passenger and freight transportation capacity of China's railway networks by 18.5 percent and 15 percent, respectively.

China is now preparing for the sixth train speed raising. He Wuhua, chief engineer with the Ministry of Railways, said the target of the sixth speed raising, scheduled to take place this year, is to extend the tracks that accommodate trains running at 200 km/hr by 6,000 kilometers.

In the next five years, Liu says, China will further raise the speed of passenger trains to 200 km/hr on another 13,000 km of the existing rail tracks, in addition to building dedicated lines to passenger trains. He adds that the speed of freight trains on all tracks will be raised to 120 km/hr by 2010.

Despite repeated speed raises, the transportation capacity of China's railways still lags far behind the need of the country's booming economy.

According to statistics released by Chinese Railways, a trade magazine, passenger trains in China provide only 2.41 million seats but sell 3.05 million tickets a day (4.2 million tickets at peak days), leaving many passengers no choice but to stand in the aisles; railway transportation authorities can provide 110,000 freight cars a day, but the nation's daily average demand for freight cars is 280,000, with over 60 percent of the demand left unsatisfied.

Dedicated Lines

To meet the increasing demand for railway transportation, railway planners have called for the building of high-speed dedicated passenger railway lines and the shifting of all freight transportation to the existing tracks.

In 1999, China started to build its first passenger-train-only railway. The 404-km Qin-Shen railway went into service in 2003, with a designed train speed at 200 km/hr and a rushing speed at 300 km/hr.

Liu says in the next five years, China will build 9,800 km of dedicated passenger railway lines, or 50 percent of the new lines to be built in the country. Of the 9,800-km dedicated passenger railway lines, 5,457 km will accommodate trains running at a speed above 300 km/hr.

The Ministry of Railways has announced that it will soon start the construction of a 1,318-km dedicated railway line linking Beijing with Shanghai, which allows trains to run at 350 km per hour.

Wang Yongping, a spokesman with the Ministry of Railways, says the fast train service to be launched by 2010 will cut train trips between Beijing and Shanghai from current 14 hours to only five hours.

"The Beijing-Shanghai dedicated passenger line can relieve the existing tracks of the heavy pressure from passenger transportation, thus increasing the freight transport capacity of the existing tracks by 50 million tons a year," says Ji Jialun, a professor with Beijing Transportation University.

The Chinese government has also approved the construction of a maglev passenger railway between Shanghai and Hangzhou with German technology. Train speed on the 175-km maglev line is expected to reach 450 km/hr, cutting the 2-hour-and-20-minute trip to only 30 minutes.

Heavy Loading Cars

To increase the freight transportation capacity of the railways, China will introduce 70-ton freight cars which carry more goods than the 60-ton freight cars presently in use.

According to the plan of the Ministry of Railways, China will roll out 70-ton cars for general use, 80-ton cars for coal and 100-ton cars for ore, iron and steel in the next five years.

The adoption of heavy loading freight cars can help reduce the length of a train set, making it possible for existing railway station platforms to accommodate heavy hauling trains.

"We will produce 1,000 more engines that can pull 5,000 tons of goods and run at 120 km an hour in the next five years," Liu says.

China's six major railway trunk lines now all have 5,000-ton freight train service. The Ministry of Railways is even running 10,000-ton freight trains on the Da-Qin Railway, with a designed annual transportation capacity of 100 million tons. The line's actual annual transportation volume reached 203 million tons in 2005.

China will also develop railway container transportation, making 10,000 km of tracks able to accommodate double-deck container transportation, and establishing an annual capacity of 10 million TEUs.

To realize the planned leap-forward in railway development, Liu says China will invest 1.25 trillion yuan (150 billion U.S. dollars) in the next five years. He adds that the country will mainly rely on domestic technology and manufacturing in railway development, though it also needs to import some key, advanced technologies from abroad.

Sun Zhang, a professor with the Shanghai-based Tongji University, holds that even in five years, China's railway networks will still lag behind those in the developed countries. He says that Germany, with a land territory smaller than Yunnan, a province in southwest China, boasts 45,000 km of railways, nearly half of the overall railway length China expects to have in five years.

Oil and Gas

Oil the pricing system

Oct 21 (chinadaily) -- Any boost in prices following OPEC's latest decision to cut production might, for the moment, be a relief for Chinese officials in charge of domestic

oil prices - who were recently blamed for being too slow to bring down domestic oil prices in line with declining global rates.

However, this is definitely not the end of the story. Without concrete efforts to accelerate pricing reform, the National Development and Reform Commission (NDRC) will be a frequent target of criticism as long as domestic oil prices lag far behind the trends in the international market.

In the last three months, international oil prices have fallen 25 per cent, to below $60 a barrel. Such a global oil price plunge has even prodded the Organization of Petroleum Exporting Countries (OPEC) into joint action to defend US$60 as its new minimum international price.

For a major oil importer like China, the oil cartel's decision to raise prices is certainly not good news. Ironically, the NDRC, the Chinese pricing authorities, might find it helpful to counter public criticism.

To prevent supply fluctuations and inflation, the Chinese Government controls the prices of major oil products and keeps them below the global level. The NDRC raised domestic oil prices twice in March and May, in line with soaring global rates.

Nevertheless, since global oil prices peaked in July, the pricing authorities have made no response, leaving prices at the pump unchanged.

To cope with rocketing prices of crude oil imports, China has raised the price for processed oil products nine times since July 2003, including twice this year.

While high oil prices often give rise to complaints by domestic consumers and enterprises, they are needed to sharpen the nation's energy-saving awareness. Yet, the merit of high oil prices in this regard does not rule out the necessity of flexibility in the pricing mechanism. And the Chinese Government also vowed to make the oil pricing system more market-based.

Unfortunately, the wait-and-see approach of the NDRC has so far deprived Chinese consumers of all the benefits of falling oil prices.

Some people from the domestic oil industry and even from the NDRC have argued that even at the current domestic gasoline price, domestic refiners were still making losses despite the drop in international oil prices.

But the fat profits netted by the country's oil giants in recent years indicate that the industry as a whole is making big money.

A flexible pricing system is urgently needed to narrow the gap between domestic and international oil prices.

COFCO to invest US$1b in ethanol

Oct 19 (chinadaily) -- China National Cereals, Oils and Foodstuffs Corporation (COFCO), the country's main fuel ethanol producer, said yesterday that it will invest more than US$1 billion in ethanol projects in line with the nation's plan to develop clean energy.

"In the next three to five years we will spend 10 billion yuan (US$1.26 billion) in the ethanol sector so as to increase the production capacity to 3 million tons," said Yue Guojun, general manager of COFCO's bio-chemical and bio-energy division.

The company yesterday officially began construction of a cassava ethanol plant in South China's Guangxi Zhuang Autonomous Region, which has an annual production capacity of 400,000 tons.

The plant will be one of the world's biggest fuel ethanol plants using cassava root, with a total investment of 1.46 billion yuan (US$185 million), said Yue.

It will take 12 to 14 months to build the first of two production lines in Guangxi. COFCO will begin construction of a second line late in 2007 or early in 2008.

"As a new business, we will attach great importance to the development of bio-energy in the future," Ning Gaoning, president of COFCO, told reporters during a press conference for the company to change its logo.

"We estimate a net profit of 1 billion yuan (US$126.6 million) a year after all the ethanol capacity is put into operation," said Yue, who is in charge of the company's bio-energy business.

Ning told reporters that COFCO was in talks to buy into the 440,000-ton-per-year ethanol plant in East China's Anhui Province. And it is also awaiting government approval to build a 300,000-ton-per-year ethanol plant in North China's Hebei Province and another plant in Northeast China's Liaoning Province of a similar size.

The Hebei plant will convert corn and sweet potatoes into bio-fuel, while the Liaoning plant will use only sweet potato, he said.

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CNOOC inks LNG deals

Oct 27 (chinadaily) -- China National Offshore Oil Corp (CNOOC), the nation's third-biggest oil producer, has inked framework agreements to purchase LNG (liquefied natural gas) from three foreign energy suppliers to meet its ambitious import plans.

"CNOOC signed the master agreements for LNG spot cargoes with Suez SA, Total SA and Shell Eastern Trading (Pte) Ltd respectively on October 5, 6 and 10," said the Beijing-based oil company in a statement.

The two-part LNG spot trading agreements differ from CNOOC's long-term fuel supply contract for its terminals in Guangdong and Fujian provinces. The sellers and buyers will elaborate on trading details when a particular transaction is made, according to Liu Junshan, spokesman for the company.

Liu did not give specific supply and pricing figures yesterday.

Beijing-backed CNOOC is leading the push for LNG terminal construction along the eastern coast amid government efforts to diversify the nation's energy supply and alleviate its heavy reliance on coal and oil.

CNOOC plans to build as many as seven LNG-importing terminals in six provinces and municipalities, only two of which have obtained government approval and gas supplies.

The market is heating up as CNOOC's bigger domestic rivals Sinopec and PetroChina strive to take a share, with plans to build terminals in places such as Shandong, Hebei and Jiangsu.

Although industry analysts have speculated the country may postpone its massive natural gas import blueprint against the backdrop of high energy prices, Xu Dingming, a senior official from the National Development and Reform Commission, said in July that China has its own solutions to secure gas supplies for these LNG terminals, but "would not import an enormous quantity of the fuel if prices remain high."

Industry analysts said falling global crude prices might help China secure more LNG deals in the future if the situation continues.

"In the coming years, China is bound to become one of the major LNG off-takers. This agreement with CNOOC a company which expects to be purchasing between 20 and 25 million tons of LNG per year by 2010 confirms once more Suez's role at the forefront of the LNG business," Rick Grant, chief executive of Suez Global LNG, was quoted by Reuters as saying on Tuesday.

CNOOC in September announced that it had finalized a deal to buy LNG from the BP-led Tangguh project in Indonesia for its terminal in East China's Fujian Province.

Private enterprises seek oil resources overseas

Oct 19 (chinanews.cn) -- As the oil prices drop down in international market, private enterprises in China, constrained by domestic quotas for oil use, try to seek more oil resources from overseas market, the China Business News reported.

From December 6 to 8, the Third Petroleum Forum between China, Russia and Kazakhstan will be held in Shanghai. Organized by the China Chamber of Commerce for Petroleum Industry (CCCPI), the forum will attract various oil giants, business delegates from oil fields, oil refineries, railway transportation companies, airliners, oil pipe transportation companies, and oil exploration companies to attend. The governments of Russia and Kazakhstan will organize high-level delegations to attend the forum.

"By arranging this forum, we hope that private Chinese enterprises will have a chance to fully communicate with oil companies from Russia and Kazakhstan, consequently to seek oil resources independently in overseas market," CCCPI's vice director said on Monday.

He disclosed that next year, CCCPI would organize some domestic enterprises to go to Russia and Kazakhstan to explore the oil resources there.

Constrained by two oil giants in China, Chinese private enterprises hope that they can find new oil resources from overseas market.

"We hope that we can find oil resources outside China and bring them back for processing," said a general manager of a private enterprise in Zhejiang. At present, even if Chinese companies have found oil resources outside China, they can not transport them back, due to domestic oil import quotas policy.

China has so far given its approval for six batches of non-state-owned companies to deal with crude oil or product oil trade: 19 companies to deal with crude oil trade, and 55 companies to deal with product oil trade. The annual import of crude oil by state-owned enterprises accounts for 90% of the total crude oil import in China. In 2007, China will set a quota for non-state-owned companies to import a total of 16.68 million tons of crude oil.

China explores LNG use in cars to cut pollution

Oct 16 (south china morning post) -- The Chinese government is expected to soon launch a programme to research and promote the use of liquefied natural gas (LNG) as a vehicle fuel as it attempts to address the soaring number of cars clogging its roads and air pollution clouding its skies.

Hou Fushen, an engineer working for both the National Clean Vehicle Co-ordination Leading Group Office and the China Automotive Technology and Research Centre, said the government would this month invite bids for research work to develop LNG engines and vehicles, as well as factory contracts to build newly designed engines and vehicles.

"The aim is to increase the technical level of LNG vehicles while decreasing costs and emissions," Mr Hou said. "We're planning to do some technical research and development work and demonstrate products, such as buses, in some cities."

The project is backed by the Ministry of Science and Technology and the National Clean Vehicle Action Co-ordination and Leading Group Office made up of more than 10 government departments.

New middle-class consumers in the world's fastest-growing vehicle market bought 5.9 million new cars last year, more than the country's total vehicle population in the

1990s and ranking it the second-largest car market after the United States.

All those additional cars are guzzling an increasing amount of oil - of which China heavily depends on imports - and accounting for a sizeable share of the country's urban pollution problem. Finding new vehicle fuels not only addresses environmental concerns but helps to diversify China's fuel consumption.

LNG is natural gas that has been super-cooled and compressed, turning it into a liquid. It is transported in highly pressurised tanks and costs more than natural gas delivered via pipeline. It is widely used as a power-generation fuel.

Mr Hou says there are only about 300,000 gas-powered vehicles in China, including those burning liquefied petroleum gas (LPG) and compressed natural gas (CNG).

"CNG vehicles account for more than 50 per cent of that and I think the number of cars using gas will grow very fast," Mr Hou said.

LPG, stored in canisters, is commonly used as fuel in taxis across Asia but is more dangerous in case of accidents and less environmentally friendly than CNG or LNG.

The cost of operating a vehicle on LNG compared with one burning CNG, LPG or petrol will depend largely on the price at which China can secure LNG supplies and the taxes that are applied to the fuel.

"Pricing will be the major concern because how will you get bus and taxi companies to use LNG or other gas instead of oil if gas costs more than oil? The government would have to offer some sort of subsidy," said Matthew Kong, a car analyst with Fitch Ratings.

Engines designed for CNG or LNG use are the same, said Brenda Smith, managing director of consultancy group Gas Advisers and a board member of the Asia-Pacific Natural Gas Vehicles Association. However, gas-burning vehicles remain expensive because they are built in small numbers.

"The buses are significantly more expensive at the moment, with prices about 35 per cent or more above that of a normal bus. That's not because the components are much more costly, but because they're not being built in large numbers. If mass-produced, they'd only be five to 10 per cent more, and that would be because the fuel storage system is a bit more expensive," Ms Smith said.

She said using LNG for urban vehicles would make the programme unique. Other countries experimenting with LNG have focused on longer-haul vehicles. But some Chinese cities are unable to tap into piped gas, making LNG a suitable option.

Several Chinese cities including Beijing, Guiyang, Changsha and Urumqi are already running small experiments using LNG in buses. Changsha is also one of the first cities in the world to experiment with LNG-fuelled taxis.

The Sichuan Air Separation Plant has built a factory with capacity to build as many as 5,000 LNG tanks per year. The tanks, made in varying sizes, are designed as fuel tanks for cars and buses. CMIC Zhangjiagang Shengdayin Cryogenic Equipment in Jiangsu province has also built a factory to make LNG containers for vehicles.

The government is trying several strategies to battle transportation's contribution to air pollution and create a cleaner image before the Beijing Olympics in 2008. In March, it introduced higher taxes on big cars and cut taxes for smaller models. The new rules aim to convince Chinese drivers to swap their petrol-guzzling sport-utility vehicles and luxury sedans for smaller, more efficient cars.

China opened its first LNG importing terminal in Guangdong province in June, and numerous other LNG import terminals are planned for China's eastern coastline. There are also small LNG plants in Xinjiang and Guangxi. But the fuel is finding it difficult to compete with cheaper piped gas

and China's huge coal reserves, which produce 70 per cent of the energy used in the country

"In our opinion, CNG will be more important than other alternative fuels, so we are investing more in CNG than in other fuels," Mr Hou said.

PetroChina: Tarim output may jump 50%

Oct 13 (chinadaily) -- PetroChina Co said gas and oil output from Tarim Basin fields in Northwest China's Xinjiang Uygur Autonomous Region may jump 50 per cent this year as the nation's largest oil company intensifies its search for new supplies.

PetroChina Tarim Oilfield Co expects to produce the equivalent of 15 million metric tons of oil this year, up from 10 million in 2005, Sun Longde, president of the PetroChina unit, said in the Xinjiang city of Kolar. That's about 10 per cent of PetroChina's projected 2006 output.

China is relying more on areas like Tarim, opened 16 years ago, as output stagnates from older fields such as Daqing, the nation's largest. PetroChina plans 2006 capital spending of more than US$20 billion, including drilling wells deeper than 5,000 metres at Tarim, to supply the world's fastest-growing major economy.

PetroChina's parent, China National Petroleum Corp, has invited tenders for 12 exploration areas in Tarim, with Total SA and Chevron Corp among foreign companies that have requested details of the sites ahead of possible bids, Sun Tairong, a director at Tarim Oilfield, told reporters in Kolar.

"We have officially started the bidding process," he said, adding that formal tenders may be received at the end of the year.

Royal Dutch Shell Plc, Europe's largest oil company by market value, is considering bidding for the Xinjiang oil and gas fields, Lim Haw Kuang, executive chairman of the company's China operations, said on September 22.

Inviting foreign partners "has been an ongoing part of their thinking because it is a fairly undeveloped area and they would like to have other people come in and participate if they can reach agreements with other companies," Macquarie's Weaver said.

Output from Tarim may reach 6.05 million tons of crude (44 million barrels) and 11.4 billion cubic metres of natural gas this year, Sun Longde said. That may more than double to in excess of 25 million tons in the five years ending 2010, including 8 million tons of crude and 20 billion cubic metres of natural gas, he said.

By then, output from Daqing, which has been pumping oil since 1959 and accounts for a quarter of the nation's production, may drop to 40 million tons from 56 million tons in 1997.

Private firms may get chance to bid on oil blocks

Oct 9 (xinhua) -- China is considering opening oil exploration blocks in its smaller basins to private domestic private companies in what could be the first step toward introducing competition in the country's highly regulated upstream energy market.

The Ministry of Land and Resources plans to develop a bidding system for exploration rights in small and mid-sized basins over the next five to 10 years, the China Oil News reported on its website on Sunday.

Trial bidding is expected to start in three to five years, the report said, citing Che Changbo, deputy chief of the Oil and Gas Resources Strategic Research Center under the land ministry.

China now grants oil and gas exploration and exploitation licenses to three state-owned energy giants, China National Petroleum Corp, Sinopec Group and China National Offshore Oil Corp, as well as provincial government-run Shaanxi Yanchang Petroleum Group Co.

Accessibilty

Che, speaking to an energy forum in Beijing on Friday, said China should allow Chinese companies under all types of ownership to access the upstream energy market provided they meet requirements in capital and expertise.

"The big state trio should still play the dominant role in domestic energy exploration and production sector by controlling more than 85 percent of the country's total oil and gas reserves and output (in the future)," Che said.

China's onshore and offshore oil basins cover 5.5 million to 6 million square kilometers, and the big three and Yanchang have already registered for the rights to explore 4.38 million square meters, according to the ministry.

Che said the blocks to be open will be those that are unregistered at present.

Small local companies that have cooperation projects with the state big names can also apply to obtain exploration rights.

The reform in the upstream market will encourage the transfer of exploration rights among qualified companies, said China Oil News, which is a publication under CNPC.

In July, PetroChina Co, which is CNPC's listed unit, said it will open nine exploration blocks in Tarim Basin in the northwestern Xinjiang Uygur Autonomous Region to foreign investors.

Climate Change and Air Pollution

Plans afoot for national car-free day

Oct 21 (chinadaily) -- China is planning to stage an annual car-free day across the country, an official with the Ministry of Construction said on Thursday.

Lan Rong, director of the ministry's department of urban construction, revealed the plan at the inaugural meeting of the China Urban Public Transport Association's intelligent traffic committee in Guiyang, capital of Guizhou Province.

"We will promote the event in order to encourage more citizens to choose public transport instead of private cars to reduce the worsening air pollution caused by car exhausts," Lan said.

Lan said China's Car-Free Day would be held annually in September in all the cities with a population of more than 500,000.

Each city would designate a certain area in which most vehicles will be banned for the day except shuttle buses, bicycles and emergency vehicles.

Lan said that with the acceleration of China's urbanization, public transport had become increasingly important.

But its development had lagged behind while the number of private cars on the road continued to soar, causing traffic problems in all major cities.

And pollution caused by the growing number of cars had affected residents' health and quality of life.

According to China's Clean Auto Movement Office, car exhausts have become the primary source of air pollution in many cities. In downtown Shanghai, car exhausts are responsible for 86 per cent of carbon monoxide in the air. In Beijing it is 80.3 per

cent during summer and 63.4 per cent in winter.

Carbon monoxide inhibits the ability of blood to adsorb oxygen in the lungs. Inhaling high levels and concentrations can lead to poisoning.

"We hope more people recognize the benefits of taking public transport and the importance of our efforts to protect the environment by participating in Car-Free Day," said Lan.

China launched its first Car-Free Day in October 2000 in Chengdu, capital of Southwest China's Sichuan Province.

Australia unveils US$500m climate change drive

Oct 23 (AFP) -- Australia is to launch a US$500-million drive to tackle global warming, Prime Minister John Howard has announced, as the country battles its worst drought in more than a century.

It comes as his government, which like the United States has refused to sign the Kyoto Protocol on climate change, scrambles to contain the political impact of the effects of the protracted drought on Australia's farming community.

As he unveiled the initiative, a group of academics and experts meanwhile launched a public advertising blitz urging Howard's government to press for reduced greenhouse gas emissions to combat the global scourge.

"The government has established a special 500 million dollar (379 million US) fund to be used in partnership with companies and state governments to invest in new technologies designed to produce cleaner fossil energy and also renewable energy," Howard said in his weekly radio address.

"Starting this week, the government will announce the first projects to be supported out of this fund."

Canberra will invest at least 230 million dollars into the project in a bid to develop ways of producing cleaner energy from renewable power sources, Howard said.

Speeding up the development of these new technologies, which would reduce greenhouse gas emissions from the use of fossil fuels, was a key element of Canberra's climate change drive, he said.

"We must respond on a number of fronts. There is no one single solution that will reduce greenhouse gas emissions over the years ahead," the prime minister added.

A group of academics launched a nationwide advertising campaign Monday calling on Howard's government to do more to combat greenhouse gas emissions that are widely believed cause to cause a rise in the Earth's temperature.

"An effective and credible response requires Australia's national greenhouse gas emissions go down, not up," said Corin Millais, chief executive of Climate Institute, which is running the ad capaign.

"The Australian government's current policy has already increased emissions by 10 percent over the last decade and is set to increase them by a further 17 percent by 2020," he said in a statement.

Under the Kyoto Protocol, the global agreement on greenhouse gas emissions, Australia was given a target of a 108 percent increase on 1990 emission levels, a target the government insists it is on track to meet.

Nation ready to join US FutureGen power project

Oct 19 (chinadaily) -- China is poised to join FutureGen, an initiative by US President George W. Bush to build a giant emission-free power plant.

Shang Yong, vice-minister of science and technology, said the government will soon

begin negotiations with the US about possible rights and obligations for participation in the Government Steering Committee.

The plan was announced yesterday at the ongoing 12th US-China Joint Commission Meeting on Scientific and Technological Co-operation.

John Marburger, science adviser to the US president and head of the US delegation, said he was "glad" that China, the world's largest coal producer and consumer, was showing an interest in the programme.

"China must take advantage of high-tech energy projects to meet the increasing domestic energy needs," Marburger said in an interview.

Initiated three years ago, FutureGen is a 10-year effort that plans to collect about US$950 million in international funds to build a zero-emission, coal-fired electric and hydrogen production plant.

It will try to integrate advanced technologies in coal gasification, hydrogen from coal, power generation, and carbon dioxide capture and geologic storage.

Under the scheme, each signatory needs to contribute US$10 million to the programme. In the meantime, participants can benefit from development of any new technologies.

Lee Hwa Gebert, a senior official with the US Department of Energy, said the draft of general agreement for FutureGen partners is still being reviewed by the US Department of State.

"After it is passed, which may take several months, the two countries can actually sit down and have a further talk," she said.

India and the Republic of Korea were the first two participants in FutureGen. And 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.

"FutureGen looks like a far distant solution for the public, but it is a roadmap for clean coal technology," Xu Jing, deputy director with the high tech division of the Ministry of Science and Technology, told China Daily.

He said the programme is the ultimate goal for comprehensive energy use, since the plant will produce both electricity and hydrogen out of coal.

"Before realizing the goal, we need to improve current coal gasification technologies," Xu said.

The ministry plans to build several pilot power plants for integrated gasification combined cycle (IGCC) across the country within the next five years. IGCC is emerging as one of the most promising technologies for realization of low-emission power generation, by utilizing low-quality solid and liquid fuels.

There are five similar pilot power stations in the US and several in Europe, the official said.

"We will encourage companies to lead the plan and in return, they will gain some subsidies," Xu said.

"These IGCC plants are preparations for an upgrade to more advanced plants suggested in FutureGen."

The biennial Sino-US joint meeting kicked off yesterday. It aims to help both countries develop new science and technology co-operation areas.

In addition to clean energy technologies, both sides also agreed on further collaboration in climate change, water resource management, earth observation and nanotechnologies.

Warming will cost trillions, says report

Oct 14 (chinadaily) -- Failure to take action to combat climate change will cause

environmental catastrophe and cost the global economy US$20 trillion a year by the end of the century, the pressure group Friends of the Earth says today.

In a report based on research from more than 100 scientific and economic papers, the group says allowing global warming to continue unchecked will mean a temperature rise of 4 C by 2100, causing economic damage worth up to 8 per cent of global GDP.

The study coincides with research from the oil group Shell released on Thursday, which said the need to find solutions to climate change could create a US$58 billion market for British business over the coming decade.

Shell's chairman, James Smith, said: "We do have to tackle climate change and that's a matter for government, companies and individuals as well, because the costs in the coming years from rising sea levels, from floods and extremes of climate will be too high.

"The cost-benefit equation of action to tackle climate change is favourable. That's true not just for the UK but internationally as well," he said on the BBC Radio 4 Today programme.

Both reports were released ahead of the government's own review of the economics of climate change carried out for the Treasury by Sir Nicholas Stern. That is expected to be published later this month and is likely to conclude that the costs of tackling climate change are far more modest than had been thought.

The Friends of the Earth report was compiled by economists at the Global Development and Environment Institute at Tufts University in Massachusetts in the US. Institute director Frank Ackerman said: "The climate system has enormous momentum, as does the economic system that emits so much carbon dioxide. Like a supertanker, which has to turn off its engines 25 kilometres before it comes to a stop, we have to start turning off greenhouse gas emissions now in order to avoid catastrophe in decades to come."

According to the report, global temperatures are already 0.6 C above pre-industrial levels and temperatures will rise by more than 2 C unless there are "immediate and vigorous efforts to reduce emissions," that a 3 C increase was "extremely likely without major efforts at reducing emissions," and the increase would be 4 C with "no efforts at reducing emissions."

Friends of the Earth says the impact on Britain of a 4 C increase will be much hotter summers, droughts, flooding that will cost US$40 billion a year by 2080, a doubling of the number of people at risk of coastal flooding to 1.8 million and the need for a cooling system on the London Underground.

It also says there is a danger that the Thames Barrier will be unable to cope with the demands on it from rising sea levels. Friends of the Earth's head of campaigns, Mike Childs, said: "This report demonstrates that climate change will not only be an environmental and social disaster, it will also be an economic catastrophe, especially if global temperatures are allowed to increase by more than 2 C."

Shell's research sought to quantify for the first time the potential size of the market for businesses that develop technologies, products and services that help combat climate change. There would be a global market worth US$1 trillion within five years, it said.

Glaciers help curb global warming

Oct 16 (xinhua) -- With the world facing an increasing threat from global warming, a Chinese scientist said Monday that the world's 20 million square kilometers of glacier will help curb a rapid rise in global temperatures.

Zhang Wenjing, a leading Chinese expert on glaciology, said glaciers, which are commonly regarded as an important source of freshwater on earth, are also "monitors" and "adjusters" of global temperatures.

Zhang is on a month-long scientific expedition to the northern and southern slopes of the Himalayas with scientists from China, India, Nepal and Bhutan.

Their tasks include researching the impact of global warming on the Himalayan glaciers, which are the world's second largest glacier cluster following the Arctic Pole.

Zhang, who has been studying glacier for decades, tried to view the dwindling of glaciers in an "optimistic" way.

"To 'some extent', the heat absorbed during the glacier's melting can counteract global warming," he said.

"In other words, the world's 20 million square kilometers of glacier and vast areas of ocean will not allow the global temperature to increase too fast," said Zhang, a research fellow with the Institute of Mountain Hazards and Environment with the Chinese Academy of Science

According to a World Widelife Fund report, glaciers on the Himalayas are retreating at a speed of 10 to 15 meters each year as global temperatures rise.

Zhang warned that the glaciers in the Himalayas are an important regional water resource and help maintain the region's eco-system.

"The shrinking of the glacier will have a serious impact on the region's social, economic and ecological environment," he said.

China issues new rules to curb auto emission

Oct 7 (CRI) -- China has reaffirmed its environmental protection efforts by unveiling a new regulation on automobile emission.

The new rule, which will go into effect in 2007, stipulates pollutants from cars should be reduced by 30 percent compared to current levels.

The State Environmental Protection Administration of China says the country will adopt even tougher standards in 2010.

Zhao Yingmin from the administration's science and standards department explains the two rules are aimed at reducing 1.8 million tonnes of nitrogen oxides, 16 million tonnes of carbon monoxide and 2.2 million tonnes of compounds of carbon and hydrogen. It is expected these reduced emissions will help boost China's car exports.

China is the world's third-largest car manufacturer, with an annual production of over 5 million vehicles. At present, there are some 33 million cars in the country.

The country began acting on curbing automobile emissions in 1980s and drew up relevant policies equivalent to Euro 2 and 3 standards in 1999.

BOCOG chief wants more effort on air pollution

Oct 21 (Reuters) -- Chief Beijing Olympic organiser Liu Qi says more effort needs to be made to clean up the air pollution in the city, according to a report on the official Web site of the 2008 Games.

Speaking on a visit to the Beijing Environmental Protection Bureau this week, the president of the Beijing Organising Committee of the Olympic Games (BOCOG)

said improving air quality was a key project in staging a "high-level" Games in 2008.

The Chinese capital is regularly covered by smog and although BOCOG has reported improvements over the last couple of years, pollution is certain to be on the agenda when the International Olympic Committee (IOC) inspectors make their second visit of the year to the city next week.

Liu, who is also secretary of the Beijing Communist Party, called on local government departments to do more to tackle the dust caused by the city's many building sites as well as cut down emissions from vehicles and coal fires.

"Environmental renovation is a long-term task and we need to uphold the spirit of the Long March in the 1930's of the China Red Army to overcome every difficulty," Liu said.

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