

# China Electric Power Weekly

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## Government Policy

### China's power generation capacity to exceed 600 mln kw

China's power generation capacity will exceed 600 million kilowatts by the end of this year.

Wang Yonggan, secretary-general of the CEC, predicted that generators of 80 million kw installed capacity would begin operation this year.

More than 60 million kw generators began operation in China in the first three quarters, including 6.9 million-kw of hydropower and 52.8 million-kw of coal-fired power. It was a record growth in electricity generation capacity, said Wang.

Power supply problems continued to ease during the first three quarters despite regional or periodic supply shortages, said Wang. China produced 2,011 billion kilowatt-hours of electricity in the first three quarters, up 12.9 percent from the same period last year. Generators producing 75 million kws will go into operation in next year. Investment in grid construction will be about 200 billion yuan (25 billion US dollars) each for this year and next year.

### Utility CLP sees looming power oversupply in China

Asian utility CLP Holdings sees an emerging oversupply of power in China, after a burst of new generation capacity, but says there is plenty of growth potential for power investors in India and Southeast Asia.

China has become the second largest power market after the United States, with 75 gigawatts of capacity expected to be added this year as the country seeks to avoid blackouts and feed a rapidly growing economy.

"Potential oversupply may loom in the near future -- utilisation in China is coming down," said Mark Takahashi, director of corporate development at CLP.

"Firms will be less profitable -- people will be looking to place capacity elsewhere," he told an energy conference in Singapore.

Hong-Kong based CLP has over 4,000 megawatts of capacity in China, with other power generation around Asia in operation or

under construction totalling 17,500 megawatts.

The rush for new supply in China has been dominated by coal plants to tap China's huge reserves, as well as a wind power boom and liquefied natural gas imports that started this year, following blackouts in 2004 that led to record oil imports. Takahashi said new power generation in China was outstripping GDP growth, though any oversupply could be temporary and would vary by province.

### China and Australia to build green plant

China and Australia plan to build the world's first commercial power plant using the technology of integrated gasification combined cycle (IGCC) in Australia, said sources from the National Development and Reform Committee (NDRC).

IGCC is a power plant technology using synthetic gas (syngas) as a source of clean fuel. Syngas is produced in a gasification unit built for combined cycle purposes, hence the integrated name.

Steam generated by waste heat boilers of the gasification process is utilized to help power steam turbines. Heavy petroleum residue and coal with a high sulphur content and even biomass are possible feeds - raw materials - for the gasification process.

There are only a handful of IGCC plants in operation for power generation. These plants are by far the most environmentally friendly in the use of coal.

The IGCC power plant in Australia is expected to be completed in 2008, with a total investment of 670 million Australian dollars (US\$507 million). The designed capacity is 400,000 kilowatts.

Australia has promised to support the development of clean energy technology with 100 million Australia dollars (US\$76 million), according to Jiang.

The equipment provider, Harbin Electric Power Equipment General Plant in Northeast China's Heilongjiang Province, will invest 4 billion yuan

(US\$500 million) in production.

However, Jiang was not optimistic when looking into the profit prospects of commercial IGCC power plants. For a conventional coal power plant, the cost, including construction and equipment, for per kilowatt stays at 5,000 yuan (US\$625); however, for IGCC power plants, the cost can be double and even reach US\$1,400 per kilowatt.

The power generation industry is yet to be convinced about the reliability of IGCC technology, as the demonstration facilities that have gone into operation have not consistently demonstrated capacities comparable to conventional combined cycle gas turbines (CCGTs) or coal-fired power plants.

But this clean energy technology shows the future orientation of energy development. Especially for China, a country with huge coal consumption, developing such technology holds great importance to curb its emissions of sulphur dioxide (SO<sub>2</sub>) and to clean its air. SO<sub>2</sub> emissions have risen 27 per cent since 2000, according to figures from the State Environmental Protection Administration (SEPA).

Each ton of SO<sub>2</sub> discharged may cause up to 20,000 yuan (US\$2,500) in economic losses.

In the 11th Five-Year Plan period (2006-10), China has promised a 10 per cent cut in the country's total SO<sub>2</sub> emissions by 2010,

compared with the end of 2005. In this way, the country now is actively seeking ways of

developing clean energy, including clean fuel, solar energy and wind power.

#### China encourages enterprises to participate in construction of power plants in Indonesia

The Chinese government encourages and supports domestic enterprises willing to participate in the construction of coal-fired power plants in Indonesia, Ma Kai, the minister in charge of the National Development and Reform Commission (NDRC) has said at the second China-Indonesia energy forum held in Shanghai. Ma Kai said it is an important measure for Indonesia to decide to build 10 million kilowatt coal-fired power plants before 2009. The Chinese government is willing to jointly research a cooperative program with Indonesia's government and to start negotiation on governmental cooperation as soon as possible, said the minister.

Ma Kai said there is great potential for the two countries to cooperate in the energy sector and the current cooperation lags far behind the

expectations of both sides.

China has cooperated with Indonesia on such projects as power station construction and has begun to import liquefied natural gas (LNG) to fuel its LNG project in southeastern Fujian Province.

Ma suggested establishing a cooperative mechanism in investment between China and Indonesia.

Both sides should attach more attention to cooperation in such fields as coal, petroleum, natural gas and electricity, renewable energy, alternative energy and efficiency enhancement, aluminum, copper and nickel, public utility construction including roads, bridges, ports and communication, manufacturing fields such as light industry, machine and electronics as well as forestry, agriculture, fishing and processing.

## **Power**

## **Company**

#### China Yangtze Power earns RMB1.152b net profits in Q3

In the third quarter of 2006, China Yangtze Power Co., Ltd generated up to 11.31b kilowatt-hours (kWh) of electricity. The company earned up to RMB2.21b of prime operating revenue, generating RMB1.15b of net profits with earnings per Share (EPS) of RMB0.141. During the first three quarters, the electric power company earned net profits of RMB2.47b, a decrease of RMB100m, with EPS of RMB0.302.

#### China Power Corporation increases electric power supply to mainland China

In late Sept. 2006, China Power Corporation, a subsidiary of China Light and Power Holdings, announced its third quarter results. The company's electric power supply to Hong Kong increased by 1.4 per cent, accounting for 86.1 per cent of total power supply; and its supply to mainland China increased by 16.6 per cent, accounting for 13.9 per cent of total. The company's total power supply increased by 3.3 per cent. As of the end of Sept. 2006, the number of China Power Corporation's clients reached 2.23m, up 1.4 per cent on 2005.

#### CNOOC Unit to expand gas-fired power plant in S China

CNOOC Gas & Power Ltd., a unit of China National Offshore Oil Corp., has received

government approval to expand a gas-fired power plant in the southern province of Guangdong.

The expansion of the Hengmen power plant in Zhongshan city will involve two 350-megawatt gas-fueled generators requiring a total investment of CNY2.64 billion (\$334.5 million), said the National Development and Reform Commission.

CNOOC Gas & Power will finance 52.7% of the investment, while the other two shareholders - Zhongshan Guanzhong Investment Co. and

Hong Kong Shandian Co. - will finance 22.3% and 25% of it, respectively.

The three shareholders are contracted to jointly operate the power plant for 32 years, said the NDRC. It didn't state the source of the natural gas for the power generators or the original output capacity of the power plant.

CNOOC operates a natural gas pipeline from Zhuhai port in Guangdong to Zhongshan city.

The pipeline has been operating since February, transporting gas from CNOOC's offshore fields to Zhongshan, the company said on its Web site.

#### **State Grid Corp. to build ultra-high pressure electric artery**

The 1,000 kv. ultra-high pressure alternating current project that connects Southeast Shanxi with Nanyang and Jingmen has entered the implementation phase, according to sources from State Grid Corp. Upon being put to commercial operation, the project will be the first ultra-high pressure electric artery that connects four provinces in mid- and North China. Its rated voltage will reach 1,000 kv, maximum operation pressure 1,000 kv., and natural transmission power 5m kv.

#### **CLP sells 50% stakes in BLCP to EGCO**

China Light and Power Holdings (CLP) announced to sell its 50 per cent of stakes in BLCP, a power project in Thailand, to the Thai company Electricity Generating Public Company (EGCO) at the price of US\$121m. BLCP Coal-fired Power Plant, with capacity of 1,434 megawatt, will soon be completed and put to operation.

#### **China Huaneng to sell emission rights to Endesa for 200 mln yuan a year**

China Huaneng Group, the parent of the country's largest listed power producer by capacity, will sell greenhouse gas emission credits to Spanish energy firm Endesa for 200 mln yuan annually, the South China Morning Post reported, citing a source.

The agreement involves three wind power and five hydropower projects, which are qualified to sell carbon emission reduction (CER) credits, Hong Kong newspaper said.

'Emission rights trading will become a growing source of income for mainland power producers as they develop more clean energy projects, with projects for trading emissions involving biomass, hydro, wind or natural gas-fired power,' the report quoted a source as saying.

## **Regional News**

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## **North China**

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### **RMB2.2b green coal power project located in Binhai New Area**

The project to build a pilot ICCC power station and a green coal power technology lab, located in Tianjin Binhai New Area, will generate an annual sales revenue of RMB750m, with power generation capacity of 1.5b kilowatt-hours (kWh). About an investment of RMB2.2b will be made in the project, and its construction will commence in 2007 and be completed in 2009.

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## **Northwest China**

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### **Electric power consumption tops 11.4b kWh in Xining from Q1 to Q3**

Electric power consumption topped 11.4b kilowatt-hours in Xining, Qinghai Province in the first three quarters of 2006, an increase of 2.1b kWh over the same period of 2005 and up 23%.

The four 110-kv. power transformation stations located in urban area of Xining were under intense construction, and sites have been chosen for another five transformation stations.

### **Chonghuer hydropower station commences construction**

Construction for the Chonghuer hydropower station commenced on Oct. 26, 2006, and it will be completed within four years. The station has a designed power capacity of 390m kilowatt-hours (kWh), with total installed capacity of 110,000 kv. A total investment of RMB999m will be made in the project.

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**Central**

**China**

**Three Gorges project generates 138.3 bln kwhs of electricity**

The massive Three Gorges Project, the world's largest hydropower plant, had generated 138.3 billion kilowatt-hours (kwh) of electricity as of 9:00 a.m. Sunday, according to an official in charge of the project. The electricity generated by the project is used in 15 provinces in central, eastern, southern and southwestern China, greatly easing power shortages in the regions, said the official with the China Three Gorges Project Corporation.

The project's first generating unit went into operation in 2003. Currently, 14 gigantic Three Gorges Project turbo-generators are operating at full capacity. Launched in 1993 and built at an estimated cost of 180 billion yuan (about 22.5 billion U.S. dollars), the Three Gorges Project on the middle reaches of the Yangtze River, China's longest, will eventually have 26 generators with a combined generating capacity of 18.2 million kw and be able to generate 84.7 billion kwh of electricity annually. The other 12 generating units are still under construction. The whole project is due to be completed in 2008, one year ahead of schedule.

**Yunan Province builds first gas power plant in Weixin County**

Yunan Weixin County Huajiaba Coal Gas Power Plant completed its construction recently. The plant will commence power generation on Nov. 5, 2006. The gas power plant, with a total installed capacity of 500 kv., will generate 2.88m kilowatt-hours (kWh) annually, generating economic benefits of RMB1.15m.

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**East**

**China**

**China's Southeast Power Q3 earnings up 39 pct**

China's Southeast Power said its net profit rose 39 percent in the third quarter from a year earlier as it boosted installed capacity for power generation at a subsidiary.

Zhejiang Southeast Electric Power Co. Ltd, an electricity generator based in Hangzhou, posted a net profit of 233.26 million yuan (\$29.5 million) in the quarter compared with 167.68 million yuan a year earlier.

The firm, which lists U.S.-dollar denominated B-shares in Shanghai and global depositary receipts in London, said its turnover rose 21 percent to 1.78 billion yuan, fuelled by a 20 percent rise in electricity output on a year earlier to 4.909 billion kilowatt-hours.

"The rise in electricity output was mainly due to a 600 MW increase in installed capacity at our Changxing Power Co. subsidiary," the firm said in the quarterly report.

Analysts have said rapidly expanding power supplies in China, the world's second-largest electricity user, will begin to hurt the bottom lines of Chinese electricity producers, including Southeast Power, in the next one or two years.

China boosted its power generating capacity by 41.94 gigawatts in the first seven months of the year, the official Xinhua news agency reported last month.

China generated more than 1.52 trillion kilowatt-hours of power in the first seven months,

12.1 percent more than in the same period last year, with usage by industry up 13.9 percent, the agency said.

Southeast Power's profit growth by far outperformed Huaneng Power International (0902.HK: Quote, Profile, Research) (600011), China's largest listed producer, which posted a 2.7 percent rise in third-quarter earnings. Another major power firm, Yangtze Electric Power (600900), co-operator of the giant hydropower Three Gorges, is scheduled to post

results on Friday. For the first nine months of this year, Southeast Power posted 24 percent rise in net profit to 563 million yuan from a year earlier. Southeast Power's Shanghai B-shares, open to Chinese and foreign investors, jumped 3.76 percent to \$0.441 on Thursday morning. They have risen 20 percent since the start of this year, but have still underperformed the broader market's <.SSEC> 56 percent gain because of concern over the industry's weakening prospects. (\$1=7.9 Yuan)

**Shanghai builds first gas power plant**

Huaneng Shidongkou Gas Plant commenced power generation through grid integration recently. The plant's peak capacity reached 1.2m kilowatt-hours, which greatly contributes to Shanghai Grid's adjustment capacity during peak time.

**Statistics**

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**Power Company Stock Price**

Stock Code	Company Name	Closing Price on Thursday	
		2nd, Nov	26, Oct
534	SHANTOU ELECTRIC POWER	3.85	3.77
539	GUANGDONG ELECTRIC POWER	4.88	4.39
600868	GUANGDONG MEIYAN HYDROPOWER	2.21	2.07
690	GUANGDONG BAOLIHUA NEW ENERGY	11.60	10.61
966	GUODIAN CHANGYUAN ELECTRIC POWER	3.80	3.62
600969	HUNAN CHENDIAN	4.43	4.52
27	SHENZHEN ENERGY	7.46	6.90
600452	CHONGQING FULING ELECTRIC POWER	4.70	4.44
600886	SDIC HUAJING POWER	6.05	5.64
600509	XINJIANG TIANFU THERMOELECTRIC	6.15	6.54
543	AN HUI WENERGY	3.36	3.27
600995	YUNNAN WENSHAN ELECTRIC	6.30	6.18
600719	DALIAN THERMAL POWER	4.38	4.86
600011	HUANENG POWER INTERNATIONAL	5.66	5.25
600674	SICHUAN CHUANTOU ENERGY	4.22	4.10
600131	SICHUAN MINJIANG HYDROPOWER	5.02	4.96
600982	NINGBO THERMAL POWER	4.08	4.19
600979	SICHUAN GUANGAN AAA PUBLIC	4.78	4.86
1896	HENAN YUNENG	3.00	3.15

600726	HUADIAN ENERGY	<b>2.85</b>	<b>2.66</b>
600236	GUANGXI GUIGUAN ELECTRIC	<b>5.14</b>	<b>4.82</b>
600116	THREE GORGES WATER CONSERVANCY & ELECTRIC POWER	<b>5.53</b>	<b>5.18</b>
600021	SHANGHAI ELECTRIC POWER	<b>4.44</b>	<b>4.22</b>
767	SHANXI ZHANGZE ELECTRIC	<b>4.67</b>	<b>4.42</b>
37	SHENZHEN NANSHAN POWER	<b>4.83</b>	<b>4.76</b>
600292	CHONGQING JIULONG ELECTRIC	<b>3.97</b>	<b>3.88</b>
692	SHENYANG HUITIAN THERMAL POWER	<b>2.69</b>	<b>2.79</b>
958	DONGFANG THERMOELECTRIC	<b>2.71</b>	<b>2.75</b>
600502	ANHUI RESOURCES DEVELOPMENT	<b>4.47</b>	<b>4.52</b>
939	KAIDI ELECTRIC	<b>7.15</b>	<b>7.08</b>
600310	GUIDONG ELECTRIC POWER	<b>8.36</b>	<b>8.30</b>
600744	HUAYIN ELECTRIC POWER	<b>2.90</b>	<b>2.79</b>
899	JIANGXI GANNENG	<b>3.14</b>	<b>3.22</b>
600644	LESHAN ELECTRIC POWER	<b>5.25</b>	<b>5.18</b>
600027	HUADIAN POWER INTERNATIONAL	<b>2.67</b>	<b>6.90</b>
600283	QIANJIANG WATER RESOURCES	<b>5.70</b>	<b>5.65</b>
993	MINDONG ELECTRIC POWER	<b>3.05</b>	<b>3.02</b>
600900	CHINA YANGTZE POWER	<b>7.14</b>	<b>6.80</b>
600	HEBEI JIANTOU ENERGY	<b>4.49</b>	<b>4.25</b>
600578	JINGNENG THERMAL POWER	<b>4.88</b>	<b>4.82</b>
600864	SHIRBLE ELECTRIC-HEAT	<b>8.44</b>	<b>9.19</b>
601	GUANGDONG SHAONENG	<b>3.43</b>	<b>3.34</b>
600505	XICHANG ELECTRIC POWER	<b>3.56</b>	<b>3.47</b>

Source: Sina Finance

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