

● DECEMBER 2021

CHINA ENERGY POLICY NEWSLETTER

Boosting Renewable Energy as Part of China's Energy Revolution

1. China energy transition updates

China will develop a national action plan for methane emission

In November 2021, the Chinese government announced at COP26 that China plans to formulate a comprehensive and effective national action plan for methane emissions and strive to achieve remarkable results in the control and reduction of methane emissions in 2020's. The Ministry of Ecology and Environment (MEE) stated that formulating an action plan for methane emission is an important part of controlling non-carbon dioxide greenhouse gases. China will take actions from five aspects: research and investigation, standard-setting, monitoring and verification, pilot projects, and international cooperation¹:

1. **Carry out emission control research:** fully investigate the current status of methane emission control, to study and formulate effective emission reduction measures in fields such as coal, oil, and gas;
2. **Develop an emission control action plan:** establish policy, technology, and standard systems for methane emission reduction, revise the emission standards of coal-bed methane and the voluntary emission reduction mechanisms of greenhouse gas;
3. **Strengthen monitoring and verification:** carry out evaluation and tracking of methane emissions in key areas and enterprises, improve statistical systems and reporting systems, and improve data quality;
4. **Encourage demonstration and pilot projects:** encourage the local government and enterprises to build demonstration projects to promote the development of technology, equipment, and industries of methane utilization;
5. **Strengthen international cooperation:** cooperation including methane control policies, technologies, standards, monitoring and verification systems, and emission reduction technology innovation.

¹ “‘甲烷国家行动计划’如何起步，环境部列出‘五步走’”，Ministry of Ecology and Environment, 25 November 2021, accessed at <https://baijiahao.baidu.com/s?id=1717377920089027937&wfr=spider&for=pc>.

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President Xi made it clear to establish a unified national power market system

The central government recently reviewed and approved the *Guiding Opinions on Accelerating the Construction of a Unified National Power Market System*. At the meeting, President Xi emphasized the need to form a unified, open, orderly competitive, safe, efficient, and well-governed power market system, to realize the sharing and mutual aid and optimized allocation of power resources across the country.² Key objectives include:

- Accelerate the construction of a national power market and guide the coordinated operation of power markets at all levels;
- National, provincial (regional, municipal) and regional power markets should adopt unified trading rules and technical standards;
- Establish a power market mechanism that adapts to the low-carbon energy structure;
- Improve the market-oriented formation mechanism of coal power prices, and improve the cost transferring mechanism;
- Ensure that electricity prices for residents, agriculture, and public utilities are relatively stable.

MIIT releases the 14th Five-Year Plan for Industrial Green Development

The green development of China's industrial sector has made positive progress by the end of the 13th Five-Year Plan period (2020), but the country is still in the stage of in-depth development of industrialization and urbanization, facing several major problems, including the high-share of industry in economic growth, a large proportion of coal in the energy consumption, and relatively low energy efficiency. Meanwhile, the time window for China's carbon peaking and carbon neutrality is short, with tight constraints over the resources and environment, and insufficient technological research and development efforts, which increases the cost and difficulty of green development. To achieve the carbon peaking goal by 2030, the *14th Five-Year Plan for Industrial Green Development* clarified that by 2025, the green and low-carbon transition of industrial structure and production methods should see remarkable results, including the widespread application of green and low-carbon technology and equipment, a great improvement of the utilization rate of energy resources, and an all-round raise of the level of green manufacturing.³ The specific goals are as follows:

Comparison in the industrial green development of the 13th Five-Year achievements and the 14th Five-Year targets

	The 13th Five-Year Plan achievements	The 14th Five-Year targets
Energy consumption of industries above designated size */value-added	Decreased by 16%	Decrease by 13.5%
CO ₂ emissions/value-added	-	Decrease by 18%
Main pollutant emissions in key industries** /value-added	Decreased by over 20%	Decrease by 10%
Water consumption/value-added	Decreased by 40%	Decrease by 16%
Eliminate outdated production capacity	150 million tons in the iron and steel industry, and have basically withdrawn the outdated production capacity in the electrolytic aluminum and cement industries	Restrain the blind development of energy-intensive and emission-intensive projects, and withdraw outdated production capacity by the law
Recycling amount of main renewable resources	380 million tons	480 million tons
Comprehensive utilization/ utilization rate of industrial solid waste	2 billion tons	57%
Production value of green environmental protection industry	RMB 750 million	RMB 1.1 billion

Note: *Industry above designated size refers to industrial enterprises with annual main business income of more than RMB 20 million; **Key industries include iron and steel, petrochemical chemicals, non-ferrous metals, building materials, textiles, light industry, and machinery.

² “习近平：加快科技体制改革攻坚建设全国统一电力市场体系，” The Paper, 24 November 2021, accessed at https://m.thepaper.cn/baijiahao_15531500.

³ “工业和信息化部关于印发《“十四五”工业绿色发展规划》的通知，” Ministry of Industry and Information Technology, 15 November 2021, accessed at https://www.miit.gov.cn/zwgk/zcwj/wjfb/tz/art/2021/art_4ac49eddca6f43d68ed17465109b6001.html; “一图读懂《“十四五”工业绿色发展规划》，” Ministry of Industry and Information Technology, 3 December 2021, accessed at https://www.miit.gov.cn/zwgk/zcjd/art/2021/art_d4b1ecde4b35411da0bccac2cb4f49f3.html.

The Central Bank issues carbon emission reduction financing tool

In November 2021, the People's Bank of China, also known as the Central Bank, officially launched a financing tool for carbon emission reduction sectors.⁴ This is one of the State Council's requirements in the *2021 Government Work Report*. Through providing low-rate capitals, the Central Bank aims to guide financial institutes offering loans for carbon emission reduction enterprises, so that to attract more social capital to invest in this field. According to the regulation, when national financial institutes⁵ offer loans in three specific sectors including clean energy, energy saving and environmental protection, and carbon emission reduction technologies, the loan rate should be roughly equal to the loan prime rate (LPR) of the same time-length. The current one-year LPR is 3.85% and five-year LPR is 4.65%. Afterwards, financial institutes can apply for capital support that amount to 60% of the whole loan from the Central Bank, while the interest rate is as low as 1.75% for one year and it can be extended twice.

On the one hand, the interest rate of LPR (3.85%~4.65%) is very attractive to private enterprises to make investment decisions in carbon emission reduction sectors, especially to the small-to-medium size businesses, as their current five-year interest rates of loans are above 4.9%. On the other hand, the interest rate of 1.75% is also very attractive to financial institutes to borrow money from the Central Bank, encouraging them to offer loans for carbon emission reduction enterprises.

Three specific sectors under the carbon emission reduction financing tool

Clean energy	<ul style="list-style-type: none"> • Wind power, pumped storage hydropower • Generation-grid-load-storage integrated system based on large-scale wind and solar power plants, county-wide household PV • Solar, biomass, hydrogen, geothermal and marine energy utilization • Heat pump, high-efficient energy storage including electrochemical battery • Emergency reserves and dispatchable power source • Smart grid, cross-regional clean power transmission
Energy saving and environmental protection	<ul style="list-style-type: none"> • Efficiency improvement and technical retrofit in the industrial sector to adapt the new-type power system with high share of new energy
Carbon emission reduction technologies	<ul style="list-style-type: none"> • Carbon capture, storage and utilization

The latest LCOE data of China's wind power and solar PV released

The China Wind Energy Association (CWEA) announced that as of 2020, the Levelized Cost of Energy (LCOE) of China's onshore wind power has fallen to RMB 0.38/kWh, a year-on-year decrease of 10%, and a cumulative decrease of 40% over the past decade. In areas with better wind resources in the northwest, the cost can be as low as RMB 0.3/kWh, and in central and eastern and southern regions are about RMB 0.4/kWh. Solar PV LCOE fell to about RMB 0.36/kWh, a year-on-year decrease of 18%.⁶ In the same period, the feed-in tariff for coal power was RMB 0.25/kWh to RMB 0.45/kWh. The continuous decline in the cost of wind power and solar PV power has created strong conditions for the construction of large-scale wind power and solar PV bases in the future.

⁴“人民银行有关负责人就碳减排支持工具答记者问,” People's Bank of China, 8 November 2021, accessed at http://www.gov.cn/zhengce/2021-11/08/content_5649851.htm.

⁵ Above certain capital scale and approved by the People's Bank of China.

⁶ “我国可再生能源发电装机容量超10亿千瓦（新数据 新看点）,” People's Daily, 29 November 2021, accessed at <http://sn.people.com.cn/n2/2021/1129/c186331-35026686.html>.

The 14th Five-Year trends of offshore wind power development

The National Energy Administration (NEA) recently stated that China's offshore wind power now has a solid foundation for large-scale development. As one of the key areas of renewable energy in China, offshore wind power will present new development trends during the 14th Five-Year Plan period: 1) The layout of wind farms will shift from coastwise to deep-sea; 2) There will be more large-scale bases; 3) Integration of offshore wind power projects with marine farms, offshore oil and gas, seawater desalination, hydrogen energy, energy storage, and other energy or resources; 4) After the central subsidy is withdrawn, enterprises will rely more on the technical level of the industry and their operating conditions to make decisions, and give full play to the role of marketization. To this end, the government will organize the preparation of the *National Deep-Sea Offshore Wind Power Plan*, to orderly promote the pilot demonstration of deep-sea projects, actively promote the construction of offshore energy islands, and the exploration of "Power to X" such as offshore wind power hydrogen production.⁷

NDRC intends to update the pricing mechanism of medium and long-term contracts of coal

The National Development and Reform Commission (NDRC) is soliciting public opinions on the 2022 pricing mechanism of medium and long-term coal contracts.⁸ The core amendments include raising the base price, increasing the floating price reference index, and achieving full coverage of coal for power generation and heating for the first time. This aims to ensure the capacity and stability of coal supply and ease the operating pressure of coal and power enterprises. From 2016 to 2021, China's coal medium and long-term contracts have always implemented the pricing mechanism of "base price + floating price". In 2022, China will continue to implement this pricing mechanism, but the base price (5500 kcal thermal coal) will be raised from RMB 535/ton to RMB 700/ton, an increase of 31%; the floating price range will be adjusted from the original RMB 470-600/ton to RMB 550-850 /ton, the allowable fluctuation range increases.

The reference index for floating price calculation was increased from three⁹ to four, adding the comprehensive price index of the National Coal Trading Center. The floating price will be adjusted every month, selecting the final monthly price of the four indices, to determine a reference index with a weight of 25% each. For every increase/decrease of the reference index by RMB 1/ton from the base price, the medium and long-term contract price will fluctuate up/down by RMB 0.5/ton in the next month, which means that the medium and long-term price rises and falls more smoothly than market fluctuations. The NDRC will release the price on the last working day of each month after reviewing the price. In addition, the coverage of signing medium and long-term contracts has been further expanded, covering about 80% of China's total coal supply, including domestic coal used by all power generation and heating enterprises, to ensure the supply of coal for power generation and heating.

⁷ “权威声音 | 国家能源局王大鹏：海上风电是可再生能源发展的新领域，也是风电发展的重要方向，” National Energy Administration, 16 November 2021, accessed at https://www.thepaper.cn/newsDetail_forward_15417258.

⁸ “2022年煤炭中长期合同签订履约工作方案(征求意见稿),” National Development and Reform Commission, 3 December 2021, accessed at <http://www.fert.cn/news/2021/12/09/4640854974.shtml>.

⁹ Bohai-Rim Steam-Coal Price Index, CCTD Qinhuangdao Port Coal Index, and China Coastal Electricity Coal Index.

2. Policy monitoring

2021-12-08

<https://news.bjx.com.cn/html/20211208/1192301.shtml>

NEA drafts wind power retrofit and retiring rules

Administrative Measures for Retrofit, Upgrade and Retiring of Wind Farms (Draft for Comments)

The NEA encourages onshore and offshore wind power projects that have been in operation for more than 15 years to voluntarily retrofit or retire. The original project that has been in operation for less than 20 years and its total power generation hours have not yet reached the total subsidizing hours can continue to enjoy the feed-in tariff subsidies after the retrofit, the subsidy amount is implemented according to the original standard, but the annual hours subsidized is 5% of the total subsidizing hours. For example, if the total subsidizing hour of wind farm A is 40,000 hours, after the retrofit, there will be a maximum of 2,000 hours for subsidies each year.

2021-11-30

https://www.ndrc.gov.cn/xwdt/tzgg/202112/t20211208_1307105.html?code=&state=123

NDRC encourages data centers to expand green power consumption

Notice on Issuing the Implementation Plan for Implementing the Requirements on Carbon Neutrality Target and Promoting the Green and High-quality Development of New Infrastructure such as Data Centers and 5G, NDRC High-tech [2021] No.1742

The government encourages new types of infrastructure such as data centers and 5G to increase the proportion of green power through the construction of dedicated new energy transmission lines or conduct bilateral transactions, and promote the consumption of renewable energy nearby. For small or edge data centers, the government will support the large-scale promotion and application of modular hydrogen batteries and solar panels. By 2025, the power utilization efficiency and renewable energy utilization rate of data centers will be significantly improved nationwide.

2021-11-16

http://www.ggj.gov.cn/tzgg/202111/t20211119_33936.htm

The government clarifies the carbon peaking timetable for public institutions

Notice on Issuing the Implementation Plan for In-depth Green and Low-Carbon Leading Actions of Public Institutions to Promote Carbon Peaking

Public institutions¹⁰ across the country should achieve a peak carbon emission as early as 2030, and regions with better conditions should achieve a peak carbon emission before 2025 if possible. Public institutions should vigorously promote the use of solar PV, solar thermal, and new energy vehicles, and strive to increase the electrification rate. The government encourages qualified public institutions to build micro-grid systems that connect solar PV, energy storage, and charging and discharging facilities. By 2025, the energy consumption per floor area of public institutions should be reduced by 5% and carbon emissions by 7% compared to 2020; the proportion of coal consumption should be reduced to less than 13%; the solar PV coverage rate of the roof area of new buildings should reach 50%; the newly added heat pump heating (cooling) area should reach 10 million m².

¹⁰ Public institutions refer to state agencies, institutions and organizations that use fiscal funds in whole or in part.

2021-11-11

https://www.ndrc.gov.cn/xxgk/zcfb/ghxwj/202111/t20211122_1304658.html?code=&state=123

NDRC issues administrative measures for electricity sales enterprises

Notice on the Issuing the Administrative Measures for Electricity Sales Enterprises, NDRC System Reform Regulations [2021] No.1595

The government classifies the scale of assets of electricity sales enterprises and clarifies the corresponding annual electricity sales caps. Electricity sales enterprises can independently choose power exchanges at all levels to purchase electricity within the province, across provinces, and across regions through bilateral negotiations or centralized biddings. One electricity sales enterprise can sell electricity in multiple power distribution areas. With a monthly contract as the smallest unit, the user can only establish a retail service relationship with one electricity sales enterprise within a contract period. The electricity sales company can query and download the customer's historical electricity consumption information on the electricity trading platform after being authorized by the customer.