

● JANUARY 2022

CHINA ENERGY POLICY NEWSLETTER

Boosting Renewable Energy as Part of China's Energy Revolution

1. China energy transition updates

China aims to transfer from energy consumption control to carbon emissions control

The government emphasized at the Central Economic Conference held in December 2021 that the gradual withdrawal of conventional energy sources should be based on the safety and reliability of new energy replacement. Based on the national coal dominant condition, China will focus on the low-emission and efficient use of coal, the increase of new energy consumption capacity, and the optimal combination of coal and new energy. The government aims to realize the transition from dual control of energy consumption (total energy consumption and energy consumption/GDP) to dual control of carbon emissions (total carbon emissions and carbon emissions/GDP) as soon as possible. In the future, the incremental renewable energy consumption will not be included in the total energy consumption control. Meanwhile, the raw material energy consumption will also not be included, but the announcement did not specify if it refers to the incremental or total amount. Nevertheless, it will provide greater flexibility for the development of the chemical industry.¹

What does it mean that raw material energy consumption is not included in the total energy consumption control?

Energy consumption of production and manufacture can be divided into fuel energy and raw material energy consumption. **Fuel energy consumption** refers to the energy consumption of oil, coal, natural gas, and other energy products used to drive boilers and power generation; **raw material energy consumption** refers to the consumption of these energy products used for production, and since most products produce no carbon emissions, the energy consumption of the corresponding energy conversion process is not included in the total energy consumption control.

The energy consumption of raw materials mainly happens in the chemical industry, such as producing basic chemical products like fertilizers and methanol. If the products are secondary energy sources to be sold, such as for oil refining and coking, the energy consumption of these raw materials is not exempted. In the chemical industry, the energy consumption of raw materials can account for as much as 80%. With the support of the new policy, the energy consumption assessment

¹ "中央经济工作会议在北京举行 习近平李克强作重要讲话 栗战书汪洋王沪宁赵乐际韩正出席会议," Xinhua, 10 December 2021, accessed at http://www.news.cn/politics/leaders/2021-12/10/c_1128152219.htm

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level of energy-intensive chemical industries such as the coal chemical industry and petrochemical industry will be greatly reduced, creating greater development opportunities for these types of industries. But this does not mean that the development of the chemical industry will no longer be under control since there are many constraints such as energy-saving, carbon emissions, and water resources in addition to energy consumption.²

MIIT releases the 14th Five-Year Plan for Raw Material Industry Development

In 2020, the added value of China's raw material industry accounted for 27.4% of industrial enterprises above designated size, which is one of the key areas of industrial green development. During the 14th Five-Year Plan period, the government will formulate implementation plans for carbon peaking in key industries such as petrochemicals, steel, non-ferrous metals, and building materials to increase the proportion of renewable resources and clean energy. The *14th Five-Year Plan for Raw Material Industry Development* calls for the energy consumption per ton of steel to reduce by 2%, the energy consumption per ton of cement clinker to reduce by 3.7%, and the carbon emission intensity of electrolytic aluminum to reduce by 5%. Specific measures include replacement of raw materials and fuels with clean energy, replacement of coal with gas and electricity, and power generation of exhaust heat and pressure. In addition, the government encourages key industries such as steel and cement to build carbon emission statistical monitoring, verification and evaluation systems throughout the production process, and accelerate the energy-saving and low-carbon retrofit and upgrading of raw material enterprises.³

NEA clarifies key tasks for energy development in 2022

The most important task in 2022 is still to ensure energy security. In addition to continuing to take thermal power as a fundamental flexible power source, expanding the exploration of oil and gas is also of great importance as well as ensuring winter heating. Low-carbon development of energy is of second priority. As for policies, the *14th Five-Year Plan for Renewable Energy Development* has been issued and will soon be published; the *Implementation Plan of Carbon Peaking in Energy Sector*, the *14th Five-Year Plan for Modern Energy System*, as well as institutional reforms and sub-field plans will also be released.

The implementation focuses on wind power and solar PV to accelerate the progresses of: 1) The local development and consumption of wind power and solar PV in the middle, southern and eastern regions; 2) The cluster development of offshore wind power; 3) The development of wind power and solar PV bases in the Three Norths area. Recently the National Development and Reform Commission (NDRC) approved a list of wind power and solar PV bases in deserts and gobi, with a total capacity of 97.05 GW, involving 19 provinces⁴; 4) Rural distributed wind power and household solar PVs; 5) Steady development of hydropower, and orderly development of nuclear power and biomass. At the same time, to improve the flexibility of the power system, the government requires strengthening the construction of pumped storage, the flexibility retrofit of coal power units, the development of new energy storage, and the optimization of power dispatching mechanism. Researches over key technology and equipment, national power market construction, energy supervision and international cooperation will provide important supports.⁵

² “「化工」原料用能不纳入能源消费总量控制,” Central Government, 14 December 2021, accessed at <https://www.163.com/dy/article/GR6VEJSP0520MI7R.html>; “碳排放“双控”提上日程,” Energy News, 20 December 2021, accessed at <https://news.bjx.com.cn/html/20211220/1194500.shtml>.

³ “三部委关于印发“十四五”原材料工业发展规划的通知, 工信部联规〔2021〕212号,” Ministry of Industry and Information Technology, 21 December 2021, accessed at http://www.gov.cn/zhengce/zhengceku/2021-12/29/content_5665166.htm.

⁴ “97.05GW! 第一批大型风光基地建设项目确定,” National Development and Reform Commission, National Energy Administration, 25 December 2021, accessed at <https://www.163.com/dy/article/GS22D88G05509P99.html>.

⁵ “2022年全国能源工作会议在京召开,” National Energy Administration, 24 December 2021, accessed at http://www.nea.gov.cn/2021-12/24/c_1310391378.htm.

China's first distributed offshore wind power project is connected to the grid

At the end of December 2021, China's first distributed offshore wind power project was connected to the grid in Pingtan, Fujian. The project consists of five 6.7 MW wind turbines, which are mainly used for the lighting of the Pingtan Straits Rail-cum-Road Bridge, which has been fully opened to traffic at the end of 2020⁶. China defines distributed wind power as wind power projects located in the load center and connected to the existing local grid of 110 kV or 66 kV below, with a total installed capacity of less than 50 MW.

⁶ “中国首个海上分散式风电项目建成并网运行!,” Goldwind Technology, 27 December 2021, accessed at <https://news.bjx.com.cn/html/20211227/1195929.shtml>.

2. China national carbon market finished debut year 2021 with upbeat results

**The contents are written and authorized to publish by the Carbon Research Team of Refinitiv*

On December 31, 2021, the Ministry of Ecology and Environment (MEE) officially announced the first compliance period of China national carbon market has successfully completed.⁷ The compliance rate is 99.5% based on covered emissions. This means that majority of the 2,162 power sector enterprises in the scheme have surrendered allowances before the deadline, meeting their compliance obligation for the 2019-2020 period.

The market settled at 54.22 RMB/t on the last trading session in 2021, 13% increase compared with the first trading day on 16 July. The weighted average price of CEA (China Emission Allowance) stood at 43.85 RMB/t including both listed and OTC (over-the-counter) trades. The MEE did not disclose official data on emissions and allocation, but a total of 179 million tonnes were announced to be transacted over the 114 trading days in 2021, including 148 million tonnes OTC trades.

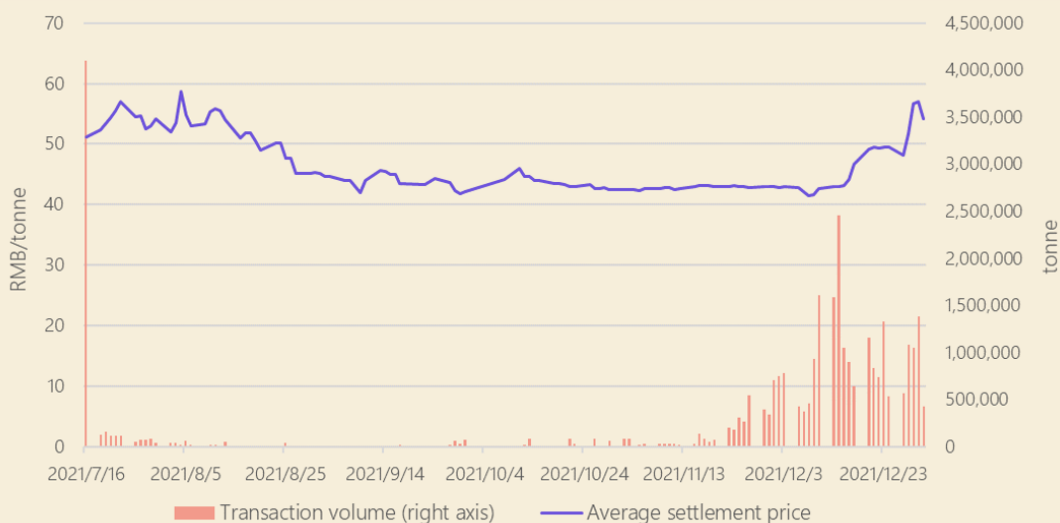
” *“The very high compliance rate in the first compliance period of China national carbon market beat expectations, the national ETS will make enterprises more aware of carbon costs and conscious of reducing emissions, help China to achieve its carbon peak and neutrality pledge.”* ”

Although it is witnessed that over 70% of total transaction volume was achieved in the last month before the compliance deadline and the price raised up by 25%, the settlement price of the last trading session did not increase significantly compared with the first day. This reflects that the total issued allowances in the first compliance period are generous and result in slight surplus. China’s regulators are now discussing whether to tighten the scheme further and reducing the benchmarks significantly in 2022, in despite of this, there is still some clouds on the horizon. As there is lack of clarity over the more strengthened ETS regulation, 2021 allocation plan and benchmark, restart of CCER scheme etc.

Some key figures

- China national carbon market launched in January 2021, covering power sector only at present. There are 2,162 power sector enterprises in the scheme’s first compliance period for 2019 and 2020. Yearly emissions are around 4.5 billion tonnes, largest in the world in terms of coverage.
- The weighted average price of allowance CEA in 2021 is 43.85 RMB/t, including both listed and OTC trades. Separately, the average CEA price for listed trades was 47.16 RMB/t, and 41.95 RMB/t for OTC block trades.

China national carbon market allowance daily closing price and trading volumes of listed trades



Source: MEE and Refinitiv, accessed in January 2022

References

⁷ “全国碳市场第一个履约周期顺利结束”. Ministry of Ecology and Environment, 31 December 2021, accessed at http://mee.gov.cn/ywgz/ydqhbh/wsqtkz/202112/t20211231_965906.shtml.

3. Policy monitoring

2021-12-21

http://zfxgk.nea.gov.cn/2021-12/21/c_1310391369.htm

NEA gradually improves the regulations of ancillary services

Notice on Issuing the Administrative Regulations on Power Grid Connection and Operation, NEA Development Supervision [2021] No.60

Notice on Issuing the Administrative Measures on Power System Ancillary Services, NEA Development Supervision [2021] No.61

2021-12-21

http://zfxgk.nea.gov.cn/2021-12/21/c_1310391161.htm

The National Energy Administration (NEA) updated the *Administrative Regulations on Power Grid Connection and Operation* and the *Administrative Measures on Power System Ancillary Services* issued in 2006. The revised edition expands the scope of ancillary service providers, adding new energy, new-type energy storage, and load-side grid-connected entities. Power users can participate in ancillary services independently or through aggregators or virtual power plants (VPP); the variety of ancillary services increases to include rotational inertia, ramp-up, generator and load interruption for system stability control; compensation costs are shared by all grid-connected entities, and non-market-oriented power users will be gradually included in the future. It is initially considered to appoint regional energy supervision bureaus of NEA to formulate a market-oriented pricing mechanism in accordance with local conditions, and report it to the NEA before implementation.⁸

2021-12-03

http://zfxgk.nea.gov.cn/2021-12/03/c_1310383862.htm

NEA officially releases monitoring measures for solar PV plants

Notice on the Issuance of the Administrative Measures of Solar PV Plant Consumption Monitoring and Statistics, NEA New Energy Development Regulations [2021] No.57

Compared with the consultation draft issued in August 2021 (see the September 2021 newsletter for content), apart from basic data and real-time operating data of solar PV power plants, this final plan adds forecast data such as predicted power and available power, into monitoring indicators. The final plan also clarified the time node of each report and feedback section from the power plant to power grid companies and ultimately to the national monitoring platform/NEA. Power grid enterprises should keep relevant data for more than three years for spot checks.

2021-11-27

<http://www.sasac.gov.cn/n2588035/n16549643/n16549900/n16550143/c22499825/content.html>

SASAC issues guidance on carbon neutrality of central SOEs

Notice on Issuing the Guiding Opinions on Promoting the High-Quality Development and Achieving Carbon Peaking and Carbon Neutrality of Central State-owned Enterprises, SASAC Development and Technology Innovation [2021] No. 93

Central state-owned enterprises (SOEs)⁹ occupy an important position in industries related to the national security and national economy and are also key units of carbon emissions. From 2021-2025, the government requires central SOEs to reduce their energy consumption per unit (i.e. RMB 10,000) of output value by 15% and to reduce their carbon emissions per unit of output value by 18%. The proportion of renewable energy in total installed power capacity should be above 50%. By 2030, the carbon emission intensity will be reduced by more than 65% compared with 2005, which is the same as the national target, and the overall CO₂ emission will reach its peak. By 2060, central SOEs should establish a green, low-carbon, and circular development system in an all-around way.

⁸ “国家能源局市场监管司负责同志就《电力并网运行管理规定》《电力辅助服务管理办法》答记者问,” National Energy Administration, 24 December 2021, accessed at http://www.nea.gov.cn/2021-12/24/c_1310391334.htm.

⁹ Central state-owned enterprises are SOE directly under the State-owned Assets Supervision and Administration Commission of the State Council or central ministries and commissions. They are directly funded by the central government and their profits are turned over to the central finance. Their investment activities directly serve the national strategy.