

● JUNE 2021

# CHINA ENERGY POLICY NEWSLETTER

Boosting Renewable Energy as Part of China's Energy Revolution

## 1. China energy transition updates

### China has reached the "13th Five-Year" carbon emission reduction target

The Ministry of Ecology and Environment (MEE) recently announced that during the 13th Five-Year Plan period (2016-2020), China's carbon emission intensity (CO<sub>2</sub> emissions/GDP) dropped by 18.8%, exceeding the 18% binding target. China's non-fossil energy accounted for 15.9% of the primary energy consumption, thus exceeding the 15% target.<sup>1</sup> For the 14th Five-Year Plan period (2021-2025), the Chinese government has proposed reducing the carbon emission intensity by 18%<sup>2</sup> and further increasing the proportion of non-fossil energy in the primary energy consumption from 15% to app. 20%<sup>3</sup>.

### The NDRC released the early warning results of the energy consumption dual-control process

*The 2021 Government Work Plan* issued by the State Council in March 2021 emphasises that the energy sector must improve the dual-control mechanism for energy consumption. Accordingly, the National Development and Reform Commission (NDRC) now issues a quarterly early warning results in order to control total energy consumption and energy intensity decline in all provinces (except Tibet) starting from 2021, aiming to monitor and supervise the provincial dual-control work. The results are divided into Level I, Level II, and Level III, represented by red, yellow, and green. The red or yellow marks for a province mean that the current dual-control work carried out by the province is delayed and needs further effective measures to ensure the completion of the 2021 target. Yet, the evaluation criteria are not mentioned in the policy.

<sup>1</sup> “生态环境部：中国已超额完成2020年碳减排目标,” Ministry of Ecology and Environment, 4 June 2021, accessed at [https://www.guancha.cn/politics/2021\\_06\\_04\\_593196.shtml](https://www.guancha.cn/politics/2021_06_04_593196.shtml).

<sup>2</sup> “2021年政府工作报告(全文),” State Council, 5 March 2021, accessed at <http://www.china-cer.com.cn/guwen/2021021911402.html>.

<sup>3</sup> “国家能源局关于2021年风电、光伏发电开发建设有关事项的通知,” National Energy Administration, 11 May 2021, accessed at [http://www.gov.cn/zhengce/zhengceku/2021-05/27/content\\_5612874.htm](http://www.gov.cn/zhengce/zhengceku/2021-05/27/content_5612874.htm).

If you would like to subscribe to the newsletter, please send your full name, organization and title to [china@ens.dk](mailto:china@ens.dk)

In the first regional early warning results released by the NDRC for the first quarter of 2021, North China does better in the dual-control progress. The Beijing-Tianjin-Hebei region does well overall, while the eastern and southern regions perform relatively poorly. The dual-control progress in the four provinces of Zhejiang, Guangdong, Guangxi, and Yunnan are all in red; the northwest shows slower progress in total energy consumption control.<sup>4</sup>

#### Early warning results of the completion of the dual control targets for energy consumption in 2021 Q1

Region	Province	Total energy consumption control	Energy intensity control	Region	Province	Total energy consumption control	Energy intensity control
North	IMAR	Yellow	Green	Central	Henan	Yellow	Green
	Shanxi	Yellow	Green		Hubei	Green	Red
	Hebei	Green	Green		Hunan	Green	Green
	Tianjin	Green	Green		Chongqing	Green	Green
	Beijing	Green	Green		Jiangxi	Yellow	Yellow
	Shandong	Green	Green		Sichuan	Yellow	Green
Northwest	Xinjiang	Red	Green	East	Jiangsu	Yellow	Red
	Shaanxi	Yellow	Green		Anhui	Yellow	Yellow
	Ningxia	Red	Yellow		Zhejiang	Red	Red
	Gansu	Yellow	Green		Fujian	Yellow	Yellow
	Qinghai	Red	Yellow		Shanghai	Green	Green
Northeast	Liaoning	Yellow	Green	South	Guangdong	Red	Red
	Heilongjiang	Yellow	Green		Guangxi	Red	Red
	Jilin	Green	Green		Hainan	Green	Green
					Guizhou	Yellow	Yellow
			Yunnan		Red	Red	

Source: National Development and Reform Commission (NDRC), June 2021

### NEA publishes renewable power consumption targets for each province in 2021 and 2022

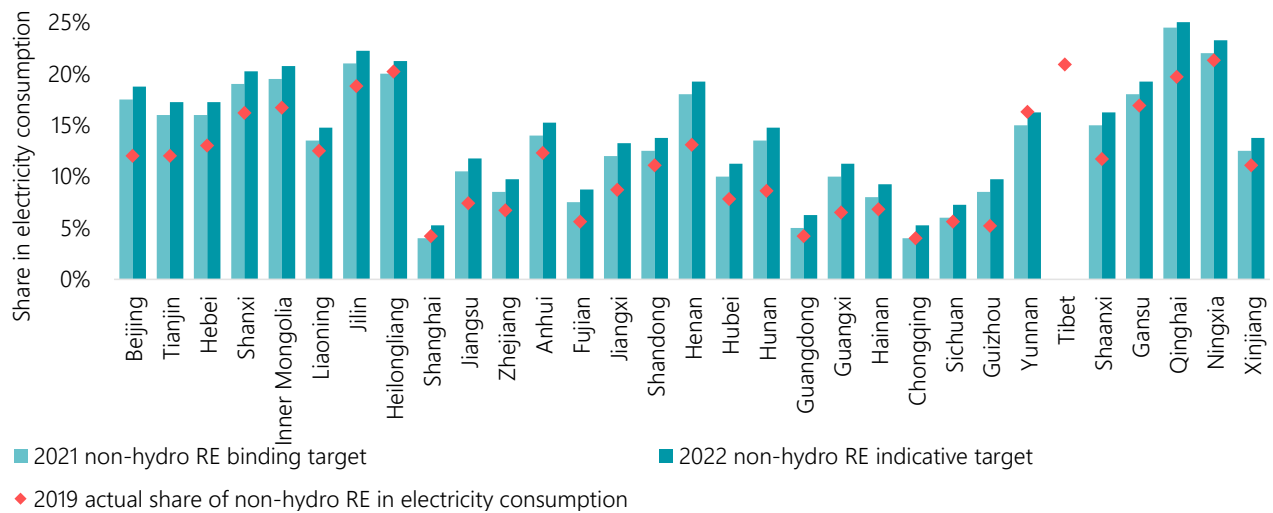
After soliciting suggestions to formulate 2021-2030 renewable power consumption targets, the National Energy Administration (NEA) has officially released the consumption targets for 2021 and 2022.<sup>5</sup> The issuance of this policy means that the provinces are to refer to these goals to determine the installed capacity of their new wind power and solar PV projects in 2021. Furthermore, the government will update the consumption targets regularly every year and release indicators for the current year and the following year. The indicators in the current year are binding targets, and those for the next year are indicative targets. Therefore, provinces can carry out project planning in advance. On the premise that the 2025 consumption target can be completed, from 2021 to 2024, the unfulfilled amount can be accumulated to the next year if the current year's consumption target is not met, which increases the flexibility of policy implementation.

As early as 2019, Yunnan has completed the 2022 indicative target of non-hydro renewable power consumption, while Heilongjiang, Shanghai and Chongqing have achieved the binding non-hydro renewable power consumption target of 2021. In comparison, the consumption in the Beijing-Tianjin-Hebei region, Henan, Hunan and Qinghai in 2019 is still about 5 percentage points behind the binding target of 2021. Nevertheless, according to the interpretation of the Energy Research Institute, National Development and Reform Commission (ERI of NDRC), the government determines the 2021 binding targets and 2022 indicative targets by considering the current renewable energy development status of each province, thus it is not difficult to complete both of them. However, the difference between the non-hydro 2021 binding target and the 2022 indicative target is the same for each province (i.e. 1.25 percentage points), meaning some of the provinces required to give bigger efforts. We believe that trading of surplus quotas and green certificates will pay effective roles in it.

<sup>4</sup> “关于印发《各地区2021年一季度能耗双控目标完成情况晴雨表》的通知,” National Development and Reform Commission, 24 May 2021, accessed at [https://www.ndrc.gov.cn/xwdt/tzgg/202106/t20210603\\_1282536.html](https://www.ndrc.gov.cn/xwdt/tzgg/202106/t20210603_1282536.html).

<sup>5</sup> “国家发展改革委 国家能源局关于2021年可再生能源电力消纳责任权重及有关事项的通知,” National Development and Reform Commission, National Energy Administration, 21 May 2021, accessed at [http://www.gov.cn/zhengce/zhengceku/2021-05/26/content\\_5612441.htm](http://www.gov.cn/zhengce/zhengceku/2021-05/26/content_5612441.htm).

## Comparison of 2019 actual non-hydro renewable power consumption with 2021 binding targets and 2022 indicative targets



Source: National Energy Administration (NEA), June 2021

## NEA determines the official wind power and solar PV project construction rules in 2021

The official document holds most of the content of the draft for comments, the main content is as follows, among which the new content is in bold font<sup>6</sup>:

- Wind power and PV aims to account for about 11% of the total electricity consumption in 2021, **and NEA will increase the target annually**;
- Newly provincial approved installed capacity and grid-connected capacity will be determined based on the non-hydro renewable power consumption target issued by NEA;
- Guaranteed grid connection capacity: wind power and PV subsidy-free projects, projects subsidised via tenders, and subsidised projects which voluntarily opt to become subsidy-free in 2019 and 2020 (so-called stock projects) will automatically be involved without tendering, **it has a total capacity of around 90 GW**; the remaining guaranteed capacity quota will be new projects that determined through tenders;
- The market-oriented capacity: projects that exceed the guaranteed capacity should be connected to the grid under the premise of sufficient dispatchable power sources and loads, **including newly added pumped storage, CSP with heat storage facility, flexible thermal power, energy storage and demand-side response**;
- Household solar PV projects will still receive subsidies in 2021, **and the total subsidising budget is RMB 500 million**.

There is, however, a significant amendment to this policy. In the draft for comments, stock projects must be connected to the grid before the end of 2021 to obtain guaranteed grid connection capacity quotas. That is, to receive subsidies or enjoy the incentives for subsidy-free projects (e.g. a 20-year contract with a fixed price). In the official document, it clarifies that the projects delayed are able to receive the guaranteed grid connection capacity quotas of the following years depending on the actual year of grid connection. It implies that stock projects have gained longer construction time.

<sup>6</sup> “国家能源局关于2021年风电、光伏发电开发建设有关事项的通知,” National Energy Administration, 11 May 2021, accessed at [http://www.gov.cn/zhengce/zhengceku/2021-05/27/content\\_5612874.htm](http://www.gov.cn/zhengce/zhengceku/2021-05/27/content_5612874.htm).

## NDRC publishes the 2021 feed-in tariff policies for new energy

From 1 August, 2021, the newly filed (i.e. approved) utility-scale solar PV, distributed commercial and industrial solar PV, and newly approved onshore wind power projects will no longer receive the national feed-in tariff (FiT) subsidies. The FiT will be the local coal power baseline FiT, but projects are voluntarily opt to participate power markets and receive a market price instead. While for newly filed and approved offshore wind power and CSP projects, provincial energy authorities are responsible to determine the FiTs which are no less than the local coal power baseline FiTs, and the exceeded part will be paid from the provincial finance. In addition, a tendering process is encouraged.<sup>7</sup>

Professor Shi Jingli from the ERI of NDRC has published a short analysis.<sup>8</sup> The new FiT policy reflects very clear information about the pricing mechanism of different renewable power generation technologies, providing project developers a stable expectation on revenue. Although wind power and solar PV except household PV have all become national subsidy-free since 2021, **for a new project no matter classified under the guaranteed grid connection capacity or market-oriented capacity, it is able to receive a fixed local coal power baseline FiT without tendering for a certain hour of output.** Therefore, it is easy to evaluate project-based Financial Internal Rate of Return (FIRR) and help project developers to make new investment decisions. Currently the FIRR is in average 9% for wind power and 8% for solar PV projects.

In addition, the NDRC and NEA intensively published three major renewable power policies within a month. Of which the renewable power consumption targets determine the minimum capacity expansion limit by province; the wind power and solar PV construction rules propose clear processes to determine specific projects; and the pricing policy provides clear price signal to project developers in order to attract investment. These policies interact with each other and establish a comprehensive policy system to support the sustainable development of wind power and solar PV during the subsidy-free era.

## CSP will become an important peak-shaving power supply in Northwest China

China has carried out its first batch of CSP pilots during the 13th Five-Year Plan period. By 2020, the country has installed 520 MW of CSP projects. In the next step, the NEA will continue to support CSP expansion of a certain scale in combination with many wind power and solar PV bases in Northwest China because the region is lacking flexible resources such as pumped storage and gas power. Therefore, CSP will participate in power system peak shaving as a flexible resource to maintain the stability of grid operation. At present, the initial cost of CSP is still relatively high, and the central government will no longer grant FiT subsidies for CSP projects approved from 2020. Thus, the government expects CSPs to participate in the spot power market and ancillary service market to obtain additional benefits in the future.<sup>9</sup>

## China's first floating offshore wind turbine rolls off the assembly line

On 26 May, 2021, China completed its first floating offshore wind turbine with 100% independent intellectual property rights. It is jointly developed and manufactured by the Three Gorges Cooperation and the Mingyang Group, with a stand-alone capacity of 5,500 kW and a blade diameter of 158 meters. It stands on a semi-submersible floating base, being able to carry 17-level typhoons. The unit can generate 5,500 kWh per hour under full-load operation and supply power to 30,000 households every year. This lays a solid foundation for the scaled-up and cost-effective development of China's deep-sea offshore wind power in the future.<sup>10</sup>

<sup>7</sup> “国家发展改革委关于2021年新能源上网电价政策有关事项的通知，发改价格〔2021〕833号”，National Development and Reform Commission, 7 June 2021, accessed at [https://www.ndrc.gov.cn/xxgk/zcfb/tz/202106/t20210611\\_1283088.html](https://www.ndrc.gov.cn/xxgk/zcfb/tz/202106/t20210611_1283088.html).

<sup>8</sup> Shi Jingli, “时璟丽：2021年风光电价政策：稳定行业收益预期 支持绿电加快发展”，Energy Research Institute of the National Development and Reform Commission, 11 June 2021, accessed at [https://www.sohu.com/a/471684400\\_418320](https://www.sohu.com/a/471684400_418320).

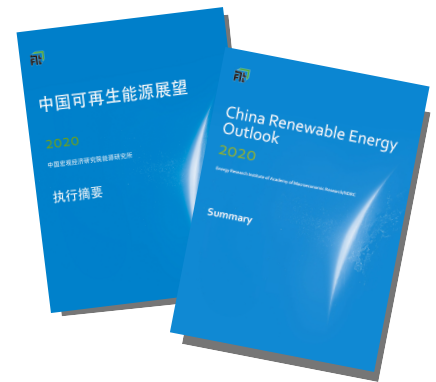
<sup>9</sup> “权威声音 | 国家能源局邢翼腾：近期有地方提出拟开展光热与光伏、风电等新能源打捆联合开发示范性项目”，National Energy Administration, 14 May 2021, accessed at [https://www.thepaper.cn/newsDetail\\_forward\\_12690121](https://www.thepaper.cn/newsDetail_forward_12690121).

<sup>10</sup> “我国首个漂浮式海上风电机组成功下线！”，China Three Gorges Renewables, 28 May 2021, accessed at <https://www.ne21.com/news/show-161690.html>.

# It is possible to reach the “30-60 carbon targets” – China Renewable Energy Outlook 2020

## CREO will upgrade to CETO from 2021

China Renewable Energy Outlook 2020 (CREO 2020) is the fifth annual outlook from the Energy Research Institute, Development and Reform Commission (ERI of NDRC). The focus of CREO 2020 on a long-term low-carbon vision has become even more topical to achieve the “30-60 carbon targets”. Even though these targets are challenging, our analyses show that it is possible to reach the targets and that a low-carbon strategy is the only feasible way to ensure sustainable economic growth for China in the future. CREO 2020 is the latest outlook that focuses on renewable energy. The [English](#) summary report is ready for download and the Chinese version will be released separately. From 2021, the ERI of NDRC will prepare comprehensive China Energy Transformation Outlooks (CETOs).



## The pathway to carbon neutrality in 2060

The scenarios in CREO 2020 comprise two development pathways. The Stated Policies scenario (SPS) expresses firm implementation of the announced energy sector and related policies. The Below 2 °C scenario (B2D) shows how China can build an energy system for the ecological civilisation. The scenarios show that it is possible to have a CO<sub>2</sub> peak before 2030 for the Chinese energy sector. In the B2D scenario, energy-related CO<sub>2</sub> emissions peak just before 2025, highlighting the importance of significant transformation during the 14th Five-Year-Plan period. The main driver for the B2D scenario is a hard target for energy-related CO<sub>2</sub> emissions reduction implemented by a strategy with **energy efficiency**, **renewable electricity**, **electrification** and **sectoral transformation** at the core.

## Primary energy demand peak in 2030

The total primary energy demand will peak in 2030 in both scenarios, with a lower peak and a steeper decrease in the B2D scenario. In both scenarios, non-fossil fuels and natural gas gradually substitute coal from 2020. After 2025, oil consumption starts declining. Natural gas peaks in 2040, with a slight decrease towards 2050. Wind and solar energy play a more prominent role in the B2D scenario.

## The energy consumption control decouples energy demand from economic growth

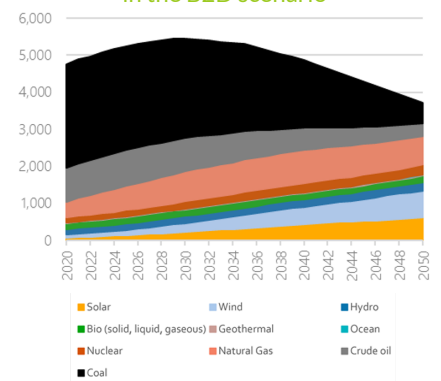
The final energy consumption in the B2D scenario will peak at 3,971 Mtce around 2030, with a very flat peak, then decreasing smoothly. It drops at a rate of 0.4% per year in average from 2020 to 2050, while GDP grows by 4.5% annually. Meanwhile, the final energy consumption structure is changed due to the economic reform process in China. The share of industrial energy consumption drops from 58% in 2020 to 41% in 2050. Several drivers cause the decoupling:

- The economic reform in China will move economic activity from heavy industry towards high tech industry and services that have much lower energy consumption per added value;
- The shift from direct fuel combusting to the use of electricity will increase the energy efficiency in the end-use sectors significantly (see below for details on electrification);
- Focus on energy efficiency and efficiency gains from replacing old with new equipment will lower energy consumption in different sectors, especially in the industry sector.

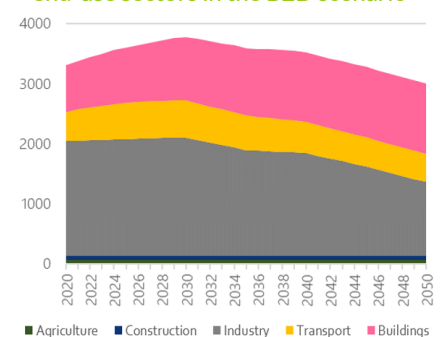
Energy sector CO<sub>2</sub> emissions in the CREO 2020 scenarios



Total primary energy demand (Mtce) in the B2D scenario



Energy consumption (Mtce) in the end-use sectors in the B2D scenario



## Solar and wind power makes the power sector green and clean

Coal-based power production is gradually phased out and replaced by renewable energy, mainly wind power and solar PV. By 2030, the B2D scenario has 1,860 GW wind and solar power capacity installed, which is higher than the targeted 1,200 GW. This is mainly because wind and solar in China are cost-competitive with fossil generating sources already, and are estimated to be cheaper than coal power in the near future (with and without CCS), even with the most conservative assumptions regarding their annual full-load hours. The share of renewables in power production increases from nearly 30% in 2020 to 88% in 2050 in the B2D scenario.

## Electrification strategy decreases coal and oil usage in end-use sectors

With the deepening of industrial electrification (especially in the iron industry) and the promotion of electric vehicles, electricity consumption will increase substantially. In 2050, the general electrification rate in the end-use sectors reaches 68% in the B2D scenario.



**Industry:** The electrification rate (share of electricity of the total final energy consumption) will increase from around 27% in 2020 to 52% in 2050 in the B2D scenario; the most rapid electrification will happen in the subsectors including ferrous metals, non-ferrous metals, chemicals, machinery manufacturing, food and paper;



**Transport:** The electrification rate will grow from 3% in 2020 to 39% in 2050 in the B2D scenario; electric vehicles and plug-in hybrid vehicles will be the main route, of which 450 – 490 million EVs (including passenger and freight) are expected on the road by 2050;



**Building:** The electrification rate will grow from 35% in 2020 to 60% in 2050.

## Regulation and reforms can support the energy transformation

The scenario analyses show that it is technically feasible and beneficial to have a genuine transformation of the Chinese energy sector. However, the energy transformation does not happen by itself. A dedicated policy effort is necessary to encourage change and remove barriers to implementation.

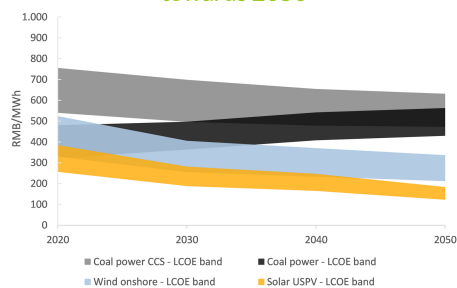
**01 Power markets as the key driver for power system transformation and RE integration.** Establishing efficient, transparent and liquid short-term power markets with clear price signals is fundamental for enhancing flexibility in the power system, easing the integration of VRE.

**02 Lower risk for green investments will boost the deployment of renewables.** Support schemes like feed-in-premium or contracts for differences (CfD) might be necessary for a period for technologies like offshore wind and concentrated solar power (CSP), while power purchase agreements (PPA) would be a risk minimising tool for more mature technologies and these instruments must be developed in line with the power market setup. *In May 2021, the NDRC and NEA jointly issued the policy "Notice to Further Accomplish the Work Relevant to Spot Power Market Construction," reflecting this suggestion. It clearly encourages new renewable energy projects to sign minimum of 20-year long-term contracts with power companies and determine a power price through negotiations.*

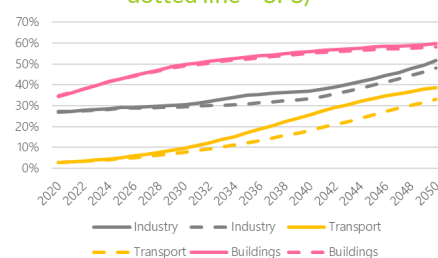
**03 Control measures to guide the transformation in the right direction.** At the level of policy design, the Chinese government has continuously formulated plans and regulations focusing on structural energy reform, carbon emission reduction and air pollution control.

- Mandatory renewable power consumption mechanism - to realise that all provinces will bear the responsibility for the development and consumption of renewable power equally by 2030;
- Total coal consumption control - to decrease the share of coal in its overall energy mix and decrease the dominant role of coal in electricity generation;
- Air pollution and control explicit policies - control major air pollutant emissions such as SO<sub>2</sub> and NO<sub>x</sub>, as well as reduce the concentration of PM 2.5 and number of heavily polluted days, especially in key regions.

LCOE by fuel in China from 2015 towards 2050



Electrification rate development for key end-use sectors (solid line = B2D, dotted line = SPS)



## 4. Policy monitoring

2021-05-31

[http://www.mee.gov.cn/xxgk2018/xxgk/xxgk03/202105/t20210531\\_835481.html](http://www.mee.gov.cn/xxgk2018/xxgk/xxgk03/202105/t20210531_835481.html)

### The government encourages strengthening the green level of the free trade zone

*Guiding Opinions on Strengthening Ecological Environment Protection in Pilot Free Trade Zones and Promoting High-quality Development, NEA General [2021] No. 44*

China has established 21 pilot free trade zones, covering all provinces in the Beijing-Tianjin-Hebei region and the Yangtze River Delta. Together with eight ministries and commissions, the MEE issued a document to encourage coal reduction and substitution actions in the free trade zone, prioritise the use of natural gas and non-fossil energy to meet new energy demands, and actively participate in carbon emissions trading. The government encourages the following applications: 1) Power-Heat-Cooling-Gas integrated energy supply projects; 2) Industrialisation and scaling up of new-type energy storage demonstrations; 3) Green supply pilots that integrate natural gas, energy storage, hydrogen energy and fast charging; 4) Large-scale, full-industry chain carbon capture, utilisation and storage (CCUS) demonstrations; 5) New energy vehicles, electric and natural gas-powered ships; 6) Building integrated PV (BIPV).

2021-05-31

[http://www.mee.gov.cn/xxgk2018/xxgk/xxgk03/202105/t20210531\\_835511.html](http://www.mee.gov.cn/xxgk2018/xxgk/xxgk03/202105/t20210531_835511.html)

### MEE incorporates carbon emission impact assessment into EIA

*Guiding Opinions on Strengthening the Prevention and Control of the Source of the Ecological Environment of Energy-Intensive and Emission-Intensive Projects, MEE Environmental Impact Assessment [2021] No. 45*

To promote the implementation of the carbon peak action plans for energy-intensive and carbon-intensive industries, MEE requires to adding the content of carbon emission impact into their environmental impact assessment (EIA). The evaluation agency should carry out identification of pollutants and carbon emissions sources, the accounting for sources intensity (i.e. discharged by time period), the feasibility study of pollution and carbon emissions reduction measures, and the comparison of alternatives, and proposal of an optimal plan for coordinated control.

2021-05-24

[http://www.gov.cn/zhengce/zhengceku/2021-05/26/content\\_5612405.htm](http://www.gov.cn/zhengce/zhengceku/2021-05/26/content_5612405.htm)

### NDRC encourages the construction of data centers supplied by green electricity

*Notice on Issuing the Implementation Plan for the Computing Power Hub of the Collaborative Innovation System of the National Integrated Big Data Center, NDRC Hi-Tech [2021] No. 709*

The annual electricity consumption of China's data centers has accounted for 2% of the total electricity consumption. At present, some western regions are endowed with renewable energy resources but limited by the capacity and cost of transmission channels, so that the inter-regional power transmission capacity is limited. Therefore, the NDRC encourages establishing data center clusters that can meet non-real-time computing requirements in provinces with sizeable green power potential such as Guizhou, Inner Mongolia, Gansu, and Ningxia. Data centers can increase local renewable power consumption through market-oriented transactions, direct purchase of electricity, and the construction of distributed power sources. The cascade utilisation of power batteries can be used as energy storage and backup power devices. In addition, the government hopes to incorporate renewable energy utilisation indicators into the energy-saving evaluation standards for data centers as soon as possible.

2021-05-20

[https://www.ndrc.gov.cn/hdjl/yjqz/202105/t20210520\\_1280320\\_ext.html](https://www.ndrc.gov.cn/hdjl/yjqz/202105/t20210520_1280320_ext.html)

## NDRC exploring new energy vehicles to participate in the spot power market

*Announcement on the Public Solicitation of Opinions on Further Improving the Guarantee Capability of the Charging Infrastructure Service (Draft for Solicitation of Comments)*

The government solicits social opinions on the development of V2G pilots, fast charging networks for electric vehicles, and battery swap applications. The government will explore the implementation path for new energy vehicles to participate in the spot power market, study and improve the trading and dispatching mechanism of new energy vehicle consuming, charging and discharging of green power, and strengthen the technological innovation and pilot application of the "PV-storage-charge-discharge" technology. Furthermore, China will strive to achieve no less than 80% coverage of fast charging facilities in highway service stations in the national ecological civilisation pilot zones<sup>1</sup> and key regions for air pollution prevention and control<sup>2</sup> by 2025 and 60% and above in other areas. The policy also emphasises the need to support the construction and layout of dedicated swap stations around short-distance, frequent-use, and heavy-duty scenarios such as mines, ports, and urban transshipment.

2021-05-18

<https://zfxgk.ndrc.gov.cn/web/iteminfo.jsp?id=18124>

## NDRC determines the energy price reform plan during 14th Five-Year period

*Notice on the Action Plan for Deepening the Reform of the Price Mechanism During the 14th Five-Year Plan Period, NDRC Price [2021] No.689*

Key tasks include continuing advancing reform of power transmission and distribution (T&D) prices, continuous deepening of the market-oriented reform of feed-in tariffs, improving price formation mechanism for wind power, solar PV, and pumped storage and establishing a new-type energy storage pricing mechanism; improving green electricity price policies including differential electricity prices and tiered electricity prices for energy-intensive and carbon-intensive industrial consumers; steadily promoting reform of oil and natural gas prices, adapt to the development direction of "a unified network in the whole country", and improving the price formation mechanism of natural gas pipeline utilisation.

2021-04-29

[https://www.ndrc.gov.cn/xwdt/tzgg/202105/t20210510\\_1279501\\_ext.html](https://www.ndrc.gov.cn/xwdt/tzgg/202105/t20210510_1279501_ext.html)

## NDRC to continue reduction on general industrial and commercial electricity prices

*Notice on the Key Work of Cost Reduction in 2021, NDRC Operation [2021] No.602*

The government is ready to reduce the energy cost of enterprises in 2021. Specific measures include a smooth implementation of the newly approved T&D prices and retailing prices in 2021, further targeting the large increase in end-use electricity prices, and continuing to promote the reduction of general industrial and commercial electricity prices. At the same time, the government aims to continuously facilitate power market reform, allowing all manufacturing enterprises to participate in market-oriented electricity transactions.

<sup>1</sup> Including Fujian, Jiangxi and Guizhou province.

<sup>2</sup> Including Beijing-Tianjin-Hebei and surrounding areas, the Yangtze River Delta and the Fen-Wei River Plain.