OCTOBER 2024

CHINA ENERGY POLICY

NEWSLETTER

China Energy Transformation Programme

1. China energy transition updates

The government reviews the *Energy Law (Draft)* for the second time

Revising the *Energy Law* is one of the key legislative tasks of the Chinese government in 2024. In April and September 2024, the Standing Committee of the National People's Congress reviewed the *Energy Law (Draft)*, respectively. The *Energy Law (Draft II)* adds new regulations on new energy development, new-type power system construction, power grid development, and green energy consumption, further strengthening the legally binding force of low-carbon energy transition and refining the content. [1]

1. Adding the *Constitution* as the legislative basis for the *Energy Law*;
2. Accelerating the establishment of a carbon emissions dual-control system, adding energy users' obligations to fulfil energy conservation and participate in green energy consumption by the *Law*;
3. Promoting safe and reliable substitution of non-fossil energy, adding to increase the proportion of non-fossil energy consumption;
4. Adding requirements for the development and utilisation of new energy:
   - ✓ Utility-scale and distributed wind and solar power projects will be developed in parallel, offshore wind power will be developed in an orderly manner, and CSP will be actively developed;
   - ✓ Rationally develop biomass power, biomass heating, and biogas;
   - ✓ Promote the large-scale development of ocean energy and develop geothermal energy according to local conditions;
   - ✓ Actively and orderly promote the development and utilisation of hydrogen energy.

[1] "能源法草案二审稿进一步促进能源绿色低碳转型," the National People's Congress, 10 September 2024, accessed at http://www.npc.gov.cn/npc/c1773/c1848/c21114/nyflf/nyflf003/202409/t20240911_439324.html; "能源法草案二审稿进一步促进能源绿色低碳转型 增加规定风、光、氢能等新能源开发利用的内容," the National People's Congress, 10 September 2024, accessed at https://mp.weixin.qq.com/s/HjFfRcIZxq2CkSe_kARFVg.

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5. Adding the acceleration of the construction of the new-type power system and strengthening the coordinated construction of power sources and power grids:
   - ✓ Promote the intelligent retrofit of power grid infrastructure and the construction of smart microgrids;
   - ✓ Improve the power grid's ability to accept, configure, and regulate clean energy.
6. Adding the provisions for the development of energy storage:
   - ✓ Actively and orderly develop pumped hydropower;
   - ✓ Promote the high-quality development of new-type energy storage and give play to the flexible role of various types of energy storage technologies.
7. To promote green energy consumption, adding the construction of green energy consumption promotion mechanisms through implementing green electricity certificates (GECs) and other policies.

China will strengthen the clean power-hydrogen-ammonia coordinated development

The National Energy Administration (NEA) recently published an article in the People's Daily, proposing to promote the transition of end-use energy consumption from electricity substitution to multiple types of substitutions of electricity, hydrogen, and ammonia.[2] In September 2024, the National Development and Reform Commission (NDRC) issued the *Application Requirements for Green and Low-carbon Advanced Technology Demonstration Projects (Second Batch)* (CHN: 绿色低碳先进技术示范项目（第二批）申报要求), many of which involve hydrogen and ammonia. [3]

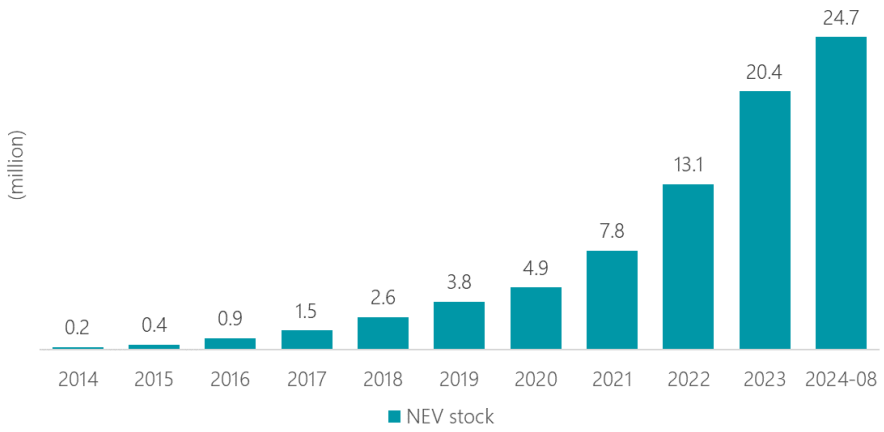
1. Nuclear power and coal power hydrogen production: nuclear power hydrogen production commercial projects, coal and green ammonia hybrid power generation projects with ammonia accounting for more than 10%;
2. Green power hydrogen production: utility-scale and distributed wind power and solar PV hydrogen production projects with a scale of no less than 100 MW, and integrated coupling with downstream chemical, smelting, and power generation scenarios, with an output range of 50%-100%, and an hourly load regulation rate of no less than 30%;
3. Hydrogen energy infrastructure: hydrogen transport pipelines under the hydrogen *production-storage-transport-utilisation* integrated demonstration projects;
4. Electricity-hydrogen coupling: the installed capacity of clean power-hydrogen coupling projects (i.e. hydrogen production capacity) exceeds 50% of the installed clean power generation capacity, and the local consumption rate is no less than 95%;
5. Hydrogen fuel: production of green diesel, sustainable aviation fuel (SAF), green methanol, and green ammonia through clean hydrogen;
6. Hydrogen power demonstration projects: solid oxide fuel cells, fuel cell ships, and Hydroprocessed Esters and Fatty Acids (HEFA) SAF demonstration projects.

New energy passenger car sales account for more than 50%

According to statistics from the China Association of Automobile Manufacturers (CAAM), in August 2024, China's new energy passenger car sales exceeded fuel passenger car sales for the second consecutive month, accounting for 53.9% of the national passenger car sales, an increase of 16.6 percentage points year-on-year. Thanks to better endurance mileage and technical maturity and reliability, plug-in hybrid vehicles (PHV) sales growth rate reached 81.6%, far exceeding the 8.3% of pure electric vehicles and becoming the main growth pole in new energy vehicle sales.[4] As of August 2024, the national new energy vehicle stock reached 247,000, five times that of 2020.[5]

[2] 以能源转型发展支撑中国式现代化," National Energy Administration, 9 September 2024, accessed at https://www.nea.gov.cn/2024-09/09/c_1310785992.htm.
[3] "国家发展改革委办公厅关于组织申报第二批绿色低碳先进技术示范项目的通知, 发改办环资〔2024〕759号," National Development and Reform Commission, 11 September 2024, accessed at https://www.ndrc.gov.cn/xwdt/tzgg/202409/t20240920_1393109.html.
[4] "8月新能源车渗透率53.9%创下新高 车市"金九"可期？," 21st Century Business Herald, 11 September 2024, accessed at https://www.eco.gov.cn/news_info/72061.html.
[5] "碳达峰碳中和重大宣示四周年 碳达峰十大行动取得积极成效," National Development and Reform Commission, 23 September 2024, accessed at https://www.eco.gov.cn/index.php/news_info/72227.html.

Number of new energy vehicles in China from 2014 to August 2024



Source: Ministry of Public Security (MoPS) and China Association of Automobile Manufacturers (CAAM), accessed in October 2024

The first large-scale coal-fired power molten salt heat storage project in China put into operation

Due to the high investment cost and land-use requirement, molten salt heat storage projects have long been mainly used in CSP projects. In September 2024, China Huaneng Group put into operation China's first independently developed molten salt heat storage project to assist coal-fired power flexibility in Dezhou, Shandong. The total heat storage capacity of the project is 180 MWh. It uses coal-fired boiler steam as a steam source, and the power plant self-uses electricity as a power source to heat the molten salt and store the heat. Then, it uses the heat exchanger to release heat to achieve industrial steam supply. In the spot power market, heat storage equipment can expand the regulatory capacity of coal-fired power units by 50 MW/4hr; when the power unit is shut down, the heat storage system can provide a rated 90 tons/hour of steam. The project will effectively respond to the peak load regulation, frequency regulation, and industrial steam supply needs, and provide a new power-heat-steam sector coupling solution for coal-fired power flexibility. [6]

A pilot project for sustainable aviation fuel applications launched

Jet fuel contributes to 99% of the current carbon emissions in the civil aviation industry, and the decarbonisation of jet fuel is the main direction for the civil aviation industry to promote green transformation. In September 2024, the NDRC and the Civil Aviation Administration of China jointly launched a pilot project to apply sustainable aviation fuel (SAF). SAF is an aviation fuel made from renewable energy or waste. The pilot project will focus on fuel supply guarantee, quality product monitoring, effect evaluation, and mechanism standard construction. The first phase is from September to December 2024, when 12 flights across the country, including Air China, China Eastern Airlines, and China Southern Airlines, will be fueled with SAF fuel; the second phase is the whole year of 2025, and the number of participating units will gradually increase. SAF is a realistic path for the civil aviation industry to fully realise a green transition and is also an important tool for creating new industrial chains. [7]

[6] "全国首个"汽电"联合加热熔盐储能项目在华能成功投运," China Huaneng Group Co., Ltd, 5 July 2024, accessed at http://www.sasac.gov.cn/n2588025/n2588124/c31114539/content.html; "全国首个火电机组调峰调频模块化熔盐储能项目在华能德州电厂成功商运," xinhuanet.com, 27 September 2024, accessed at http://www.xinhuanet.com/government/20240927/d26fdb605a7c43c5a1e3326109409b07/c.html.

[7] "我国启动可持续航空燃料应用试点," Xinhua News Agency, 19 September 2023, accessed at https://baijiahao.baidu.com/s?id=1810610493934001791&wfr=spider&for=pc.

2. Policy monitoring

2024-09-13

https://www.gov.cn/zhengce/zhengceku/202409/content_6976860.htm

NEA releases basic rules for power market registration

Notice on Issuing the Basic Rules for Power Market Registration, NEA Development Supervising Regulations [2024] No.76

There are more than 700,000 registered operators in China's power markets, but the market access standards in various regions are vague and the registration process needs to be unified. For this reason, the NEA has issued the *Basic Rules for Power Market Registration* (CHN: 电力市场注册基本规则). The document requires establishing a unified registration process and inspection standards nationwide. Power exchanges, power dispatch centres and power grid enterprises should share information to achieve "one-stop" registration services; it clarifies the basic market access conditions for eight types of entities, including power generation enterprises, power sales enterprises, power users, new-type energy storage, virtual power plants, smart microgrids, distributed energy and electric vehicle charging facilities; it improves the entire process standards for registration, information changes and cancellation, and stipulates the review time for each; the power exchanges are responsible for market registration, and the NEA regional agencies and relevant local government departments conduct supervision jointly.

2024-09-11

https://www.gov.cn/zhengce/zhengceku/202410/content_6978315.htm

NDRC proposes guidance on clean and efficient use of coal

Opinions on Strengthening the Clean and Efficient Utilisation of Coal, NDRC Operation [2024] No.1345

The government requires strengthening the clean and efficient use of coal throughout the chain. By 2030, the green and intelligent level of the coal industry will be significantly enhanced, the unit energy consumption of coal production will gradually decrease, and the quality of commercial coal will steadily improve. Meanwhile, continue to optimise the coal storage and transportation layout, and comprehensively improve the efficiency and clean level of coal use in key areas. The main tasks include: 1) Intensify green coal exploration, carry out scientific mining area planning and green mining; 2) Improve the intelligent mining in coal mines, accelerate the low-carbon retrofit of facilities, and improve the energy-saving and carbon reduction standard system; 3) Optimise the coal transportation network and storage layout, increase the proportion of long-distance railway transportation, and improve the national unified coal trading market; 4) Continue to control the total amount of coal consumption in key areas of air pollution prevention and control, orderly carry out low-carbon retrofit of coal-fired power units and withdrawal of outdated production capacity, regularly update coal technical standards in key industries, and orderly promote loose coal (*sanmei*) substitution.

2024-09-09

https://www.mee.gov.cn/xxgk2018/xxgk/xxgk06/202409/t20240909_1085452.html

MEE is developing a plan to include energy-intensive industries in the national carbon market

Letter on Soliciting Public Opinions on the Work Plan for the National Carbon Emission Trading Market to Cover the Cement, Steel, and Electrolytic Aluminum Industries (Draft for Comments), MEE General Office Letter [2024] No. 299

MEE plans to include cement, steel, and electrolytic aluminium industries in the national carbon market in three stages. The first stage (2024) focuses on improving market players' participation and management capability and improving market supervision; the second stage (2025-2026) will witness the first compliance. The government will adopt a carbon intensity control approach to formulate a free carbon allowance allocation plan. There will be no allowance cap during the compliance period, but the difference between actual carbon emissions and carbon allowance must be controlled within a small range; the third stage (starting from 2027) will formulate a more scientific, accurate, and transparent carbon allowance allocation method, and the total carbon allowance will be moderately tightened.

2024-08-30

https://new.qq.com/rain/a/20240830A091OW00?suid=&media_id=

The 2023-2024 carbon allowance plan of the national carbon market released

Total Allowance and Allocation Plan for the Power Generation Industry in the National Carbon Emission Trading System in 2023 and 2024

2023-2024 is the third compliance cycle for the power generation industry to participate in the national ETS. The rules have three major changes compared with the previous period. 1) The compliance period is shortened from two years to one year to increase market liquidity, such as completing the 2023 carbon allowance compliance by the end of 2024; 2) The allowance issuance basis is changed from amount of power supply to total power generation, which avoids calculating the power plant own consumption and simplifies the accounting process; 3) The carbon emission baseline value of thermal power units is reduced by about 1% year-on-year, maintaining a certain emission reduction pressure within the acceptable range of power generation enterprises.

2024-08-26

https://www.gov.cn/zhengce/zhengceku/202409/content_6973736.htm

NEA requires coordination between the GEC market and the CCER market

Notice on the Linkage and Coordination Between Renewable Energy Green Electricity Certificates and the China Certified Emission Reduction Market, NEA General Notice [2024] No. 124

The Green Electricity Certificate (GEC) market and China Certified Emission Reduction (CCER) market both can cover CSP and deep-sea offshore wind power. To avoid double counting, the NEA issued a document to clarify the two markets' boundaries and mutual recognition process. The regulation will be implemented in October 2024 for two years and will apply to CSP and deep-sea offshore wind projects that have completed CCER filing before March 2017. During this period, these projects can voluntarily participate in CGE transactions or apply for CCER, and actively register with the corresponding registration agency. Projects that choose CGE transactions are no longer allowed to apply for CCER; for the power generation of projects that decide to apply for CCER, the NEA Qualification Center will be responsible for cancelling the corresponding CGEs in the national green certificate issuance and trading system. NEA and MEE will verify the data regularly.

2024-08-23

https://www.gov.cn/zhengce/zhengceku/202409/content_6973459.htm

NDRC takes the lead in conducting pilot projects for large-scale application of V2G

Notice on Promoting the Pilot Projects for Large-scale Application of Vehicle-to-Grid Interaction, NDRC General Office Energy [2024] No.718

The government requires the full expansion of the scale of EV-V2G projects. It encourages V2G projects to participate in the spot power market, green electricity trading pilots, and energy storage capacity leasing market through aggregation. Pilot areas should fully implement peak-valley time-of-use electricity prices for charging, strive to concentrate more than 60% of annual charging electricity in the off-peak period, and more than 80% in private charging piles; the total V2G discharge power should be no less than 500 kW, and the annual power generation is not less than 100 MWh except in the western region. The government encourages all regions to improve the peak-valley time-of-use electricity price mechanism for residents' charging, reasonably expand the peak-valley price difference, and explore the discharging price mechanism for NEVs and battery swapping stations to the power grid.