14th Five-Year Plan: Timeline of key dates related to energy policy

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The following dates are based on the experience with the 13 FYP and indicative only.

1 2019 November
main topics and structure decided, approval from top leaders

2 2020 November
study and coordination groups with suggestions

3 2021 March
Main Plan Launched

4 2021 December
Energy Plan Launched

Regarding Shale Gas (2016-2020), NEA
2021-09-14

Electric Power Sector Development FYP
NDRC and NEA
2021-11-07

Greenhouse Gas Emission Control FYP, NEA
2021-10-27

Coalbed Methane FYP
NEA
2021-11-24

Renewable Energy Development FYP
NEA
2021-12-10

Oil and Natural Gas Development FYP
NEA
2021-12-24

Energy Technology Innovation FYP
NEA
2021-12-30

2021-10-17
Hydropower Sector Development FYP
NEA

2021-10-28
Biomass Sector Development FYP
NEA

2016-11-16
Wind Power Sector Development FYP
NEA

2021-12-08
Solar Power Sector Development FYP
NEA

2021-12-22
Coal Industry Development FYP
NDRC and NEA

2021-12-26
Energy Development FYP, NDRC and NEA

2022-01-25
Geothermal Energy Development FYP
NEA

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August 2019

Source: National Energy Administration (NEA), National Development and Reform Commission (NDRC) and the State Council, accessed in August 2019

The 14th Five-Year Plan Outlook

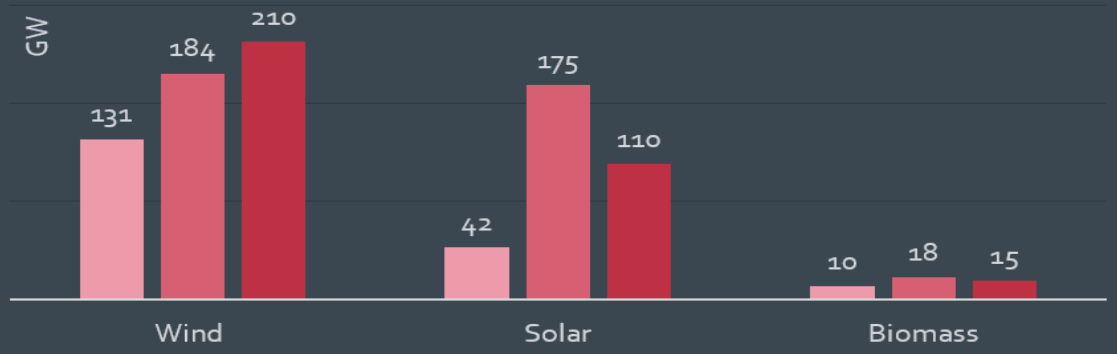
"Build an energy sector that is clean, low-carbon, safe, and efficient for China and the vision of ecological civilisation "

—— **President Xi Jinping,** at the 19th National Congress of the Communist Party of China

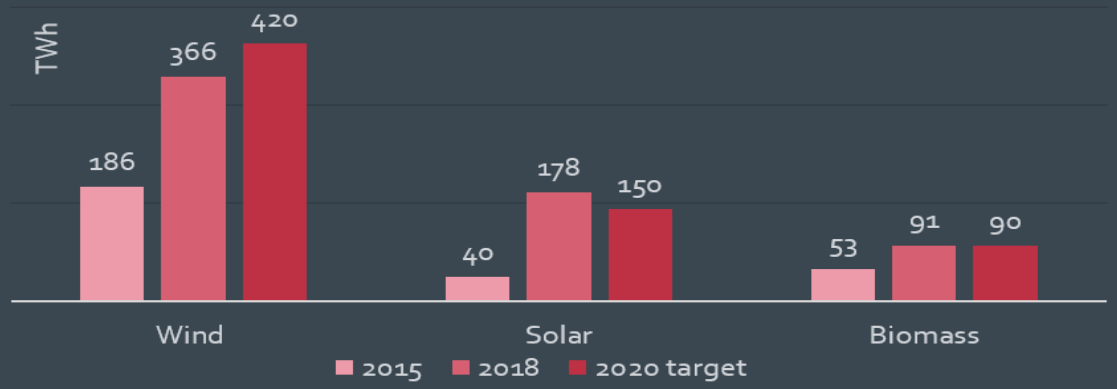
- China's green transition has accelerated during the 13th Five-Year Plan (2016-2020), but coal and energy-intensive industry remain the majority of energy production and consumption.
- To meet the Paris Climate Agreement goal of keeping global climate change below 2 degrees C, the 14th Five-Year Plan will be crucial to keeping carbon emissions within the global carbon budget.
- The National Development and Reform Commission (NDRC) is responsible for coordinating the FYP process. The plan will be presented during the National Congress of the Communist Party of China in March 2021.
- Sector-specific plans for each ministry and key industry will follow. For energy, the National Energy Administration (NEA) will be responsible. Based on the timeline of previous five-year plans for energy, it is expected that the 14th FYP for energy will be presented approximately one year into the five-year period.
- One of the main topics to be addressed in the 14th FYP will be how to secure energy supply while not depending on expensive imported energy.
- Renewable energy can be one of the primary solutions for ensuring this security of supply, especially as the cost of wind power, solar power, and energy storage solutions continue to decline.
- Finding solutions for the future of existing coal power plants will be crucial for the energy transition: New roles for coal power as flexibility providers with less operation, and starting the phasing out of coal power plants. Solutions for provinces heavily dependent on coal are equally important.
- On carbon, the Ministry of Ecology and Environment (MEE) has launched studies which include the possibility of setting a ceiling on CO_2 emissions. Currently, national targets focus on carbon intensity, whereas some provinces have coal consumption caps. As well, the national carbon market has been launched, and thus far includes the coal power and coal heating sectors.
- The role of natural gas in the energy supply will be one of the important themes in the 14th FYP.
- The development of an effective power market is a priority for integrating renewable energy and boosting electricity trade among provinces. Currently several pilot markets are underway.
- Energy efficiency has a key role in reducing carbon intensity, but the ambition in this field remains unclear.

Achievements of the 13th FYP energy Target

Installed Capacity



Power Generation



Capacity	2015 Actual	2018 Actual	2020 Target
Total	1525 GW	1900 GW	2014 GW
Coal	900 GW	1010 GW	1100 GW
Gas	66 GW	83 GW	110 GW
Nuclear	27 GW	45 GW	58 GW
Hydro	296 GW	322 GW	340 GW
Pumped-Storage	23 GW	30 GW	40 GW
Geothermal	27 MW	-	527 MW

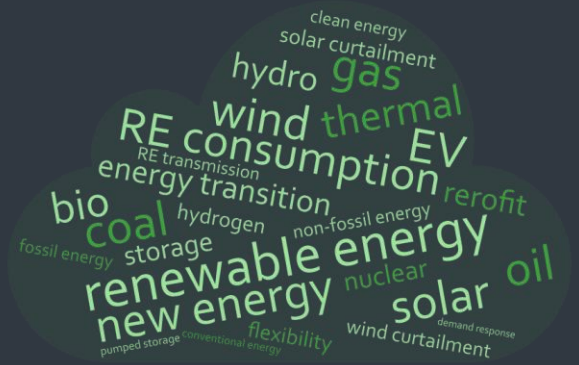
* For wind and solar, policy targets increasingly focus on energy output, not capacity.

Source: 2015 and 2018 data from Chinese Electricity Council (CEC), 2020 targets from NEA and NDRC, accessed in August 2019

Experts Commentary on Energy Development

Climate vs Low Carbon

Renewable vs Fossil Fuel



Subsidy vs Market

Li Junfeng

China Renewable Energy Industry Association

- Solar and wind need more fair tax and land apportionment
- Need mandatory market share for RE
- Break provincial barriers, increase buying motivation

Source of the full commentary1
Source of the full commentary2

Shi Dan

Institute of Industrial Economy CSSN Director

- Low carbon and clean energy is a world trend
- We project that coal will decline and renewable continue rising in our modeling

Source of the full commentary

Wang Zhongying

ERI Acting Director

- More electricity in end-use sectors, renewables in power and energy mix
- Need an energy system with wind and solar PV as the backbone
- Pillars of China's energy revolution: clean transport, RE based power system, compatible institutional arrangements

Source of the full commentary

Jiang Kejun

ERI Senior Scientist

- CO_2 emission control to reach the Below 2℃ target is achievable
- Advanced technology makes energy transition, low carbon cities and climate targets achievable in the absence of carbon pricing

Source of the full commentary

Zhang Guobao

Former Energy Minister

- Power capacity built or under construction more than adequate
- Need to strictly control coal power additions
- Utilization hours of coal power could reach 5500~6000 hours

Source of the full commentary

Du Xiangwan

CAE & Zeng Ming North China Power University

- Emphasize digitalization
- Encourage distributed solar
- Change role of gridcos to management
- Shift RE subsidies from supply to demand
- Focus on EVs and hydrogen FC

Source of the full commentary

Xie Kechang

CAE Academician

- Push coal-to-gas, coal-to-oil, and coal-to-ethanol and involve them into planning process
- If EE in China converges to international level it would help on emissions

Source of the full commentary

Chen Zongfa

China Huadian Corporation Ltd.

- Coal power dilemma
- China rich in coal, cannot give up on it in certain period of time
- Coal capacity reduction and caps control, flexibility retrofit and effective market mechanisms are required

Source of the full commentary

Yu Congde

China Electricity Council Guodian Deputy

- Strengthen fulfillment of LT coal power contracts
- Give suitable credit support to coal power
- Improve T&D tariff mechanism
- Resolve RE subsidy delays

Source of the full commentary

Feng Yongsheng

CASS Researcher

- Doc 9 (Deepening Reform of Power Sector) is still insufficient
- Imperfect market mechanism and missed price signal exist
- Top-level design for spot market is needed

Source of the full commentary

Li Gao

Climate Change Department, MEP Director

- Accelerate the progress of China's carbon market
- In 2018, China's carbon intensity decreased by 45.8% compared with 2005
- Ensure promise on achieving CO_2 peak in 2030

Source of the full commentary

Lin Boqiang

Xiamen University

- Efforts on RE and EVs supporting infrastructure construction
- Pursue EE in coal-to-oil and coal-to-gas
- China's coal power is new, so it will take many years to retire units

Source of the full commentary