

China Energy Policy Newsletter: July 2019

1. Recent project activities

dena report published: Transmission Grid Planning in systems with high shares of RE

Grid planning plays an important role for the success of the energy transition as the further development of the energy infrastructure is decisive for the integration of renewable energies and for ensuring security of supply. The report "Transmission Grid Planning in systems with high shares of Renewable Energy - Planning the future energy system in China" describes the transmission grid planning processes in China and compares them to the processes in the EU and Germany. The report concludes with recommendations for successful development of grid planning processes in China. This report is led by Germany Energy Agency (dena) and supported by China National Renewable Energy Centre (CNREC) and GIZ. The report is available on the [Boosting RE website](#).



dena-REPORT

Transmission Grid Planning in systems with high shares of Renewable Energy

Planning the future energy system in China.

Source: German Energy Agency (dena), June 2019

GIZ presented CREO in Shanxi Ruicheng, the Top-Runner Solar PV Energy Base

On 23 June 2019 GIZ Energy Transition Project Director Anders Hove presented the China Renewable Energy Outlook to government and energy company officials in Ruicheng, Shanxi province. The delegation was in Ruicheng to visit the 1 GW Top-Runner Solar PV Energy Base, the first phase of which now has a full year of operating data. Ruicheng officials also detailed the results of renewable energy participation in regional day-ahead spot market trading. International experts and officials discussed the upcoming phase of renewable energy development in Shanxi, which will increasingly focus on residential rooftop solar and smart energy town development. There are a number of obstacles to rooftop solar in remote areas, including lack of financing, unfavourable economics, and older buildings with inadequate structural ability to support rooftop energy.

International Round Table on Topic of Ruicheng New Energy Development



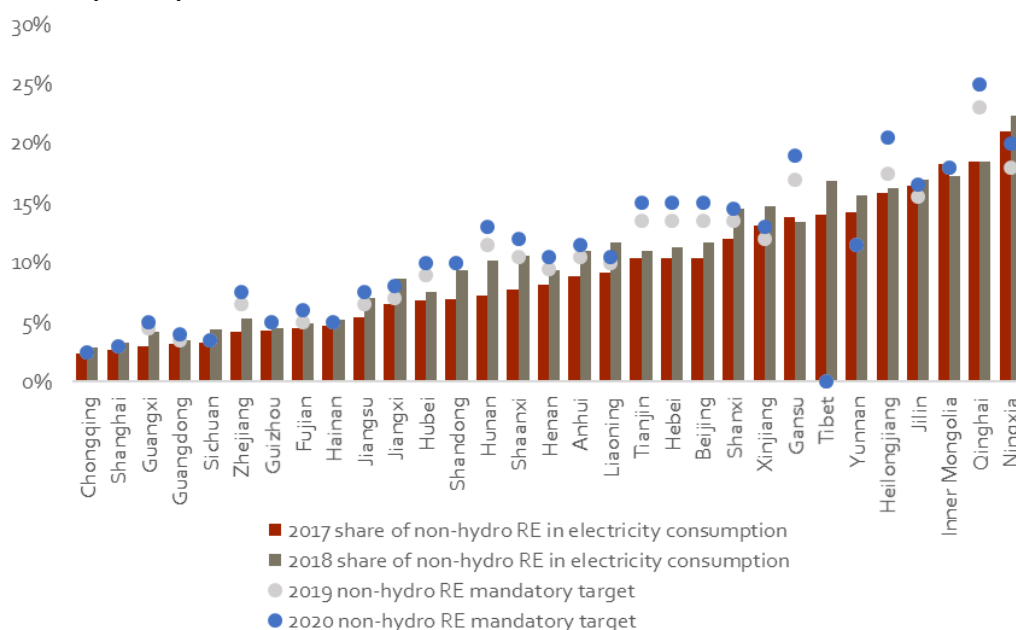
Source: GIZ

2. China energy transition updates

2018 renewable consumption report issued

In 2018, renewable power consumption reached 1,816 TWh, or 26.5%, a rate unchanged compared to 2017. Non-hydro accounted for 9.2%, a 1.2%-point year-on-year increase. All provinces showed growth in their renewable shares except Inner Mongolia and Gansu. Hunan, Shaanxi and Tibet had the biggest increase of consumption share at around 3%-point. Compared to the 2020 mandatory renewable power consumption quota, 11 provinces have achieved the targets ahead of the schedule in 2018, while Qinghai (6.5%-point), Gansu (-5.6%-point), Heilongjiang (-4.3%-point), Hebei (-4.0%-point) Tianjin (-3.7%-point) and Beijing (-3.3%-point) have the biggest gaps.¹

Comparison of 2017 and 2018 non-hydro renewable consumption with 2019 and 2020 consumption quotas



Source: 2017 data from China National Renewable Energy Centre (CNREC), July 2018; remaining data from National Energy Administration (NEA), accessed June 2019

Wind and solar PV curtailment rate improved in 2018

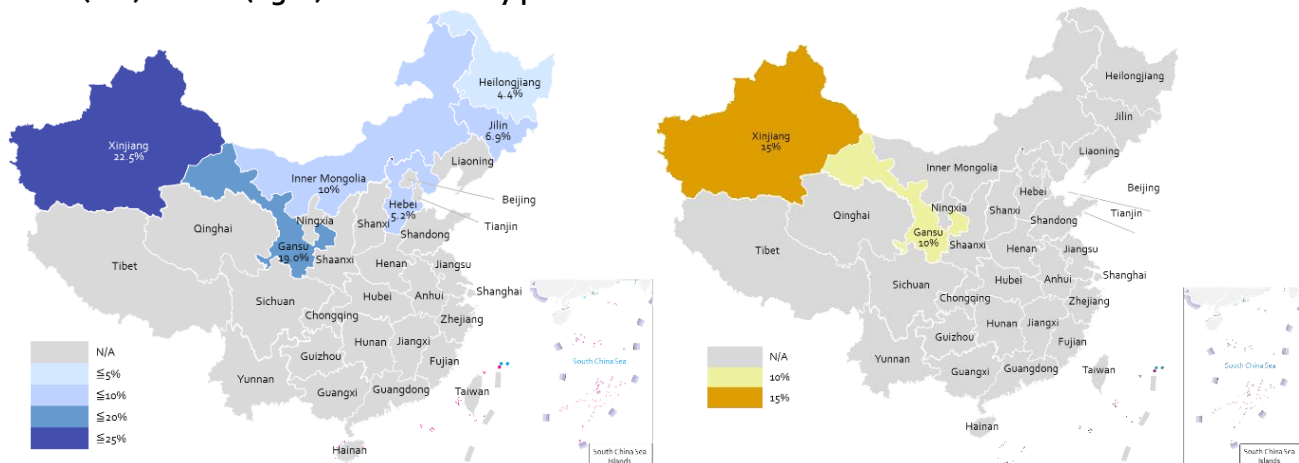
Wind, solar PV and hydro power all achieved their 2018 consumption targets on national level. Wind and solar curtailment continued to decline. In 2018, wind curtailment dropped to 7%, or 5 percentage points lower than in 2017. Shaanxi, Shanxi and Yunnan no longer have meaningful curtailment. Several of these provinces have increased inter-provincial trading of electricity. The solar PV curtailment rate dropped to 3%, or 3 percentage points lower than in 2017.

	Wind curtailment	Solar PV curtailment	Hydropower usage rate
2018 Target	<12%	<5%	>95%
2018 Achievement	7%	3%	95%

Source: 2018 target data from NEA, October 2018; 2018 achievement data from NEA, June 2018

¹“国家能源局关于 2018 年度全国可再生能源电力发展监测评价的通报, 国能发新能〔2019〕53 号,” National Energy Administration, 4 June 2019, accessed at http://zfxqk.nea.gov.cn/auto87/201906/t20190610_3673.htm.

Wind (left) and PV (right) curtailment by province in 2018



Source: NEA, June 2019

2019 wind and solar PV tendering mechanism finalised

NEA published the official wind and solar PV tendering policy on 28 May 2019, with few changes versus the third draft. (Please refer to the [May and June newsletter](#) for the details of the third draft.) “This is an innovative policy that provide long-term benefit for the development of Wind and solar,” said Dr. Shi Jingli, researcher at CNREC. The tendering process features different rules for each project, and it includes a national ranking system and early warning mechanism. The policy ensures that even after PV subsidies are completely phased out, PV will likely be viable in each market segment. The new solar PV tendering mechanism consists of three parts:

1. The government will determine the amount of subsidised PV projects based on electricity renewable surcharge revenue instead of planned installations. Authorities will set a subsidy cap based on the estimated incremental amount of surcharge revenue compared to 2018, which reduces the risk of insufficient funding to cover feed-in tariff subsidy payments.
2. Tendering applies to most utility-scale PV projects, prioritising regions that will achieve subsidy-free projects. This increases the efficiency of remaining subsidies and accelerates the phase-out of subsidies.
3. The policy will provide stronger support for household PV. A total of RMB 0.75 billion in subsidies, roughly sufficient to subsidise hundreds-mega-watt above 3.5 GW of installed capacity, is open for both new and existing household PV that has not been involved in bidding. The government offers a one-month buffer for the subsidy application, implying all projects that connect to the grid by the end of the second month after the incremental subsidised capacity reaches 3.5 GW could enjoy the subsidy.²

Under the new tendering mechanism, Dr Shi expects China to install about 40 GW of PV in 2019. Setting different grid connection deadlines for each project categories will help to avoid big swings in installations and grid connections seen in prior years.³

2019 incremental PV installed capacity estimated by CNREC

	Household, poverty alleviation and Top-runner	Attend tendering	Subsidy-free	Total
Incremental PV installed capacity	>10 GW	25~30GW	>4GW	>40GW

Source: CNREC, June 2019

² RMB 7.5 billion of subsidy actually could subsidise hundreds-mega-watt of projects above the 3.5 GW. Therefore, the final subsidy payment will still remain at RMB 7.5 billion.

³ 时璟丽, 从 2019 项目建设工作方案看光伏政策新机制、新思路, 能源杂志, 31 May 2019, accessed at <https://www.wowodx.com/xinnengyuancailiaoyuqijian/e61632b2cc6f44bdb9ccee5a5912335.html>.

China should continue to strictly control coal power capacity

The Electric Power Planning and Engineering Institute (EPPEI) published China Electric Power Development Report 2018, with a forecast that power supply will be tight in from 2019 to 2021, while the former minister of NEA pushed back on this report. According to EPPEI, high-end technology and manufacturing sector industrial development will result in rapid power demand growth from secondary industry. The rapid expansion of service industry will also raise demand from tertiary industry and in residential sector. EPPEI expects electricity demand growth of 5.6% in 2019, 5.0% in 2020 and 4.7% in 2021—similar to growth in 2016 and 2017. EPPEI thus argued that 16 provinces should increase installed capacity and start preliminary work on approving a new batch of thermal power plants.⁴

The former minister of NEA, Mr Zhang Guobao, provided an opposite point of view that was widely circulated online: "At least 25% of generators are not fully functioning at the moment," he said. Coal power currently operates around 4,000 hours per year, 1,500 to 2,000 hours less than it can achieve. The overcapacity is actually increasing as installed capacity grows faster than power generation in 2019 and 2020. From the consumption side, the development of energy-intensive industries such as steel, nonferrous metals and building materials is slowing. Although commercial and residential power demand will continue to increase rapidly, the absolute amount of increase from these consumers won't compensate for the decrease in large-scale industrial consumption. In addition, the share of electric vehicle in current power consumption is less than 0.25%. China should continue to strictly control coal power capacity to avoid the overcapacity issue arising again.⁵

Eight spot power markets pilots have all launched

Inner Mongolia started simulation of its spot power market on 26 June 2019. So far, the first eight spot power market pilots have all launched.⁶

A new segment on the electric vehicle policies

On 3 June 2019, National Development and Reform Commission (NDRC), Ministry of Ecology and Environment (MEE) and Ministry of Commerce (MoC) jointly issued new guidance to cities and provinces, instructing local governments to remove limits to traffic circulation or license plate issuance for new energy vehicles.⁷ Local governments have also been instructed to eliminate local subsidies for EV purchase. This continues a trend towards removal of subsidies for clean technologies such as PV and EVs that have achieved commercial scale; in the future, administrative targets, quotas, trading mechanisms, and markets will support such technologies, while technologies that haven't reached scale, such as fuel cell vehicles or rooftop solar, may continue to receive subsidies. In response to the new policy, some cities such as Shenzhen removed various limits, but others such as Beijing may continue to limit overall vehicle numbers to control traffic.

⁴ "中国电力发展报告：未来三年全国电力供需形势全面趋紧," China Energy News, accessed at <http://finance.sina.com.cn/stock/relnews/hk/2019-06-18/doc-ihytcitk6094813.shtml>.

⁵ "全国电力供需全面趋紧？国家能源局原局长：我看未必," China Energy News, 19 June 2019, accessed at http://finance.sina.com.cn/roll/2019-06-19/doc-ihytcitk6331754.shtml?cre=tianyi&mod=pcpager_news&loc=3&r=9&rfunc=100&tj=none&tr=9.

⁶ "第一批 8 个电力现货市场建设试点全部启动试运行," Caixin.com, 28 June 2019, accessed at <http://companies.caixin.com/2019-06-28/101432869.html?NOJP>.

⁷ "关于印发《推动重点消费品更新升级 畅通资源 循环利用实施方案（2019-2020 年）》的通知, 发改产业（2019）967 号," National Development and Reform Commission, Ministry of Ecology and Environment and Ministry of Commerce, 3 June 2019, accessed at http://www.ndrc.gov.cn/zcfb/zcfbtz/201906/t20190606_938326.html.

Six key tasks determined in energy storage sector from 2019 to 2020

2019-2020 Action Plan to Guide the Technological and Industrial Development of Energy Storage Sector, NDRC Energy [2019] No. 725

The NDRC has issued a list of energy storage tasks and priorities as follows: R&D to upgrade supply chains and manufacturing equipment; improve the policy environment such as interaction with incremental distribution power grids; adjust the site selection planning for pumped-storage hydro power plants; kick off a batch of demonstration projects such as new energy and energy storage integrated demonstrations; apply new energy vehicles as energy storage; and establish standards covering the full life cycle of energy storage equipment.

2019/06/25

http://www.ndrc.gov.cn/zcfb/zcfbtz/201907/t20190701_940747.html

NDRC opens power market for more power consumers

Opening the Power Market for Non-Residential, Non-Agricultural and Non-Major Public Utility Consumers, NDRC Operation [2019] No. 1105

The government has decided to open power markets for all power consumers except residents, agriculture, major utility and public welfare facilities, and mandatory power consumers to serve power generators, so called business-featured power consumers. The government strongly supports small-scale business-featured power consumers to participate power markets by joining direct trading or via aggregators, and it encourages determination of a flexible power price by bilateral negotiation.

2019/06/22

http://www.ndrc.gov.cn/gzdt/201906/t20190627_939775.html

NDRC issues fourth batch of incremental power distribution business pilots

Notice on Issuance of Fourth Batch of Incremental Power Distribution Business Pilots, NDRC Operation [2019] No. 1097

The fourth batch of pilots consists of 84 projects in 24 provinces. The government requires each pilot to report the status of the process monthly, the content includes determination of developers, equity structure, geographical range of service and process of getting a license.

2019/06/21

http://www.ndrc.gov.cn/gzdt/201906/t20190626_939498.html

MoF announces new renewable energy subsidy standards

Complementary Notice of Management Rules of Renewable Energy Development Dedicated Fund (Trial), MoF Construction [2019] No. 298

The government has adjusted the subsidised project scope and standard under the *Renewable Energy Development Dedicated Fund*. Rural hydropower expansion and retrofit projects will not receive subsidy starting in 2021. Exploitation of unconventional natural gas including coalbed methane, coal-mine gas, shale gas and tight gas will no longer receive a fixed subsidy of RMB 0.3/m³. Starting in 2019, the subsidising standard for surplus exploitation of unconventional natural gas will receive higher subsidy compared to summer.

2019/06/11

http://jjs.mof.gov.cn/zhengwuxinxi/zhengcefaui/201906/t20190617_3279412.html

Renewable 2019 project funding plan set

Notice of Issuing Budgets for Renewable Power Subsidy Funding Collected from Electricity Surcharge, MoF Construction [2019] No. 275

The Ministry of Finance plans to issue RMB 86.6 billion of funding collected from electricity tariff surcharge to pay for renewable power projects in 2019. Of this, RMB 42.4 billion is for wind power, RMB 30.8 billion for solar PV, RMB 1.1 billion for biomass power, and RMB 6.8 billion for independent renewable power utilities. The government prioritise payments to poverty alleviation PV projects, residential distributed PV and independent renewable power utilities.

2019/06/05

http://www.mof.gov.cn/zyyjsqkpt/zyddfyzf/zfxjjzyzf/kzsnvdfjfsr/201906/t20190605_3272079.html

NDRC clarifies the supervision rules for pricing costs of T&D tariff

Notice of Supervision and Investigation the Cost to Pricing Power Transmission and Distribution Tariff, NDRC Pricing Regulation [2019] No. 897

The document determines the details of supervision rules for pricing the costs of power transmission and distribution tariffs (T&D tariff) of provincial and regional grids, as well as inter-provincial, inter-regional and dedicated power transmission projects. The costs should include depreciation cost, operational cost and maintenance cost. The cost relevant to electric vehicle charging, pumped storage hydropower plants, energy storage facilities and grid company owned power plants that enjoy dedicated feed-in tariffs will not be included.

2019/05/24

http://www.ndrc.gov.cn/gzdt/201905/t20190528_936979.html