AUGUST 2020

CHINA ENERGY POLICY
NEWSLETTER

Boosting Renewable Energy as Part of China's Energy Revolution

1. Energy transition updates

Energy production and consumption picks up in Q2 2020

The National Energy Administration (NEA) announced the 1H 2020 energy and power production and consumption status in July 2020.[1] The document shows that energy consumption picked up significantly in Q2 2020, with electricity and natural gas consumption continuing to grow and already exceeding the level of the Q2 2019. The COVID-19 epidemic has had relatively small effects on natural gas consumption whose year-on-year growth rate in Q2 increased by about 4.5 percentage points over Q1; while refined oil consumption is about 6 percentage points higher than that of Q1 due to the recovery of production and the demand for gasoline and diesel fuel driven by residents' travel. Based on the national strategy of energy security, from January to June in 2020, natural gas production increased by 10.3% year-on-year to 94 billion cubic meters, oil increases by 1.7% year-on-year to 97.15 million tonnes, and coal increased by 0.6% year-on-year to 1.81 billion tonnes.

National coal productivity almost recovers by June 2020

China's daily coal production capacity remains at around 10 million tonnes[2], and the productivity continues to centralize to large coal mining bases. By 13 July 2020, China has built 52 ten-million-tonne level coal mines with a rated production capacity of 821 million tonnes/year, accounting for about one fifth of the national productivity. In terms of geographical distribution, the provinces of Inner Mongolia (391 million tonnes/year), Shaanxi (210 million tonnes/year) and Shanxi (133 million tonnes/year) rank in the top three.[3] After COVID-19 being under control, 92.1% of domestic coal production capacity has been recovered in June 2020.[4] From the price perspective, coal prices show a U-shape trend in 1H 2020. It is expected

[1] "全国能源生产消费逐步回升，多条特高压等重大输电通道工程正在规划建设," National Energy Administration, 17 July 2020, accessed at **https://www.sohu.com/a/408188048_100070607?_trans_=000014_bdss_dklzxbpcgP3p:CP=**.

[2] "全国能源生产消费逐步回升，多条特高压等重大输电通道工程正在规划建设," National Energy Administration, 17 July 2020, accessed at **https://www.sohu.com/a/408188048_100070607?_trans_=000014_bdss_dklzxbpcgP3p:CP=**.

[3] "中国在产千万吨级煤矿达五十二处," National Energy Administration, 13 July 2020, accessed at **http://www.nea.gov.cn/2020-07/13/c_139209106.htm**.

[4] "全国能源生产消费逐步回升，多条特高压等重大输电通道工程正在规划建设," National Energy Administration, 17 July 2020, accessed at **https://www.sohu.com/a/408188048_100070607?_trans_=000014_bdss_dklzxbpcgP3p:CP=**.

If you would like to subscribe to the newsletter, please send your full name, organization and title to ***china@ens.dk***

Danish Energy Agency

可再生能源推动能源革命研究
Boosting Renewable Energy
As part of China's energy revolution

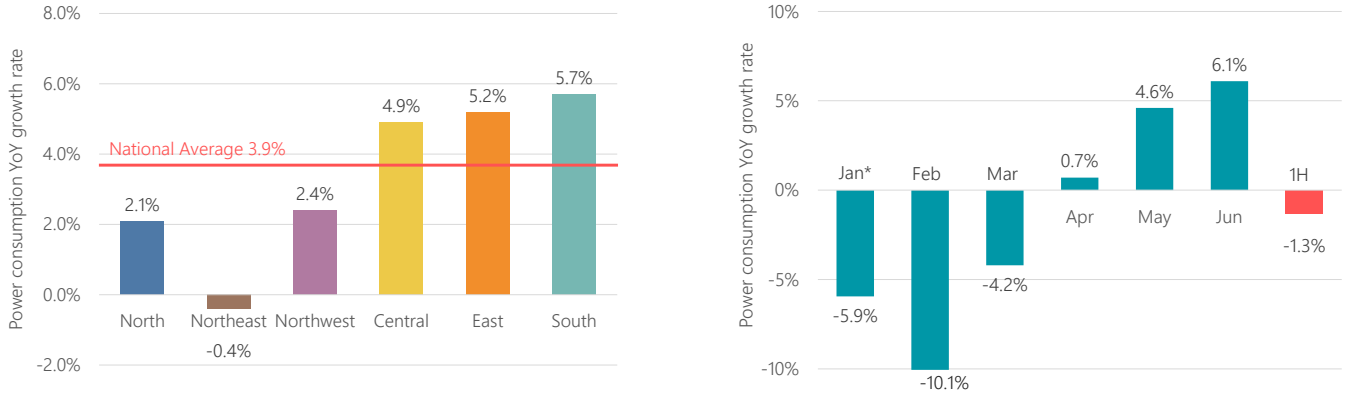
国家发展和改革委员会
能源研究所
Energy Research institute, NDRC, P.R.C

that coal supply and demand will maintain balance but slightly tight in July and August, therefore coal price may continue to rise steadily.[5]

Electricity consumption growth shows positive in Q2 2020

China's electricity consumption has shown positive year-on-year growth since April, with the cumulative electricity consumption in the first half of the year reached 3,355 TWh. Although the total power consumption has a 1.3% year-on-year decrease in 1H 2020, it is narrowed by 5.2 percentage points compared to Q1. The secondary industry is the main driver of power consumption growth.[6] Within the tertiary industry, information transmission, and software and information technology services show nearly 30% of growth in Q2. Geographically, southeast of China has stronger growth in power consumption than the rest of the nation.[7]

Power consumption year-on-year growth rate by region in Q2 2020 (left); Comparison of total power consumption year-on-year growth rate from January to June 2020 (right)



Note: *The figure is calculated. Source: (left) China Renewable Energy Monitoring Centre (CREMC), July 2020; (right) China Electricity Council (CEC), July 2020

Growth of renewable power capacity slows down in 1H 2020

China added 37.0 GW of power generation capacity in 1H 2020, down 9.3% year-on-year, while above 6 MW units increased by 5.3%.[8] In overall, renewable power has been growing steadily as expected. Although the COVID-19 delayed the construction and grid connection processes of new renewable power projects in the first quarter, the situation returned to normal in Q2. By considering the 2020 consumption capacity and renewable power construction plans, it is expected that the installed capacity of solar PV will have a significant increase in 2020 compared to 2019.[9]

Regarding power generation efficiency, from January to June 2020, renewable power generation increased by 1.5 percentage points to reach 11% in China.[10] Although the national average utilization hours decreased by 107 hours and of which thermal power decreased by 119 hours, wind (-10 hours) and solar (+19 hours) remained, implying curtailment was improved.[11] According to the China Renewable Energy Monitoring Centre (CREMC), The curtailment rate of wind power

[5] "煤价涨至十个月新高 旺季上行动力不减," National Energy Administration, 13 July 2020, accessed at **http://www.nea.gov.cn/2020-07/13/c_139209154.htm**.

[6] "全国能源生产消费逐步回升，多条特高压等重大输电通道工程正在规划建设," National Energy Administration, 17 July 2020, accessed at **https://www.sohu.com/a/408188048_100070607?_trans_=000014_bdss_dklzxbpcgP3p:CP=**.

[7] "2020年二季度全国新能源电力消纳评估分析," China Renewable Energy Monitoring Centre, 28 July 2020, accessed at **https://www.in-en.com/article/html/energy-2293950.shtml**.

[8] "国家能源局发布1-6月份全国电力工业统计数据," National Energy Administration, 20 July 2020, accessed at **http://www.nea.gov.cn/2020-07/20/c_139226604.htm**.

[9] Energy Research Institute of National Development and Reform Commission, July 2020.

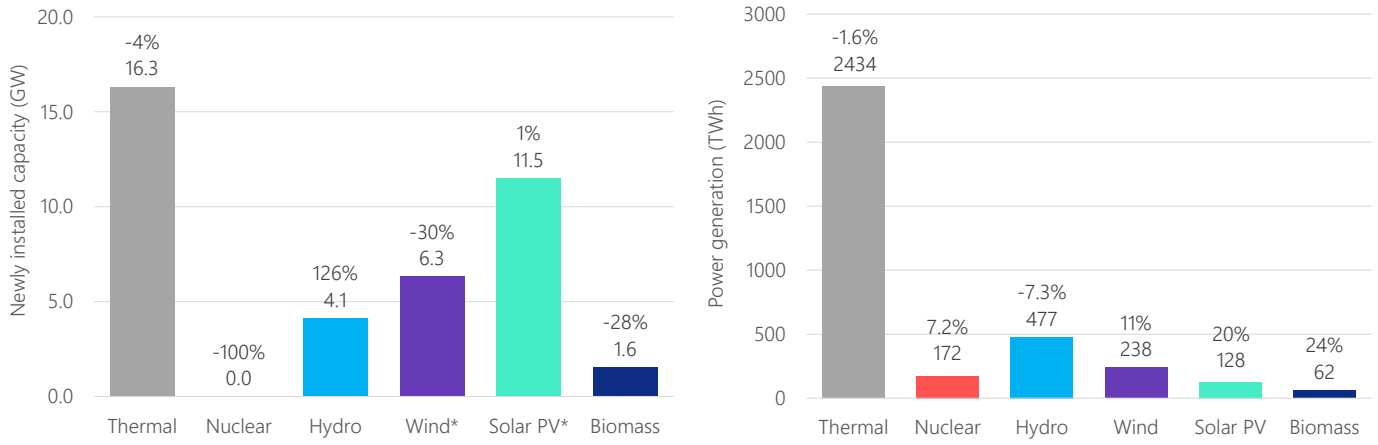
[10] "2020年二季度全国新能源电力消纳评估分析," China Renewable Energy Monitoring Centre, 28 July 2020, accessed at **https://www.in-en.com/article/html/energy-2293950.shtml**.

[11] "国家能源局发布1-6月份全国电力工业统计数据," National Energy Administration, 20 July 2020, accessed at **http://www.nea.gov.cn/2020-07/20/c_139226604.htm**; "2020年上半年光伏发电并网运行情况," National Energy Administration, 31 July 2020, accessed at **http://www.nea.gov.cn/2020-07/31/c_139254346.htm**.

dropped by 36.2% and solar PV dropped by 24.3% in Q2 2020.[12]

The incremental wind power capacity decreased by 30% year-on-year in H1 2020[13], of which -48% year-on-year in Q1 and 7% year-on-year in Q2.[14] Nevertheless, offshore wind showed rapid increase of more than 1 GW. Wind power generation increased by 10.9%, a year-on-year increase of 1.7 percentage points.[15] Newly installed solar PV had 1% year-on-year increase in 1H 2020, of which 38.5% was distributed PV. By June 2020, the share of distributed PV in cumulative PV installed capacity reached 31.1%, a year-on-year increase of 1.5 percentage points. Solar PV power generation increased by 20%, down 10 percentage points compared to H1 2019.[16] In addition, even though the *2020 Construction Plan for Biomass Power Project* is yet to be published, China has built 1.6 GW of biomass power plants in 1H 2020. The cumulative biomass power generation reached 62 TWh, up 24% compared to 1H 2019.[17]

1H 2020 newly installed power capacity by source (left); 1H power generation by source (right)



Notes: * The figure of year-on-year increase rate is calculated. Source: (left) biomass data from Energy Research Institute of National Development and Reform Commission (ERI of NDRC), the rest data from National Energy Administration (NEA), July 2020; (right) biomass data from ERI of NDRC, wind and solar PV data from NEA and the rest from CEC, July 2020

China's first 10 MW offshore wind turbine starts to operate

On 12 July 2020, China's first 10 MW offshore wind turbine was successfully connected to the grid in Fujian.[18] It is currently the biggest offshore wind turbine on capacity in China with full independent intellectual property rights, jointly developed by Dongfang Electric and Three Gorges Group. At an annual average wind speed of 10 m/s, it is estimated that the turbine could provide 40 GWh of electricity annually, serving the power demand of 20,000 families (three persons in each family). From an environmental perspective, it has the potential to reduce coal consumption by up to 13,000 tonnes and carbon dioxide emissions by up to 35,000 tonnes per year.

[12] "2020年二季度全国新能源电力消纳评估分析," China Renewable Energy Monitoring Centre, 28 July 2020, accessed at **https://www.in-en.com/article/html/energy-2293950.shtml**.

[13] "2020年二季度全国新能源电力消纳评估分析," China Renewable Energy Monitoring Centre, 28 July 2020, accessed at **https://www.in-en.com/article/html/energy-2293950.shtml**.

[14] Energy Research Institute of National Development and Reform Commission, July 2020.

[15] "2020年上半年风电并网运行情况," National Energy Administration, 31 July 2020, accessed at **http://www.nea.gov.cn/2020-07/31/c_139254298.htm**.

[16] "2020年上半年光伏发电并网运行情况," National Energy Administration, 31 July 2020, accessed at **http://www.nea.gov.cn/2020-07/31/c_139254346.htm**; "2019年上半年光伏发电并网运行情况," National Energy Administration, 23 August 2020, accessed at **http://www.nea.gov.cn/2019-08/23/c_138330885.htm**; "2020年二季度全国新能源电力消纳评估分析," China Renewable Energy Monitoring Centre, 28 July 2020, accessed at **https://www.in-en.com/article/html/energy-2293950.shtml**.

[17] Energy Research Institute of National Development and Reform Commission, July 2020.

[18] "国内首台10MW海上风电机组并网发电," China Industry News Network, 13 July 2020, accessed at **http://www.cinn.cn/gongjing/202007/t20200713_230845.html**.

2. Policy monitoring

18 July 2020
http://www.gov.cn/zhengce/zhengceku/2020-07/28/content_5530756.htm

NDRC clarifies the 2020 key tasks in cost reduction

NDRC emphasizes again that the incentive policy of 5% exemption in electricity bill of industrial and commercial power consumers will be effective until the year-end 2020. Moreover, the central government will guide to implement the new coal power pricing mechanism, i.e. baseline tariff + floating tariff, and to track and evaluate the implementation of power pricing reform policies. Local governments are given stronger decision-making power on land use management, especially the construction land of industries and land conversion process.

14 July 2020
http://zfxxgk.nea.gov.cn/2020-07/14/c_139234797.htm

NEA announces the 2020 phase out capacity of out-dated coal power units

China aims to phase out 7.33 GW of outdated coal power capacity in 2020. The tasks distributed to Fujian, Jiangxi, Shandong, Henan and Hubei all exceed 500 MW. All the listed units should complete the decommissioning process by the end of 2020, implying at least two of the equipment including boiler, turbine, generator, coal conveyer, cooling tower and chimney should be demolished. The government will provide supporting policies to the units that complete the process on time.

12 June 2020
http://www.gov.cn/zhengce/zhengceku/2020-07/01/content_5523237.htm

The 2020 budget for the Clean Energy Development Dedicated Fund issued

In early July 2020, the Ministry of Finance (MoF) issued the 2020 budget for Clean Energy Development Dedicated Fund. The annual budget is RMB 423.3 million, with an effective period from 2020 to 2024. It will support the development and utilization of energy in a clean way, including renewable energy, high-quality fossil fuels and fossil fuel processing with low emission. The funding covers demonstrative promotion and industrialization of key technologies, scaled-up development, establishment of public platform, capacity building, comprehensive application demonstrations and other specific programs nominated by the government. In addition, the document specifically clarifies the subsidizing standard of rural hydropower expansion and unconventional natural gas (i.e. coal-bed methane, coal-mine gas, shale gas and tight gas) exploitation and utilization.

10 June 2020
https://www.ndrc.gov.cn/xxgk/zcfb/ghxwj/202007/t20200701_1232843.html

NDRC clarifies the specific rules of mid-to-long term electricity transaction

The prices of mid-to-long term electricity transactions, except the amount of generation rights scheduled by the government, shall be determined by market-oriented methods such as bilateral negotiation and centralized bidding. The third parties cannot not interfere. In principle, the government will not set floor price and cap price for bilateral negotiation transactions, while upper and lower price limits are allowed for centralized bidding in order to avoid market manipulation and vicious competition. Electricity exchanges will be responsible to organize renewable power transactions in markets, guiding market entities to carry out transactions in order to complete the compliance of the mandatory renewable power consumption quotas with priority.