

CURRENT ENERGY PROBLEMS OF GANSU PROVINCE IN WESTERN CHINA

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Annotation. *The main energy problems in Western China, in the province of Gansu, were analyzed.*

Keywords: energy problems, renewable energy, Western China.

Аногація. *В роботі досліджено основні проблеми енергетики в Західному Китаї, в провінції Ганьсу.*

Ключові слова: проблеми енергетики, відновлювані джерела енергії, Західний Китай.

In order to achieve the goals of carbon peak and carbon neutralization, China will continue to promote the adjustment of industrial structure and energy structure, and vigorously develop renewable energy.

For renewable energy, accelerate the planning and construction of large-scale wind power photovoltaic base projects in deserts, Gobi and desert areas. Gansu is rich in wind and light resources, It is one of the regions with the best basic conditions for developing new energy in China. To this end, the government seize the opportunity to take the development of new energy. The main focus of building a modern industrial system during the fourth five year plan period is to follow the goal and process of "double carbon" and speed up the construction of clean energy in Hexi corridor Base, promote the construction of large-scale wind power base, continue to expand the scale of photovoltaic power generation, vigorously promote the integration of wind, solar energy and water storage, and realize new energy high quality development.

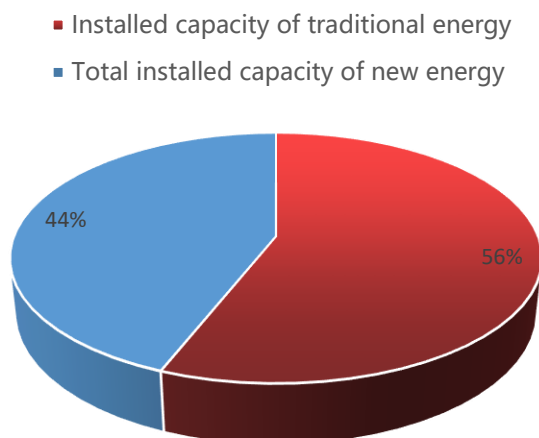


Figure 1 - Distribution map of total installed capacity in Gansu Province

According to the statistics of Gansu Provincial Development and Reform Commission from January to September this year, the newly installed capacity of new energy grid connection in the province was 1.5318 million kW. The total installed capacity of new energy has reached 25.22 million kW, accounting for 43.6% of the total installed capacity of the province; The power generation reached 33.274 billion kWh, the same as increase of 11.64% year on year; The utilization rate of wind power equipment reached 97.08%, with a year-on-year increase of 1.93 percentage points; The province's external power transmission is 406.13 billion kWh, of which, the export power of new energy exceeds 13.7 billion kWh, accounting for about 33.74% of the total export power.

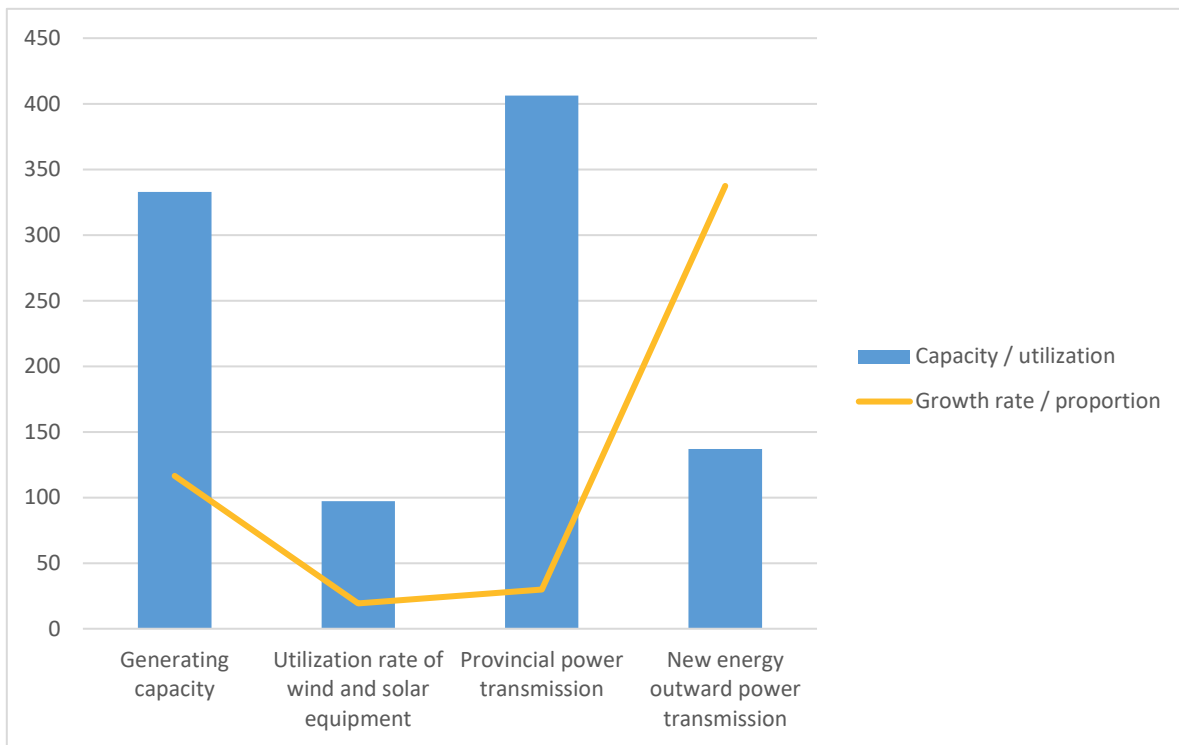


Figure 2 - Comprehensive utilization of new energy in Gansu Province in 2021

On October 15, the 2021 new energy project in Gansu Province was held in Liangzhou District, involving deserts, Gobi and desert land. The large-scale wind power photovoltaic base project in the District, with a total scale of 12.85 million kW, is a vivid practice of vigorously developing new energy in Gansu Milestone meaning.

Gansu new energy to achieve rapid and high-quality development During the 13th Five Year Plan period, the government took the consumption of new energy as an important starting point to promote the high-quality development of new energy. After the National Energy Bureau approved our province as a pilot province for the nearby consumption of renewable energy and the construction of a comprehensive demonstration area of new energy, a series of policies have been issued one after another Policies and measures to accelerate the construction of 100% renewable energy utilization in Dunhuang by promoting direct power purchase transactions, replacing self-owned power plants with new energy Cities, promote demonstration projects such as clean energy heating and electric energy substitution, make every effort to solve the bottleneck of local consumption of new energy, and achieve positive results.

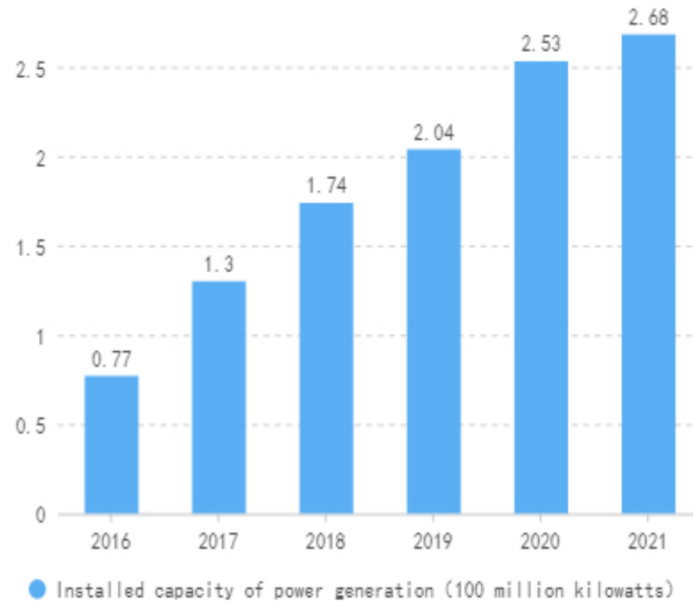


Figure 3 - Statistics of installed capacity of photovoltaic power generation in China 2016- 2021

Through years of development, the proportion of new energy in Gansu has been increasing, and the installed capacity and power generation of new and renewable energy have increased year by year. Section By the end of 2020, the installed capacity of new energy in the province will account for 42%, the power generation will account for 21%, and non-fossil energy will account for primary energy consumption.

The proportion of fees reached 26.8%, and several indicators were far higher than the national average. In 2020, 16.8 billion kWh of hydropower was completed, The trading power of new energy is 2.74 billion kWh.

Table1 - Ranking of installed capacity of photovoltaic power generation in all provinces and cities in China in 2021

Ranking of installed capacity of photovoltaic power generation in all provinces and cities in China in 2021		
Ranking	Region	Installed capacity (10000 kilowatts)
--	Whole country	26708.6
1	Shangdong	2606.0
2	Hebei	2365.6
3	Jiangsu	1764.6
4	Zhejiang	1621.6
5	Qinghai	1590.7
6	Anhui	1459.5
7	Shanxi	1337.2
8	Neimenggu	1309.3
9	Henan	1271.1
10	Ningxia	1240.0
11	Xinjiang	1233.5
12	Shaanxi	1143.5

13	Guizhou	1056.6
14	Gansu	977.8
15	Guangdong	860.0
15	Jiangxi	820.1
17	Hubei	735.2
18	Liaoning	412.1
19	Hunan	407.0
20	Yunnan	393.3
21	Heilongjiang	338.9
22	Jilin	338.3
23	Guangxi	239.2
24	Fujian	222.4
25	Sichuan	192.3
26	Tianjin	169.6
27	Shanghai	151.0

Conclusion

Overall, the development of new energy in Gansu has shown the characteristics of high proportion of new energy, balanced development of regional layout of new energy and external power transmission new energy accounts for a high proportion, the leading role of demonstration projects is prominent, and the effectiveness of energy poverty alleviation and benefit projects is remarkable.

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