SOE MATTERS

RIGHT TRACK

State Grid sets transmission record

Cross-provincial electricity supply efforts support nation's recovery amid epidemic

By **ZHONG NAN**
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State Grid Corporation of China reported its cross-regional and cross-provincial power transmission levels hit a record high this summer as the country's economy further recovers from COVID-19 and grows using many new business models.

The group's maximum capacity for cross-regional electricity transfer reached 92.08 million kilowatts during the summer, an increase of 14.11 million kW from the previous high level set in 2019. State Grid's maximum capacity for cross-provincial electricity transfer rose 6.84 million kW from the high set last year to 80.5 million kW.

The growth indicated the nation's accelerated pace of social and economic recovery, said Xin Baoan, president of the Beijing-based central SOE.

Amid effective pandemic prevention and control measures, China reported consecutive growth in power consumption as business activity was further restored, said the National Development and Reform Commission earlier this month.

The group announced that it completed the Zhangbei-Xiong'an 1,000 kV ultrahigh voltage AC transmission and transformation project in Hebei province last month.

The project runs from Zhangbei UHV substation in Zhangjiakou to Xiong'an UHV substation in Baoding. It crosses nine counties and districts across the province. The project is currently being tested by related government branches and third-party inspection agencies. It is expected to be operational by the end of the month.

Since the project was launched in March 2019, construction and management units — guided by State Grid's UHV transmission projects — have overcome challenges of complex geological conditions affecting construction, short working periods and contagion containment issues. They enhanced coordination with local governments and partnered with construction units, and dealt with various issues to ensure the completion of the project on time.

As a key project of State Grid critical to the UHV ring grid in North China, the project adopted UHV AC technology which features long-distance large capacity transmission and will transmit abundant clean power from Zhangjiakou to the load center of Xiong'an New Area of Hebei province without burdening Beijing's 500 kV ring grid. After entering operation, it will deliver more than 7 terawatt hours of clean power to Xiong'an every year, achieving 100 percent clean power supply for the new area.

Xin said the company has contributed to the fight against COVID-19 by supplying safe and reliable power while boosting economic and social development.

Central China, particularly Hubei province — the hardest-hit region in China — was a main battlefield for State Grid. The company has arranged staff from facilities, safety supervision, power generation and operation and maintenance branches to ensure power supply and safe operations in the province.

In addition to providing 24-hour shifts and supervision, unmanned aerial vehicles, inspection robots and online monitoring systems were adopted to offer safe power grids and high-quality electric services this year.

A total of 153,000 employees participated and 25,000 vehicles, 1,284 emergency power generator cars and 3,654 generators were deployed in the battle against the contagion, according to the company's press office.

As businesses nationwide began to resume operations in the second quarter, Xin said State Grid implemented several measures to support virus prevention and control as well as power supply.

As 2020 is a year marking a decisive victory in the elimination of poverty, he said poverty-alleviation projects have also been a focus of State Grid amid the outbreak. The company so far has helped facilitate sales of previously unsold agricultural products in Hubei valued at 123 million yuan ($17.85 million).

The new infrastructure has been a growth focus for China these years, and Xin said State Grid increased fixed-asset investment in the field of UHV, new energy automobile charging networks and digital infrastructure projects to 460 billion yuan. They are now expected to drive social investment of 900 billion yuan.

Among the investments, 181.1 billion yuan was allocated to UHV construction and 2.7 billion yuan went to charging piles.

Dong Yu, deputy dean of the China Institute for Development Planning at Tsinghua University in Beijing, said that apart from playing a vital role in assisting in China's battle against COVID-19, SOEs have actively participated in other activities, including stabilizing export and job markets, ensuring supply and industrial chains, as well as taking part in poverty alleviation and flood control efforts this year.

Eager to diversify its growth strength, State Grid has signed strategic agreements with 41 companies including Huawei Technologies Co Ltd, Alibaba Group, Tencent Holdings Ltd and Baidu Inc on ecological energy development.

Aside from taking the investment, construction and operation of power grids as its core business, State Grid also owns and operates overseas assets in the Philippines, Brazil, Portugal, Australia, Italy, Greece and elsewhere.

A State Grid employee checks transformers at a substation in Zhangjiakou, Hebei province, in June. YANG SHIYAO / XINHUA

460 billion yuan
total investment made by State Grid in UHV, new energy automobile charging networks and digital infrastructure projects

State Grid employees perform repairs on a transmission tower in Zhoushan, Zhejiang province, in July. YAO FENG / FOR CHINA DAILY

NHL starts shipping giant electric mining trucks to Australian firm

By **ZHONG NAN**

Inner Mongolia North Heavy Industries Group Co Ltd (NHL), a major Chinese mining truck manufacturer, rolled the first of 28 units of its 360-metric-ton carrying capacity electric mining trucks off the production line last week for an Australian client.

Ordered by Warkworth Mining Ltd, the giant trucks will be shipped to mines in New South Wales, Australia. The 1 billion yuan ($145 million) vehicle order was sealed by the two sides in March.

The trucks, with their advanced systems, will help Warkworth's mining fleet improve performance by reducing fuel consumption and adding more digital functions, and provide it with distinct sustainable cost advantages over the service lifetime of the trucks, said Li Jun, NHL's chairman.

The trucks are 16 meters long, 10 meters wide and 8 meters tall, and have carrying capacity of 360 tons.

$145 million
total value of the 28 electric mining trucks being supplied by Inner Mongolia North Heavy Industries Group Co Ltd to Australia's Warkworth Mining Ltd

Under the agreement, the trucks will be delivered over the next three years with initial three units shipped to Australia later this year, said Yang Zhe, who is affiliated with the order.

The Baotou-based company also announced earlier this month that it shipped seven 240-ton electric mining trucks from Tianjin to Serbia, representing another breakthrough for the company to export giant mining trucks to the European market amid the COVID-19 pandemic and a declining global business environment.

"This has become a successful mode for the company to extend its business scope from simply making trucks to offering entire life-cycle services in the global market," Yang said.

As a subsidiary of China North Industries Group Corp — the country's largest manufacturer of land armaments by production volume — NHL has shipped its mining trucks and other construction machinery to over 500 mines and water conservancy projects in more than 65 countries and regions, many of them located in economies related to the Belt and Road Initiative such as Mongolia, Turkey and Brazil, as well as many African nations.

The State-owned enterprise has also developed intelligent unmanned mining trucks for its customers in the energy, steel and cement sectors, including subsidiaries of State Power Investment Corp Ltd, China Huaneng Group Co Ltd, China National Coal Group Corp and Anhui Conch Cement Co Ltd.

The unmanned mining trucks have been used in opencast mining. They can plan missions and routes, load and unload and maneuver autonomously. The new products feature integrated direct line control, image processing, wireless communications and artificial intelligence technologies, the company said.

Unmanned mining trucks are expected to improve mining safety and production efficiency. Compared with other unmanned vehicles, mining vehicles need to cope with tough road conditions, unpredictable obstacles and no clear guideposts, said Ding Rijia, a professor specializing in mineral resources engineering at China University of Mining and Technology.

Qi Jun, president of the China Construction Machinery Association, predicted that China's construction machinery sector is expected to see a 3-percent increase in revenue this year on the back of the growing number of infrastructure projects being undertaken by local governments and sustained efforts by companies to boost demand for next-generation products.

Although many industries such as textiles and the services sector have been severely hit by COVID-19, local governments' infrastructure projects and China State Railway Group Co's continued network expansion will effectively support sales by domestic construction machinery firms. Most of the companies are expected to start seeing better sales in the second half.

Apart from traditional infrastructure projects like highways and airports, Qi said construction machinery will be key in supporting the growth of new infrastructure projects, such as building 5G base stations, telecommunication towers, ultrahigh voltage grids and intercity high-speed railway networks.

CARING HANDS

SPIC vows to step up green tech investment

By **ZHENG XIN**
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State Power Investment Corp, the world's largest investor in solar power generating plants, vowed to further step up investment in the ecological restoration of mining sites as the country pursues a synergy between economic development and environmental protection.

Inner Mongolia Energy Co Ltd, a subsidiary of SPIC, has invested 756 million yuan ($109 million) in ecological treatment of its five mines in two regions, including 265 million yuan in the No 1 open-pit mine (south and north open-pit coal mines) during the 2018-2019 period. It pledged to further invest another 598 million yuan this year, which will be used for the ecological restoration of 15,870 acres and to upgrade 14,198 acres of restored areas in order to ensure complete ecological restoration.

This is in accordance with the country's practice of the building of an ecological civilization as part of the country's development strategy, said the company.

> "It is our hope that we can leave the green mountains and clear waters to future generations."
>
> **Zhao Minglei,** director of SPIC's south open-pit coal mine in the Inner Mongolia autonomous region

Chinese President Xi Jinping once proposed the concept of "lucid waters and lush mountains are invaluable assets" as a measure to boost the "ecological civilization".

Central enterprises have been actively practicing the concept of green development in recent years. They have worked to keep production and operations aligned with green, ecological and sustainable development practices.

The aspiration of the "ecological civilization" advocated by Xi aims to accomplish a balance between economic development and protection of ecosystems, said Dechen Tsering, United Nations Environment Program regional director and representative for Asia and the Pacific.

From 2018 to 2019, the Inner Mongolia branch of SPIC has made remarkable progress in ecological restoration of mined areas, including a total of 1,406 hectares of terrain remodeled, 2018 hectares of grass sodded, and the planting of 36,778 trees and 7,156,535 shrubs — all representing an increase of green reclaimable land from less than 92 percent to 97 percent in the mined areas, and a rise of the vegetation coverage from 35 percent to 51.5 percent.

One of the five mines, the south open-pit coal mine excavated in 1976, is the first self-designed and self-constructed modern open-pit coal mine in China with a capacity of 18 million metric tons.

"Now, wild animals such as grassland rabbits and corsac foxes are often seen in the mine zone. It is our hope that we can leave the green mountains and clear waters to future generations," said Zhao Minglei, director of the south open-pit coal mine.

Differing from the south version, the north open-pit coal mine has been further improved on the basis of existing ecological governance, with efforts being made to build it into a garden-style and landscape-style mine zone.

Since 1976, the Inner Mongolia subsidiary of SPIC has developed and built five modern 10-million-ton per year open-pit coal mines with a combined production capacity of 81 million tons.