

Pioneers face green electricity challenges as power use grows

By YUAN SHENGGAO

When Weng Peng, a taxi driver in Taiyuan, the capital city of Shanxi province, was reminded by the car console that it's time to charge his electric car, he took out his smartphone and clicked on an app icon called Green Electricity.

The app told him where green electricity charging stations were available in his vicinity. He arrived at one in minutes and got his car charged immediately.

The green electricity, generated using clean energy sources like hydropower, solar power and wind power, can be 9 yuan (\$1.39) cheaper for a full charge than electricity generated from coal-fired plants, thanks to the government's subsidy for clean-energy development, according to Wang.

The use of green energy resources in power generation has grown substantially in recent years with support from the State as it produces almost zero emissions. However, instability in power generation and low utilization efficiency are the challenges the green electricity sector needs to address, according to industry insiders.

"The wind and solar power sectors are affected by the weather, while the hydropower sector is influenced by river runoff volume," said Sun Dawei, a senior engineer at Shanxi-based Xiangrui New Energy. "Their unstable supply to power grids is a disadvantage compared with coal-fired electricity."

Xiangrui New Energy, the developer of the Green Electricity platform and app, is among the pioneers in Shanxi to offer solutions to this challenge, according to Sun.

"Using digital and virtual reality technologies, our platform is connected with power plants, power grids, charging stations and end users like drivers," Sun said. "With information regarding power supply conditions, the drivers can select from green electricity or conventional electricity for charging based on availability."

According to Sun, the project has been operational for more than 10 months, covering most of the cities in Shanxi.

"There are a total of 116 charging

“With information regarding power supply conditions, the drivers can select from green electricity or conventional electricity for charging based on availability.”

Sun Dawei, a senior engineer at Xiangrui New Energy

ing stations and 7,300 charging piles for green electricity in Shanxi," Sun said. "Through the coordination of the platform, the power supply efficiency has been improved among green power stations, grids and charging stations and drivers also benefit for the use of subsidized green electricity."

He noted that the project can eventually contribute to emission reduction and a better environment in Shanxi by solving the supply efficiency problem for green electricity.

Xiangrui New Energy is just one example of the booming energy conservation service industry in Shanxi, as well as in China.

Statistics show that China's energy conservation service industry reported a total revenue of 600 billion yuan last year, increasing 14.9 percent from 2019.

In Shanxi, the industry is empowered by digital technologies and has been extended to a wide range of sectors including construction and heat supply.

A comprehensive construction energy conservation project, for instance, has been put into use in the northern Shanxi city of Datong.

Using building materials with good insulation properties and smart indoor temperature-adjusting technologies for its residential buildings, the project can lead to up to a 90 percent decrease in energy consumption, according to local officials.

Wu Jia contributed to this story.



New energy vehicles are assembled at a plant of Shanxi-based Dayun Automobiles. LI ZHAOMIN / FOR CHINA DAILY



A documentary featuring Shanxi's attractions and charms is played on big screens during the Shanxi Week at the China Pavilion at Expo Dubai 2020. LI SHU / FOR CHINA DAILY

Province shines during landmark Dubai expo

Unique resources, advantages showcased during high-profile event



By YUAN SHENGGAO

High-quality products from nearly 200 Chinese enterprises are being displayed online at the ongoing Expo Dubai 2020 and attracting the world's attention.

The half-year-long Expo Dubai 2020, which was originally scheduled to open a year ago, was launched on Oct 1 this year as a result of the COVID-19 pandemic.

The Shanxi Week at the China Pavilion was held from Nov 8-10 both online and offline.

The offline Shanxi Week was held in Taiyuan, capital of the North China province. It was shown to buyers and visitors in Dubai, the United Arab Emirates, as well as across the world, via the expo's online platform.

In addition to products, there were also shows exhibiting what Shanxi offers in terms of culture and tourism.

A special TV documentary entitled *This is Shanxi, A Land of History and Modernity*, featured many of the province's attractions and charms. It generated more than 160,000 views online during three days.

Shanxi's economic development achievements, advantageous industries and business opportunities were also displayed during the exhibition.

A particular highlight was Shanxi's high-quality development in relation to its economic transformation, energy revolution and low-carbon growth.

In his keynote speech delivered at the opening ceremony of the Shanxi Week, the province's vice-governor

He Tiancai said: "In the next five years, we plan to build Shanxi into a demonstration zone for China's transformation in resources development; a pilot region in the country's energy revolution; and an important experimental zone for ecological protection and high-quality development in the Yellow River drainage region."

"Our five-year targets also include becoming an advanced manufacturing base in China's central regions; a new hub for opening-up in China's inland regions; and a renowned tourist destination with international influence."

The vice-governor added that all these initiatives will create huge opportunities for the international business community to cooperate with Shanxi.

He noted that Shanxi is implementing an economic transformation that is reducing its reliance on coal mining and other heavy industries and fostering new growth drivers by developing emerging, high-tech and low-carbon industries.

With all these plans in place, the vice-governor added that Shanxi is devoting much energy to developing a business environment friendly to both global and domestic investors.

"Sticking to the principles of rule of law and market orientation, learning from the best practices of the world and constantly improving services for businesses, we are determined to offer an ideal environment to facilitate collaboration with the world," He said.

Collaboration in the energy industry is an important part of Shanxi's international cooperation programs that it showcased during the Shanxi Week.

An online business promotion fair for cooperation relating to energy revolution and innovation was held after the opening ceremony.

Leading energy enterprises in Shanxi, including Jinneng Hold-

ing Group, Huayang Group and the Shanxi branch of State Grid, introduced their latest products, technologies and solutions to potential partners in Dubai and the rest of the world.

Huayang Group displayed a range of new, energy-conserving materials, including its cutting-edge aerogel and graphene, at the fair.

Wang Mingju, deputy general manager of Huayang's new materials unit, introduced the aerogel materials to the audiences attending the fair online, explaining its application as a catalyst, in heat insulation and in chemical absorption among others.

She said that aerogel is among the best heat-insulating materials in the world.

"It is set to play a bigger role in boosting energy conservation in construction as the world moves toward its goals of carbon peaking and neutrality," Wang said.

Jinneng Holding's offering at the fair was its heterojunction thin film — or HJT — solar cell technology.

The company began to supply this high-efficiency photovoltaic component to domestic solar power generation plants in 2015, and now the product has been sold in more than 30 countries, according to Yang Liyou, general manager of the clean energy arm of Jinneng Holding.

Yang gave high praise to the role of Expo Dubai 2020's online platform and the Shanxi Week event for promoting local business opportunities and showcasing Shanxi's unique image.

"I believe the cloud event made the world more aware of Shanxi and I hope to collaborate with new partners from all over the world by sharing our expertise and experiences," Yang said.

Li Shu contributed to this story.

Sheep herding brings prosperity flocking

By YUAN SHENGGAO

Sheep herding is a profitable industry in China. However, if farmers want to earn more, they have to solve a range of problems such as scale expansion, processing and marketing, which is almost impossible relying on only their individual strength.

But farmers in Nanxiaozhai village in the Shanxi city of Huairan, have found a solution to the problem.

Guo Jianqiang, a resident in Nanxiaozhai, said he started his business in 2013 by raising about 300 sheep. The number has since increased to 1,000.

"I earned an income of 2 million yuan (\$309,000) last year and the amount is expected to reach 9 million yuan this year," he said.

Guo attributed the growth to the establishment of a sheep cooperative, which helped to expand operational scale and sales channels with the joint force of stockholders. Guo himself is the head of the cooperative.

According to Guo Zhidong, Party secretary of the village, Nanxiaozhai now has a total of 89 such cooperatives.

"The number of sheep totaled 1 million in our village last year," Guo Zhidong said.

The cooperatives have also developed a full industrial chain for sheep, ranging from raising, slaughtering and lamb processing to their sale, according to the village Party chief.

"In addition to our locally raised sheep, we also purchase sheep from neighboring villages for our slaughterhouses," Guo Zhidong said.

Nanxiaozhai's sheep industry generated more than 2 billion yuan in gross revenue last year, making it one of the richest villages in the city of Huairan, according to Guo Zhidong, who added that the village's per capita net income surpassed 100,000 yuan.

Nanxiaozhai has a long history in the sheep industry, according to the village Party chief, who explained that was a natural choice out of the village's environmental conditions.

In Nanxiaozhai, residents used to farm on the infertile land and the grain yield could hardly support their existence.

It was Wang Yueming, Cao Zhiguo and other villagers who started their business as sheep dealers in the late 1970s.

"They could earn up to 20 yuan for selling a sheep," Guo Zhidong said. "That was a very large income at that time."

Later, about 80 percent of the villagers were engaged in the business but they found purchasing sheep from neighboring villages became more difficult because of limited output. So they began to raise sheep themselves.

It was the cooperatives that helped the sheep-raising business increase to today's scale.

Wang Gaizhuan is the head of another cooperative in Nanxiaozhai. He said he started his business by raising about 100 sheep in 2008.

"Our cooperative now operates two farms and the total number of sheep is about 7,000," Wang Gaizhuan said, adding that his personal income was more than 2 million yuan last year.

The village business has also boosted the sheep industry in Huairan city as a whole.

Statistics show the city's annual output of sheep is about 6 million heads, making it a renowned sheep-producing base in Shanxi.

Wang Pei contributed to this story.



A sheep farm in the village of Nanxiaozhai in Huairan. YU SUWEN / FOR CHINA DAILY

Tourism industry puts spotlight on 'hidden gems'

By YUAN SHENGGAO

Many rural villages in Shanxi are often referred to as "hidden gems" by those in the know, for their cultural wealth and natural wonders. These are necessary elements in spreading the word and developing them into tourist attractions to help to boost local incomes.

With assistance from cultural and tourism experts, the development of these villages is speeding up, and at the same time becoming more sustainable.

Experts from the Shanxi Cultural Heritage Administration, for instance, are helping five villages in Shanxi protect and preserve their cultural legacies and develop tourism.

One such village is Baiyangpo in the heart of the Taihang Mountains. The village can be found in the east of Pingshan county near the source of the renowned Red Flag Canal.

The canal was dug on precipitous

rock surfaces and sheer cliffs in the Taihang Mountains by local people in the early 1960s as a major irrigation project. As a large part of the canal consists of waterways on cliffs and suspended viaducts, it enjoys a reputation as being a "man-made river in the sky" and

"modern Great Wall". The project is viewed as a symbol of the enterprising spirit of the local builders and residents.

In 2020, the provincial cultural heritage administration's experts proposed an overall tourism development plan for the village of Bai-

yangpo, aiming to build it into a "museum of farming culture and ecology".

According to the plan, the canal, the farmlands and every farmhouse in the village would be integrated into this huge museum. Every resident was then regarded as an operator and



A theatrical show is staged in the village of Beiquan in Lingqiu county to entertain tourists. MENG MIAO / FOR CHINA DAILY

guide of the museum and an inheritor of the local farming culture that has thrived for hundreds of years.

Shanxi Archaeological Research Institute, a branch of the cultural heritage administration, has helped to promote the tourism attractions and produce of the village of Doukou in Pingshun county in its museums. Driven by its booming tourism industry and sales of produce, Doukou, once a poverty-stricken village, has seen steady growth in residents' income over the past five years. Its per capita net income for its residents was 10,721 yuan (\$1,678) last year.

The Shanxi Federation of Literary and Art Circles is another organization offering active assistance for rural tourism development.

It has organized cultural shows and held other activities in a number of Shanxi villages to help to promote rural tourism.

Its members of photographers and painters have traveled extensively in the countryside, using their cameras and canvases to publicize rural attractions.

Guo Yanjie contributed to this story.