

Energy revolution changing people's lives for the better

Host of companies innovating to get the most out of Shanxi's green power resources



A wind farm straddles the Lyuliang Mountains in the county of Jiaokou. HAO HUI / FOR CHINA DAILY

By YUAN SHENGGAO

A taxi driver in Shanxi province's capital of Taiyuan, whose surname is Li, said he used to think energy revolution was only a slogan used by authorities, instead of a concern of ordinary people.

But recently, he felt the benefits that energy revolution has brought to his livelihood.

On one summer day while driving, Li was reminded by the car console that it was time to charge the battery. 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.

The green electricity, generated using clean energy sources like hydropower, solar power and wind power, can be much cheaper for a full charge than electricity generated from coal-fired plants, thanks to the government subsidy for clean-energy development, according to Li.

"The electricity we use to charge our cars is already much cheaper than other conventional fuels like gasoline and diesel," Li said. "So we can enjoy a substantial decrease in energy cost, which is very significant for a taxi driver who has to be on the road all day long."

The use of green energy resources in power generation has grown substantially in recent years because it produces almost zero emissions and has support from the State. However, instability in

power generation and low utilization efficiency are challenges the green electricity sector needs to address, according to industry insiders.

They said wind and solar power sectors are affected by the weather, while the hydropower sector is influenced by river runoff volume. Their inherently 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 an answer, according to Sun Dawei, a senior engineer at the company.

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

Shanxi is now one of the pioneers in China's energy revolution campaign, which aims to realize peak carbon in 2030 and carbon neutrality in 2060.

The province's own initiatives for the energy revolution campaign include promoting the development of green energy resources like wind and solar power, and upgrading the coal-mining industry with the latest technologies to improve efficiency and reduce emissions.

The capacity of power generation plants based on clean and renewa-

ble energy resources now accounts for 34.3 percent of Shanxi's total, local statistics show.

Shanxi witnessed rapid growth in the development of solar and wind power industries during the 13th Five-Year Plan (2016-20). Those years saw wind-power generation capacity increase at an average annual rate of 24.16 percent, while the rate for solar-power generation was 63.22 percent. It ranked Shanxi among the fastest-growing provinces in the two sectors.

In the area of coal-mine upgrading, Shanxi's industrial players have been using the latest digital and automatic technologies.

Statistics from the Shanxi Energy Administration show that more than 75 percent of the coal output in Shanxi was from advanced facilities in 2021. Such facilities feature higher efficiency, fewer emissions and less pollution.

Shanxi Coking Coal Group is one of the pioneers in using new technologies to improve efficiency and reduce emissions.

It has recently developed such technological solutions as unmanned coal cutting, digitalized remote control and the simultaneous extraction of coal and coal-bed methane to improve efficiency and safety.

One of its renowned environmentally friendly practices is refilling depleted mining shafts with coal refuse to avoid the risks of geological disasters.

Lu'an Group, a coal-mining and power generation company based in the city of Changzhi, has

designed a comprehensive approach to upgrade its operations.

One of its solutions is turning coal into cleaner fuel through liquefaction before it is used for power generation.

Lu'an Coal-Based Clean Energy, one of the branch companies of the group, recently launched a power generation project fired by liquefied coal. The facility can process 1.8 million metric tons of coal a year.

A number of companies in Shanxi have recently reported achievements in the comprehensive use of coal, including turning the mineral into hydrogen, carbon-graphite and other chemicals and new materials.

Lu'an Group is once again an important player in these initiatives. It recently announced the completion of a project for making carbon fiber from coal. Its annual output will be 1,800 tons of carbon fiber upon full operation, the biggest in the country, according to company executives.

Another player in developing new materials from coal, the Second Research Institute of China Electronics Technology Group Corp based in the provincial capital of Taiyuan, has realized mass production of 4 and 6-inch silicon carbide chips, with coal as the raw material.

It is the largest company in China and the only one in Shanxi developing and producing silicon carbide materials, according to its executives.

Zhang Yi contributed to this story.

Tourism booms as county highlights cultural assets

By YUAN SHENGGAO

Jingle, a Shanxi county within one hour's drive of the provincial capital of Taiyuan, is developing itself into a popular tourist attraction capitalizing on its unique natural, cultural and even farming resources.

With a national-level wetland park by the Fenhe River and a number of mountains covered by lush vegetation, the county is one of the most renowned destinations for recreation in Shanxi, according to local officials.

While boasting a number of natural attractions, the county's rich resources in culture and history have proved to be another draw for tourists.

These unique cultural resources include a number of Buddhist temples, secluded caves that used to offer shelter to hermits, inscribed cliffs, old battlefields, cave dwellings and a unique farming culture, as well as time-honored intangible cultural assets like paper-cutting, ballad singing and other folk performances.

Jingle was included on the nation's list of "demonstrative regions for comprehensive tourism development" in 2016.

Since then, the local authorities have adopted a comprehensive approach to design a plan for the development of tourism.

To map out a development model with local characteristics that can meet the diverse demands of tourists, the county government has proposed an overall tourism plan in cooperation with experts in Shanxi and local industry insiders.

The new plan focuses on the integration of culture and tourism, farming and sightseeing and tourism and ecology.

Jingle's tourism development has also won strong support from the

country's central authorities. Over the past two decades, the Ministry of Culture and Tourism has sent 28 officials and experts to the county to guide its tourism and culture-related development.

The officials have offered training to hundreds of locals, helping them get familiar with tourism business operations. They have also organized local folk artists to teach residents skills in local arts like paper-cutting, ballad singing and opera performances.

Combining farming activities with tourism is just one of the innovative practices in Jingle.

The county is one of the largest bases in Shanxi for quinoa farming. As quinoa is a crop introduced from South America decades ago, the farming process can offer an exotic experience and the farmland can offer a unique sight that tourists cannot observe in other agriculture-sightseeing areas, according to local tourism officials.

The Jingle Quinoa Industrial Park is now the county's major destination for agricultural sightseeing, where tourists can watch farming activities on-site and buy the special produce that is said to be good for people's health.

According to officials, this park is also an ideal site for students' study tours as they can visit a museum with products on display, and view videos and pictures about the crop's origin and its full process of growth. They can also visit the base's laboratory to experience the gene bank, which contains various quinoa varieties, and talk with agronomists to gain further knowledge on the topic.

Zhang Tianzhu and Qiao Mu contributed to this story.



The Fenhechuan Wetland Park is a major attraction in the county of Jingle. SONG YULONG / FOR CHINA DAILY

Traditional brands adapt to modern consumption

By YUAN SHENGGAO

Time-honored brands often arouse people's memories of history and culture unique to the region of production.

This is true in the North China province of Shanxi, which is home to 69 time-honored brands that include the famed mature vinegar in the provincial capital of Taiyuan and Fenjiu white liquor in the city of Fenyang. Of them, 27 have been recognized by the Ministry of Commerce as national old brands and the remaining 42 recognized as provincial old brands.

Old as they are, however, these brands are evolving. Through constant adaptation and innovation, the time-honored brands of Shanxi are taking on a new lease of life, embracing modern trends of consumption.

One example is the mature vinegar produced in Taiyuan. Local producers' attempts to adapt include integrating their operations with the culture and tourism industry.

Taiyuan is a major production site of mature vinegar in China. It is said that China's vinegar industry originated in Qingxu county in Taiyuan, dating back about 3,000 years.

Shanxi Old Vinegar Group, the producer of the famed Dongghu-branded vinegar, is operating an industry-themed tourism facility in Taiyuan.

The facility, Dongghu Old Vinegar Garden, was opened in 1998. It was

recognized by the then National Tourism Administration as the only tourism brand in the vinegar industry in 2004.

This is a facility combining production, sightseeing and sales, where tourist can catch a glimpse of the centuries-old, traditional vinegar-making techniques.

In the garden's museum are old vinegar-making equipment and documents recording the ancient production techniques.

A variety of the company's current produce is on display in the museum, giving visitors the opportunity to taste the authentic vinegar of Shanxi.

"I thought vinegar should be sour in taste," said a visitor to the garden. "Now, I recognize the richness of the taste of Shanxi's mature vinegar is beyond my expectations."

In addition to old mature vinegar, other time-honored brands in Shanxi are making attempts to adapt to modern times and meet the demands of various consumers at home and abroad.

These attempts include expanding into global markets, presenting new varieties to meet the tastes of international consumers and sales on online platforms, according to Qiao Zhijun, secretary-general of the Shanxi Association of Time-Honored Brands.

Xing Aitian contributed to this story.



Dongghu Old Vinegar Garden is a destination where tourists can experience the centuries-old vinegar culture in Shanxi. XING AITIAN / FOR CHINA DAILY

Reforms and innovations spurring on employment

By YUAN SHENGGAO

Enthusiasm for entrepreneurship is on the rise in Shanxi, despite a nationwide slowdown in economic development due to ongoing COVID-19 outbreaks.

The vibrancy of the economy is visible in the booming market activities and the increasing number of business startups throughout the North China province.

In early July, thousands of job hunters were attracted to a job fair in the city of Datong. The event focused on the big data industry.

Li Juan, one of the participants in the fair, said she was there to seek employment or business opportunities.

Li is a university graduate who majored in big data. "Datong has a booming big data industry," she said. "I'm optimistic about the industry's prospects here."

About two dozen renowned domestic big data companies from across the country were present at the event. They had a total of 5,000 vacancies on offer and intended to recruit professionals and workers for their operations in Datong and its neighboring areas.

And there were more jobs provided by smaller companies at the fair.

Datong has witnessed rapid development in digital industries with livestreaming as the representative of their growth.

The Datong 5G Livestreaming Base, for instance, is an industrial



Jinyangli commercial district in the city of Taiyuan has gathered a number of retail businesses. WANG RUIRUI / FOR CHINA DAILY

park established in collaboration with renowned e-commerce and internet companies like JD, Suning, Tencent and Baidu. It has been home to more than 50 businesses in the past two years.

The livestreaming platforms of these 50-plus companies have signed agreements with almost 1,000 suppliers nationwide to promote their nearly 100,000 product varieties online. The platforms have hired hundreds of livestreaming anchors for product promotion.

In addition, tens of thousands of small or household businesses have been established in Datong and its neighboring areas, using the platforms to sell their goods.

Shanghai-based Jinhuasuan is one of the companies that operate an e-commerce branch in Datong.

The branch's e-commerce platform alone is offering online stores to nearly 70,000 household businesses.

Local entrepreneurs said the secret behind such strong economic vitality is the improved business environment in Datong, as well as the rest of Shanxi.

The authorities' initiatives to benefit businesses include easier market access; protection of intellectual property rights; reduction in taxes and charges to help businesses cut operational costs; streamlining administrative service procedures; as well as other incentives to assist business startups and operations.

In Shanxi as a whole, reforms to licensing systems have played an important role in boosting people's confidence in doing business in the

province, according to Guo Xin'an, deputy chief of the Shanxi Market Regulation Bureau.

He said Shanxi began the reform to delegate business approval powers and reduce the number of certificates needed for market access in 2021.

Guo said Shanxi's current practice means "a business license is all that's needed to begin operations".

In the past, business owners needed to first obtain various certificates, including those for fire safety, sanitation and admissions for the sale of drugs and medical equipment before they could apply for a business license to start operating.

The old practice meant that a business would spend several months applying for certificates before they could get a business license and get their business moving.

"And now, businesses can begin operations upon acquiring a license, while other certificates can be dealt with afterward," Guo said.

The official said such an initiative has ignited people's enthusiasm for entrepreneurship.

"Within a year of the reform's implementation, we saw a substantial increase in the number of business entities in Shanxi," Guo said.

The number of Shanxi's business entities reached 3.58 million by the end of June, an increase of 21.47 percent from the same period of last year, according to Guo.

Wu Jia contributed to this story.