

Shanxi drives growth with industrial upgrade and rural vitalization

Province shoulders double responsibility to ensure nation's energy security and fulfill its sustainable emission targets in 2030 and 2060



By YUAN SHENGGAO

The North China province of Shanxi is promoting high-quality development by diversifying and upgrading its energy industry; vitalizing its rural areas through modernized agriculture, integrating culture and tourism, and promoting e-commerce; and cultivating emerging sectors as new growth engines.

As a major supplier of coal, electricity and other energy resources, Shanxi shoulders the double responsibility of ensuring the nation's energy security and helping the country fulfill its sustainability targets, including the goals of carbon peaking before 2030 and carbon neutrality before 2060.

By stabilizing production, Shanxi made a great contribution this year to ensuring its coal supply to the country.

The Shanxi Energy Bureau said during the first 11 months of the year, the province produced a total of 1.2 billion metric tons of coal, ranking it first in the country. The

majority of the output was transported to the rest of the nation.

The bureau predicted that whole-year coal output is expected to surpass 1.3 billion tons.

To help to ensure the sustainability goals of the province and the entire country, Shanxi has made great strides in upgrading its coal mining and coal-fired power generation industries, as well as accelerating the development of clean and renewable energy sources.

The bureau said more than 78 percent of the coal output is produced at advanced facilities featuring high efficiency, digitalized operations and clean production. All coal-fired power generation facilities reached a standard of super-low emissions. The bureau added the amount of electricity generated from clean energy resources like wind and solar power now accounts for 40.34 percent of Shanxi's total.

In Shanxi's energy industry, there are a great number of cases of best practices for sustainable development.

Tunlan Coal Mine, a coal-mining and coal-fired power generation enterprise in the Shanxi city of Gujiao, for instance, is contributing to sustainable development by establishing an innovative coal refuse recycling and reuse project.

The coal ash from its power plant is

now transported via conveyor belts totaling 2 kilometers to its depleted mining shafts for refilling, reaching a depth of up to 400 meters underground. The company said the practice has multiple benefits in both economic and environmental terms.

It can solve the problem of solid waste discharge and avoid the risks of geological disasters. It is also a practical solution to saving on the costs of waste disposal and shaft refilling.

In addition, refilling depleted shafts with coal refuse can help to enhance the coal mine's safety and extend its operational life cycle. "The operational period of shafts near the refilled ones can be extended by more than 12 years," an executive of the company said.

Wang Maosheng, deputy chief of the Shanxi Energy Bureau, said other excellent practices in the energy industry also include simultaneous extraction of coal and coal-bed methane, and producing hydrogen from coking gas, as well as the extensive use of digital technologies, 5G communications and the internet of things in developing intelligent coal mines.

During the 2022 Taiyuan Energy Low Carbon Development Forum held on Sept 1-3, these best practices were presented and aroused great interest among participants from home and abroad.

In addition to the revolutionary



Taiyuan Iron and Steel Group is among the few in the world that can produce steel foil with a thickness of less than 0.02 millimeters and a width of more than 600 mm. WU LIUHONG / FOR CHINA DAILY

transformation of the energy industry, Shanxi's efforts dedicated to sustainability also include improving the environment.

The province has implemented a comprehensive environmental campaign to improve water and air quality, curb soil erosion and encourage the greening of the land.

Over the recent years, Shanxi has seen an annual addition of 267,000 hectares of forests, with its forest coverage surpassing the national average for several years.

Aside from fulfilling sustainability goals, Shanxi also regards advancing manufacturing industries, modernizing agriculture, developing emerging sectors and fostering new growth areas as crucial parts of its high-quality development.

Taiyuan Iron and Steel Group is one of the best examples for advanced manufacturing in Shanxi.

The company is one of the first steel-makers in Shanxi with intelligent operations and automation. It is among the few in the world that can produce steel foil with a thickness of

less than 0.02 millimeters and a width of more than 600 mm.

The product, which is called super-thin broadsheet steel foil, can take the place of aluminum foil in similar industrial applications such as the fields of aerospace, electronics, petrochemicals and automobiles. Compared with aluminum foil, however, it performs better in erosion, moisture and heat resistance.

Thanks to the promotion of farming machines, new technologies and new techniques, Shanxi's agricultural industry has seen steady growth in recent years.

This year, Shanxi's total grain output and per-unit grain output both reached record highs. Local statistics show that the total output hit 14.64 million tons in 2022, 430,500 tons more than in the previous year. Per-hectare output reached 4.65 tons, about 119 kilograms more than last year's figure.

Shanxi has fostered 14 strategic emerging industries as new growth engines for the local economy. The new industries, mostly falling in high-

tech categories, are playing a crucial role in promoting the upgrade and transformation of the province's traditional industries.

The central Shanxi cities of Taiyuan and Xinzhou are implementing a program to build an integrated economic zone and develop a city cluster.

The zone will mobilize resources in both cities to build industrial clusters centering on new materials and advanced equipment manufacturing, and foster new engines for the province's economic development, officials said.

Before the program, Taiyuan teamed up with the city of Jinzhong to its south to develop the Shanxi Transformation and Comprehensive Reform Demonstration Zone.

The three cities of Taiyuan, Xinzhou and Jinzhong have formed a larger city cluster which can drive development of a bigger area of neighboring cities with their own industrial strengths and advantages, the officials said.

Zhang Yi contributed to this story.

Green development at the forefront of city's strategy

By YUAN SHENGGAO

The southwestern Shanxi city of Hejin, which literally means "ferry port along the Yellow River", is transforming into a green development model, making itself an attractive destination for tourists and ideal home for residents.

The transformation began in 2019 with the completion of the Hejin section of the Yellow River No 1 Road.

Stretching more than 1,200 kilometers from north to south along the river, the Yellow River No 1 is a major sightseeing highway in Shanxi province.

In Hejin, the road is a combination of a 31.8-km motorway and a 14-km path for cyclists. The entire road constitutes a scenic belt along the Yellow River that links a number of attractions including the Grand Ladder Cliff, Dragon Gate, Cangtuo ancient village, Gaomei Temple and General Xue Rengui's Cave Residence, as well as a string of wetland parks.

The area along the road is also an ecological corridor consisting of wetlands, rivers, lakes and farmland. It offers an ideal habitat for such wild birds as white egrets, cranes and herons.

Li Hui, head of the Yellow River Promotional Center in Hejin, said the ecological corridor cost a total investment of 360 million yuan (\$51.66 million) in its initial phase. In recent years, there was an additional investment of 180 million yuan in developing green spaces, building gardens, pavilions and sightseeing facilities. The total area of greenery along the corridor amounts to 1.5 million square meters.

The official said the big investment in developing the ecological corridor shows the local government's determination in environmental protection. "We are protecting the environment like protecting our eyes," he said.

This determination is also demonstrated by the efforts in improving the environment in other areas, including the mountains, urban areas



A wetland park near the Yellow River in Hejin city. ZHANG HAIYING / FOR CHINA DAILY

as and countryside.

The city has marked 47.3 sq km of land as ecological protection zones, increased its urban vegetation coverage to 40 percent and built a number of sewage treatment facilities.

Industrial development is also subject to strict environmental standards. Sunshine Group, for instance, is a major coking company in Hejin that has upgraded its operations toward clean and efficient production.

"Thanks to the use of new techniques, new technologies and new equipment, we have realized zero

discharges of wastewater, solid waste and waste gas," said an executive of the company.

In addition to the manufacturing sector, the rural areas of Hejin are gearing up to green development as well.

Local statistics show that a total of 500 million yuan has been invested in building sewage treatment facilities in villages, fundamentally changing the living environment for residents.

Zhang Haiying contributed to this story.

Majority of destinations welcome back visitors

By YUAN SHENGGAO

Under the warm sunshine of a winter day, the Taoqing Wetland Park in the southeastern Shanxi city of Changzhi welcomed flocks of migratory birds and groups of sightseeing tourists and photographers.

It is one of the tourist destinations in Shanxi which recently opened to the public after the State and provincial authorities released new measures to optimize the COVID-19 response in late November.

This is also the case in the Salt Lake scenic area in Yuncheng, where the "blooming salt flowers" — various forms of salt crystal — are attracting more tourists, and in Taiyuan's food street, which is welcoming back diners.

The Shanxi Department of Culture and Tourism said a total of 168 tourist destinations have reopened to date, accounting for 61.8 percent of Shanxi's total.

To attract more visitors, 14 destinations in Shanxi, including the Grand Courtyard of Qiao's Family in Jinzhong, the Mianshan Mountain in Jiexiu and the Zhangbi Ancient Castle in the same city, are offering tourists with free entrance or discounted fees.

More residents in Shanxi are planning for long-distance trips. Local online ticket-selling platforms show that the number of searches for railway and airline tickets recently reached record highs in the three years since the COVID-19 outbreak at the end of 2019.

Fan Xiaofeng, a resident in the Shanxi provincial capital of Taiyuan, said: "I have been planning for a long-distance trip for a long time and it is the right time to go."



A craftsman making noodles attracts the attention of visitors to Jiajiazhuang, a rural tourist destination in Fenyang city.

He plans to take a self-driving trip along the Yellow River with his friends.

When talking about the remaining 38.2 percent of destinations whose operations are suspended, Chen Shaoqing, deputy chief of the Shanxi Department of Culture and Tourism, explained that "they are shut down not for the reason of pandemic control".

"Thirty-two destinations are closed because they are in conditions not suitable for operations in winter, while the other 43 are in the process of renovation," Chen said.

The official said there will be a great number of promotional events during New Year and Spring Festival in destinations across Shanxi. The events will include winter sports activities in ski resorts, Spring Festival folk shows throughout the province, and culinary festivals.

Zhang Ting contributed to this story.



Jiajiazhuang is known for a variety of food among tourists. PHOTOS BY WU LIUHONG / FOR CHINA DAILY

Wind power project marks new direction of company

By YUAN SHENGGAO

Despite the winter cold, workers are busy building a large wind power project in the Shanxi city of Gujiao.

With a total investment of 1.65 billion yuan (\$236.7 million), this is one of the new projects funded and built by Shanxi Construction Investment Group, a leading State-owned infrastructure company in Shanxi province.

The company's executives said the project marks the latest effort by SCIG in its transformation toward green and low-carbon development.

Sun Bo, chairman of the group, said the Gujiao wind power project will have an annual power generation capacity of 450 million kilowatt-hours, which represents a saving of 130,000 metric tons of coal a year.

The executive said low carbon and environmental protection are now at the top of the company's agenda. Its sustainability goals are realized not only in its adjusted investment orientation, but in its entire operational process ranging from manufacturing, construction and installation.

The company has a plant in the



Construction structures are produced at an intelligent plant of Shanxi Construction Investment Group. LI JIE / FOR CHINA DAILY

Xiaohe Industrial Park in Jinzhong, which manufactures structures used in construction.

Yang Qian, an executive at the plant, said they aim to bring environmental benefits to construction sites. "The manufactured structures, like steel structures and other big components, are bringing a revolution to the construction industry," Yang said. "It means that the projects are not built but assembled."

Assembling structures at the construction site can save the use of water, cement and other resources and can substantially reduce pollu-

tants like dust and wastewater.

SCIG now has eight such production facilities in operation in Shanxi, with another two under construction.

These facilities can produce 166 varieties of environmentally friendly products for construction. They include pipes, steel structures for bridges and wind power components, according to Cheng Junhu, an SCIG executive in charge of the operation of the production facilities.

"Since 2019, when we began to develop the production facilities, we have grown into a pacesetter in

assembled construction in Shanxi," Cheng said.

He added that the new business model has resulted in skyrocketing orders. The orders for manufactured structures amounted to 5.04 billion yuan in 2021, compared with 309 million yuan in 2019. Its profit from the new business also increased from 2 million yuan to 93.2 million yuan during the same period.

He said the company has reported a more rapid development in the so-called "low-carbon market", which includes the production for and construction of wind and solar power facilities, as well as other industries related to environmental protection.

The company has founded a subsidiary company, Shanxi Low-Carbon and Environmental Industry Group, for this specific market. By November, the total value of its contracts in this market surpassed 30 billion yuan.

In SCIG as a whole, the total value of contracts signed in the first three quarters of this year reached 249 billion yuan, an increase of 24.4 percent year-on-year.

Jin Shuaini contributed to this story.