

Eco focus sees Shanxi lead way in emissions reduction



Province once famed for coal production now helping China fulfill carbon pledges

By YUAN SHENGGAO

As a pilot province for industrial transformation and energy revolution, Shanxi in North China is contributing to the country's carbon targets.

Chinese authorities pledged to the international community last year that the country will reach peak carbon emissions in 2030 and carbon neutrality in 2060.

Shanxi is one of the major coal-mining and energy-producing provinces in China.

In recent years, the province has been running a campaign to transform its development model. It has been reducing its reliance on coal mining and other heavy industries and prioritizing the development of clean energy resources and fostering emerging industries as new growth engines.

Local authorities said this economic transformation targets sustainable high-quality development with a balance between growth and environmental protection.

A recent move was that almost all of the province's 107 power-generating enterprises listed on the national carbon-trading market had completed their quota settlement for the first performance cycle. Local media reported that the quota completion rate reached 99.68 percent, 0.18 percentage points higher than the national average.

The national carbon-trading market, or China Carbon Emission Trade Exchange, opened on July 16, 2021.

Carbon trading is the buying and selling of quotas that permit a company or other entity to emit a certain amount of carbon dioxide or other greenhouse gases.



Taiyuan Iron and Steel Group is one of the few steelmakers in the world capable of producing broadsheet superthin stainless steel foil with a thickness of less than 0.02 millimeters. WANG XUZHONG / FOR CHINA DAILY

Industry insiders in Shanxi said that listing local power companies, which are usually the major polluters, in national carbon trading marks a crucial step in carbon peaking and neutrality. This is because power producers subject to the quotas are motivated to reduce their emissions to lower their costs.

In Shanxi, efforts to realize carbon peaking and neutrality are not limited to the power-generation industry. Energy-consuming industries like steelmaking were among the first to respond to the initiative.

Taiyuan Iron and Steel Group, based in the provincial capital, is the largest and most advanced steelmaker in Shanxi.

Its board chairman Gao Xiangming said the company has always endeavored to reduce emissions over the years.

"In 2019 we realized superlow emissions in all production processes and we were among the first steelmakers to be granted an A-class national certificate for super-low emissions in 2020," Gao said. "And our total emissions volume in 2021 represented a 73.5 percent decrease from the figure in 2018, before a massive upgrade was launched."

Gao said the company's use of clean energy resources, like solar power and hydrogen, has greatly contribut-

ed to the reduction in emissions.

He said its energy consumption was reduced by using cutting-edge technologies that created both high-quality products and environmental benefits.

The company is one of the few steelmakers in the world capable of producing broadsheet superthin stainless steel foil with a thickness of less than 0.02 millimeters, according to Gao. He added that it is produced for specific industries including aerospace, electronics, petrochemicals and automobiles.

In Shanxi, initiatives responding to carbon peaking and neutrality include developing clean energy resources to replace coal, planting more trees and grasses, cleaning up rivers and reducing air pollution.

On March 14, Shanxi released its list of key environmental projects for 2022. Those relating to the energy revolution, resource conservation and ecological restoration topped the list.

After efforts to develop solar and wind power, the province is turning its attention to the development of hydrogen — a fuel with zero emissions. It includes hydrogen produced from coking gas and the production of hydrogen fuel cells for vehicles.

Hydrogen industry clusters have been created in the cities of Taiyuan, Datong, Changzhi and Jinzhong. The

annual hydrogen production capacity of the province has reached 3 million metric tons, according to the Shanxi Energy Administration.

Shanxi saw the addition of 346,000 hectares of forests in 2021 as a result of 143 greening projects across 11 cities, according to the Shanxi Forestry and Grassland Administration.

The administration said Shanxi's forestry sector will become an important part of the national carbon-trading market. It has established a special team to help integrate the local forestry industry into the market.

Shanxi has also established a number of institutions and organizations for research and services related to carbon peaking and neutrality. These include the Shanxi Carbon Neutrality Strategy Research Institution, an assessment center for greenhouse gas emissions, and the Shanxi service center for carbon trading.

A carbon neutrality industrial alliance was established on Nov 11, 2021. It aims to foster cooperation between research institutions and industrial players by commercializing research results, training professionals, offering consultation and other technical services.

Han Linfang contributed to this story.

Tech upgrade improves community services

By YUAN SHENGGAO

It's routine for Li Min, a resident in Shanxi's provincial capital of Taiyuan, to go to the community convenience store called Tangjiu No 1, for breakfast.

She can usually be served within seconds, she said, as she places her order the night before through an app.

The store is also where she can wash her clothes or pay her bills for water, electricity and gas.

Feng Kai, head of this convenience store on Wuyi Road of Taiyuan, said Tangjiu No 1 is one of the first convenience stores in China to combine online and offline services.

"Through receiving orders on an Alipay-powered app, we offer a range of services including retail of goods, meals — both dining-in or delivery to your door — laundry and paying bills," Feng said. "The services are also friendly to senior residents as our app can be used through voice commands."

Tangjiu No 1 is just one example of how Shanxi's service industry is being upgraded with the latest technologies and new operational models.

The service industry, for its role in serving both people's livelihoods and economic development, has developed into a major driver for Shanxi's growth.

Local statistics show that Shanxi's service industry generated a record total revenue of 1.01 trillion yuan (\$157 billion) in 2021. It also represented an increase of 8.3 percent from 2020.

The 12th Congress of the Shanxi Provincial Committee of the Communist Party of China, which was held in late October, proposed a new direction for the

service industry. It is now required to upgrade toward higher-end and higher-quality operations by incorporating new technologies and new business models.

Powered by new technologies, the manufacturing services sector is among the fastest-growing in Shanxi.

Shanxi's network and information technology companies have offered support to help local manufacturers, especially coal-mining enterprises, adopt the latest digital and 5G technologies.

One example is intelligent coal mines, which have become increasingly automated, manpower-free, efficient and safe with the help of local technological service providers.

Tashan Coal Mine, operated by Jinneng Holding, is one of the beneficiaries of the support from IT service providers. All kinds of operations at its mine, including coal cutting and conveyance in shafts more than 100 meters below the surface, now can be made in its control room thanks to the application of a 5G network.

Shanxi's traditional tourism industry, which features tours of historical and cultural sites, has also benefited from a technological upgrade.

Bell Tower Street, an ancient block in Taiyuan, now uses various e-commerce platforms to promote attractions and draw in tourists. During the National Day holiday in October last year, the site ranked second among China's traditional commercial streets for the number of visits, according to local media reports.

Wang Pei contributed to this story.



Bell Tower Street in Taiyuan is receiving many visits thanks to online promotions. LI ZHAOMIN / FOR CHINA DAILY

Peach of a view

A picture taken by a drone shows that wild peach flowers began to bloom in mid-March on the hills of the village of Linghui in Yuanqu county, Shanxi province. The hills covered with white blossoms are surrounded by great expanses of wheat farms with yellowish green seedlings, forming a colorful, picturesque scene. The view has attracted many sightseeing tourists. Linghui, home to more than 300 hectares of wild peach trees, is a popular spring destination among tourists in Yuanqu and its neighboring regions.

LU GUOLIN / FOR CHINA DAILY



Scenic area in Yuanping a peak of natural beauty

By YUAN SHENGGAO

In China, imposing natural wonders are often described as "art-works crafted by heavenly masters".

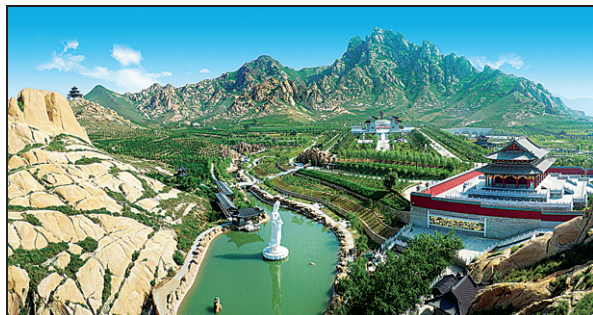
Tianya Mountain Scenic Area, in the Shanxi city of Yuanping, is one such site that fits this description, thanks to its rich variety of landforms.

About 5 kilometers to the east of Yuanping's city center, the scenic area covers about 1,000 hectares.

Tianya is part of the Wutai Mountains, which are among the highest mountains in Shanxi province.

The southeastern part of Tianya Mountain consists of a group of peaks that resemble a set of teeth if viewed from afar. When viewed up close, these rising peaks resemble huge swords pointing to the sky.

Researchers believe such a landform is the result of geological evolution over billions of years. They surmise that the region began to rise some 2.6 billion years ago during the Archeozoic Era and reached today's altitude during the Sinia Period between 570 and 800 million years



With an imposing landscape, Tianya Mountain is a major tourist attraction in the city of Yuanping. PENG KE'ER / FOR CHINA DAILY

ago, when high but gently sloped peaks formed.

The researchers believe that the high-rising peaks were formed during the Fourth Glacial Age about 2 million years ago as a result of glacial movement.

Today these peaks are a major destination for mountaineers from Shanxi and the rest of the country because of their difficulty to climb.

The northwestern part of Tianya

consists of a totally different landform, featuring a number of peaks resembling lotus flower petals. Called Lianhuashan, or Lotus Flower Mountain, by locals, it is a site for amateur mountaineers due to its relatively low degree of difficulty to climb. The mountain-climbing paths are scattered between the gaps of the "lotus petals" and along the slopes.

One location in Lianhuashan that visitors cannot afford to miss is a

huge piece of rock called Shigu, or Stone Drum. It is so named because a cave in the rock sounds like a drum when the wind blows through it.

This natural wonderland boasts a wealth of culture and has a rich and storied history.

Nearby the Stone Drum is an old building complex consisting of 20-plus rooms built during the Ming (1368-1644) and Qing (1644-1911) dynasties. This is a temple devoted to an ancient hermit called Jie Zitui. A politician during the Spring and Autumn Period (770-476 BC), Jie retreated to neighboring Mianshan in search of a solitary life. After rejecting the king's offer to serve as a higher-ranking official, he died in a fire set by the king, who believed the blaze could force him out to continue his political career.

Tianya Mountain has been a popular destination for many Chinese literati, who have left a great number of poems and inscriptions on the rocks and cliffs.

Xing Aitian contributed to this story.

Baijiu brand embraces nation's poetic history

By YUAN SHENGGAO

It's not easy to find a brand like Xinghuacun, owned by Xinghuacun Fenjiu Group based in Fenyang, Shanxi province, with such a deep association with ancient poetry.

The brand Xinghuacun is actually named after a poem written by Tang Dynasty (618-907) poet Du Mu.

In the poem, Du described his mood during a trip on Qingming, or Tomb Sweeping Day, in April. In Chinese, Xinghuacun literally means apricot flower village.

"A drizzling rain falls like tears on the Qingming day.

The traveler's heart is going to break on the way.

Where can a wine shop be found to drown his dismay?"

A cowherd points to the apricot flower village far away."

The poem is so popular in China that almost all school children are able to recite it. So its popularity has also made the white liquor, or baijiu, brand a household name.

Some researchers believe the history of alcoholic beverage production in Fenyang is as long as the history of Chinese poetry. Archaeologists found an ancient alcoholic beverage production site at the location of Xinghuacun Fenjiu Group. Unearthed production equipment revealed the site has a history of about 6,000 years.

Recorded history shows that the first reference of the Fenjiu brand name was made by an emperor during the Northern Qi Dynasty (550-577). And the first reference of Xinghuacun was made by Du Mu in his Qingming poem.

Zhuoyeqing, which literally



Tang Dynasty empress Wu Zetian refers to the Zhuoyeqing brand name in her poetry. PROVIDED TO CHINA DAILY

means bamboo-leaf green, is another brand of Xinghuacun Fenjiu. It was first referred to in a poem written by Wu Zetian, the famed empress of the Tang Dynasty, who said "it's an enjoyable moment when drinking the bamboo-leaf green liquor contained in a cup with lotus patterns".

As the development of the local alcoholic beverage has been accompanied by many poems written by poets in different times, Xinghuacun Fenjiu has deemed poems an important part of its corporate culture.

In October last year, the company hosted a poetry-themed gala, where more than 12,000 poems — in both ancient and modern styles and by writers from home and abroad — were presented.

Liu Jiarui contributed to this story.