

Information panels of Shanxi's energy industry transformation on display during the Taiyuan forum. PROVIDED TO CHINA DAILY

By YUAN SHENGGAO

Shanxi's transformation in the energy industry is conducive to fostering new quality productive forces, agreed delegates attending a high-profile international energy forum earlier this month.

The 2024 China (Taiyuan) Energy Low Carbon Development Forum was held on Sept 10-11 in Taiyuan, the capital city of the North China province of Shanxi.

Delegates from 30 countries and regions, as well as international organizations, attended the two-day event, sharing insights into new strategies and paths for energy industry transformation, and discussing cooperative opportunities.

Participants also offered innovative ideas and solutions for global green and low-carbon energy development, and witnessed the fruitful results of Shanxi energy industrial transformation.

The opening ceremony was held at Taiyuan's Xiaohu International Convention and Exhibition Center on Sept 10. It was attended by diplomats stationed in China, government officials and representatives from Shanxi's sister provinces and states. Also in attendance were international organization delegates, national and regional government representatives, provincial leaders, academicians, and experts and leaders from key energy enterprises and trade associations.

Liu Zhenmin, China's special envoy for climate change, delivered a keynote speech at the opening ceremony. Liu said, as a Shanxi native, he is emotionally attached to the province and is keeping a close eye on its development.

He said he is glad to see that Shanxi has made positive progress in its comprehensive reform of the energy industry. "Shanxi is piloting in developing a new type of energy industry, contributing to China's dual-carbon goals, while ensuring energy supply to the nation."

China has proposed to reach peak carbon emissions before 2030 and carbon neutrality before 2060. This ambition is widely known as the dual-carbon goals.

Liu added that Shanxi, a traditional coal-mining province, should use its energy industry transformation to cultivate new quality productive forces.

"The province should use this transformation to create new industries and seek new development opportunities, contributing to China's modernization," Liu said.

The International Renewable Energy Agency, an intergovernmental organization supporting countries in their transition to a sustainable energy future, has attended sessions of the Taiyuan Energy Low Carbon Development Forum since 2019.

Francesco La Camera, director-general of IRENA, delivered a speech through video link at the ceremony. He highlighted the importance of cross-disciplinary and cross-industry cooperation to push an energy industry transformation toward the directions of greener and cleaner development.

He stressed that IRENA's cooperation with China is deepening and

broadening, supporting an energy industry transformation.

Ouyang Minggao, academican at the Chinese Academy of Sciences, is a reputed expert in China's new energy vehicle power system research. At the Taiyuan forum, he praised Shanxi's practice in energy industry transformation and expressed his willingness to cooperate with local scientists and entrepreneurs to take part in Shanxi's energy revolution campaign.

Mexico is the guest country of honor at this year's forum. Jesus Seade, Mexican ambassador to China, delivered a keynote speech, providing insights into energy-related issues between Mexico and China, as well as the international arena.

This year's forum featured three major international conferences: the Mexico Honored Guest Country Forum, the Europe-China Workshop on Clean Energy Transition and the 14th Global Top 500 New Energy Enterprises Forum.

During the Mexico Honored Guest Country Forum, national representatives discussed topics on accelerating cooperation in energy transformation with Shanxi's representatives.

Energy expo

The 2024 China (Taiyuan) International Energy Industry Expo opened on Sept 10 alongside the forum. Over the course of three days, more than 300 leading energy companies from around the world showcased their latest products, technologies, achievements and applications.

A noteworthy exhibition was held by Shanxi's energy industrial giant Jinneng Holding Group. Its exhibits covered such areas as smart mines, green mining operations and industrial diversification, the simultaneous extraction of coal and coal-bed methane, as well as its latest achievements in the fields of photovoltaics and intelligent energy storage.

Jinneng Holding, based in Jinzhong, is one of the pioneers in Shanxi's energy industry transformation, which features upgrading of the traditional coal-mining industry and fostering emerging sectors. Leveraging the National Laboratory on Coal and Coal-Bed Methane Simultaneous Extraction, which is a research institute jointly founded by Jinneng Holding Group, China University of Mining and Technology and other research institutions, Jinneng has become one of the country's pioneers in the simultaneous extraction of coal and coal-bed methane.

Coal-bed methane used to be the No.1 threat to coal mine safety, but it's now turned into a safe source of energy in large volume thanks to new technological achievements made by Jinneng and the lab.

Jinneng began to make major breakthroughs in its demonstration project at the Yuecheng Coal Mine in Qinshui county in early 2021.

Jinneng's executives said that simultaneous extraction of coal and gas can effectively solve the problem of profuse coal-bed methane in mines, increasing safety and developing a new source of energy.

In addition to upgrading coal mines and developing the coal-bed methane industry, Jinneng Holding has diversified into other emerging



Visitors visit the Shanxi exhibition zone at the 2024 China (Taiyuan) International Energy Industry Expo. PROVIDED TO CHINA DAILY

Power industry titans discuss future strategies



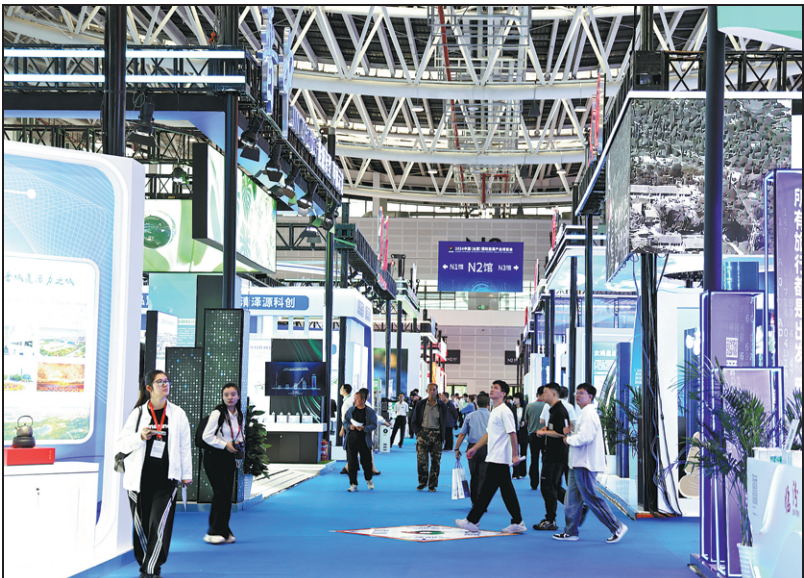
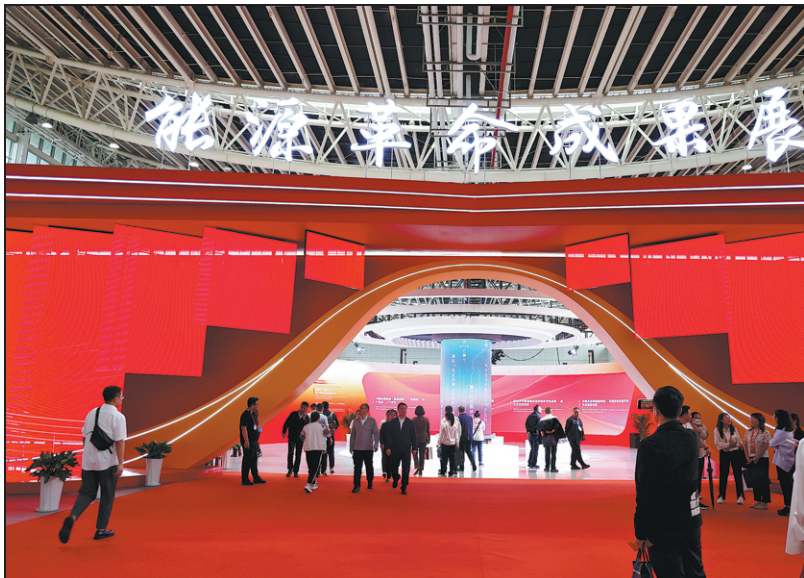
Taiyuan Energy Low Carbon Development Forum attracts delegates worldwide

“Shanxi is piloting in developing a new type of energy industry, contributing to China's dual-carbon goals, while ensuring energy supply to the nation. The province should use this transformation to create new industries and seek new development opportunities, contributing to China's modernization.”

Liu Zhenmin, China's special envoy for climate change

Electric cars produced by Tesla (left) and a hydrogen-fueled truck made by Shanxi-based Meijin (right) are exhibited during the energy industry expo.

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Delegates listen to a speech during the Taiyuan forum. PROVIDED TO CHINA DAILY

sectors, with its latest development shown at the expo.

One exhibit of the company that garnered great attention from industry insiders was the TOPCon high-efficiency heterojunction solar cells developed by its subsidiary Jinneng Clean Energy Technology, or Jinergy.

According to company executives, the high-tech solar cell has a photoelectric conversion efficiency of more than 25.5 percent, one of the highest rates in the industry worldwide.

As the first domestic mass production facility of heterojunction cells, Jinergy has sold products to more than 50 countries and regions.

Another heavyweight local energy company that showcased its results in industrial diversification was Changzhi-based Lu'an Chemical Group. On display were its complete industry chains that range from high-end chemical equipment manufacturing, coal liquefaction and smart coal mining to new chemicals like carbon-based materials, chemicals and lubricants.

Huayang Group, another coal-mining giant based in Yangquan, is a successful player in the province's energy industry transformation. Its exhibits at the expo included an array of products such as a sodium-ion battery, polycrystalline diamond film, degradable plastic bags, nanometer fiber filtering sheets and aerogel insulation materials.

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Compared with lithium-ion batteries, sodium-ion batteries feature better safety performance, better adapt to temperature changes and have a longer life cycle, according to company executives.

Huana Xinneng began to develop sodium-ion batteries in 2021. It realized volume production of cylindrical cells and battery packs in 2023 and began mass production of square cells in April this year. Square cells are the upgraded version from cylindrical cells, featuring a larger capacity in energy storage.

At the expo, Shanxi Coking Coal Group, another heavyweight player in Shanxi's energy industry, displayed its achievements in industrial transformation through exhibits, videos, photos and multimedia.

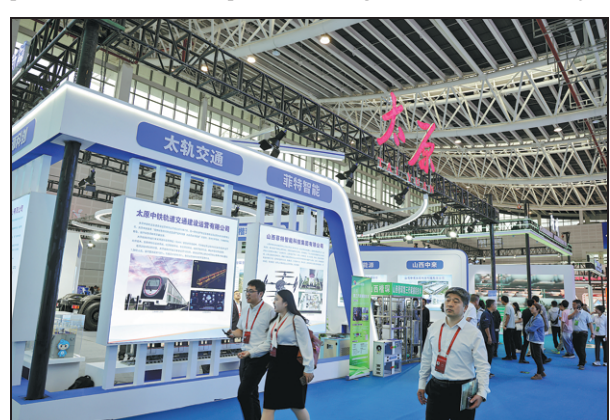
While showing its solutions related to coal mining, like smart coal-cutting systems, equipment for clean coking and other mining machines, the company exhibited a wide range of products of its emerging sectors, like wind power turbines made from carbon-fiber composite materials and concrete-spraying machines.

At the expo, there was a special zone dedicated to new launches. Ten companies from Shanxi and the rest of the country debuted their products, solutions, technologies and applications there.

The Taiyuan Energy Low Carbon Development Forum has served as a platform to enhance cooperation

Fruitful cooperation

The Taiyuan Energy Low Carbon Development Forum has served as a platform to enhance cooperation



From left: Shanxi's transport sector, which features the wide use of new energy resources, is on display. The Shanxi exhibition zone at the energy industry expo attracts visitors with its arched entrance. Enterprises in Shanxi exhibit their products and services at the expo. Coal-mining machines — both real and scale models — are on display. Taiyuan showcases its latest developments in energy industry transformation. PHOTOS PROVIDED TO CHINA DAILY