

# LOW CONCENTRATION MINE METHANE DISTRIBUTED POWER PROJECT

supporting China's energy transition



## Background

In the Jincheng city of China's Shanxi province, the Shanxi Jinju Coal-Power-Chemical Company's Hudi gas power station has put waste gas produced as part of its coal mining operations to work in support of the country's energy transition goals. The low concentration mine methane (LCMM) that is released from coal and surrounding rock strata as a result of mining activities is a potent greenhouse gas. By capturing the LCMM for use in the distributed power station, the project efficiently delivers power while lowering greenhouse gas emissions in the region.

## First-of-its-kind solution

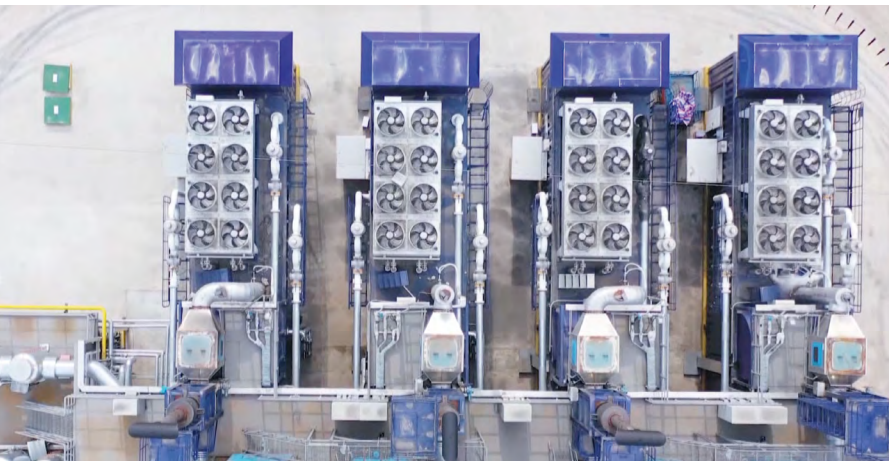
The overall project is the first in China to put both coal mine gas (CMG) and LCMM to use separately for power generation at the same site.

Power generation with LCMM is the more challenging scenario, requiring a highly reliable genset. These requirements were met with eight Jenbacher J420 gensets running on LCMM at the center of the Hudi plant.

With an installed capacity of 10 MWel of power and total heat recovery of 10.5 MWth, the plant is one of INNIO's largest LCMM power generation projects to date. In addition to supplying the J420 gensets running on LCMM, INNIO and its local solution provider delivered special sound-proof acoustic enclosures and offered installation guidance, commissioning services, after-sales support, and long-term spare parts supply for the project.

## Results

By collecting the waste LCMM gas discharged in the process of coal production and turning it into energy, the Hudi distributed power plant efficiently supplies approximately 70 GW of power annually while also reducing the area's greenhouse gas emissions. Additionally, the electricity and heat generated at the distributed power plant results in much lower emissions than those of a similar capacity coal plant.



## Key technical data

Installed engines	8 x J420
Electrical output	10 MW
Thermal output	10.5 MW
Total efficiency	80%
Energy source	LCMM gas
Year of commissioning	2019



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## Customer benefits

- The J420 gensets deliver a total efficiency of more than 80% when operating on LCMM gas.
- The plant helps reduce greenhouse gases in the region by keeping waste LCMM from entering the atmosphere.

INNIO is a leading energy solution and service provider that empowers industries and communities to make sustainable energy work today. With our product brands Jenbacher and Waukesha and our digital platform myPlant, INNIO offers innovative solutions for the power generation and compression segments that help industries and communities generate and manage energy sustainably while navigating the fast-changing landscape of traditional and green energy sources. We are individual in scope, but global in scale. With our flexible, scalable, and resilient energy solutions and services, we are enabling our customers to manage the energy transition along the energy value chain wherever they are in their transition journey.


INNIO is headquartered in Jenbach (Austria), with other primary operations in Waukesha (Wisconsin, U.S.) and Welland (Ontario, Canada). A team of more than 3,500 experts provides life-cycle support to the more than 54,000 delivered engines globally through a service network in more than 80 countries.

INNIO's ESG Risk Rating places it number one of more than 500 worldwide companies in the machinery industry assessed by Sustainalytics.

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