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GAIL starts India's maiden project of blending hydrogen into natural gas system

The hydrogen blended natural gas will be supplied to Avantika Gas Ltd, one of GAIL's joint venture with HPCL, for retailing of CNG to automobiles and piped natural gas to households in Indore.

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New Delhi: State gas utility [GAIL](#) (India) Ltd on Monday said it has commenced India's first-of-its-kind project of mixing hydrogen into the [natural gas system](#) in Indore, Madhya Pradesh.

The hydrogen blended natural gas will be supplied to Avantika Gas Ltd, one of GAIL's joint venture with [HPCL](#), for retailing of CNG to automobiles and

pipled natural gas to households in Indore, the company said in a statement.

"In line with the [National Hydrogen Mission](#), GAIL has started hydrogen blending as a pilot project to establish the techno-commercial feasibility of [blending hydrogen](#) in City Gas Distribution (CGD) network. This project marks the stepping stone of India's journey towards hydrogen-based and carbon-neutral future," it said.

GAIL started injection of [grey hydrogen](#) at the city gate station (CGS), Indore. "This grey hydrogen would subsequently be replaced by green hydrogen," it said.

GAIL has already obtained the necessary regulatory permissions to commence the project.

Zero-emission hydrogen is the latest buzzword around the world. Depending on the source, the hydrogen is classified as blue, green or grey.

Blue hydrogen is when natural gas is split into hydrogen and CO₂. The CO₂ is captured and then stored. Grey hydrogen is a similar process to blue hydrogen but the CO₂ is not captured and is released into the atmosphere.

Green hydrogen is hydrogen produced by splitting water by electrolysis using electricity from renewable energy sources such as wind or solar. This produces only hydrogen and oxygen. The hydrogen is used and oxygen is vented into the atmosphere with no negative impact.

GAIL said it has also engaged domain experts to carry out the impact assessment of blending hydrogen in natural gas.

India has committed to achieving net-zero carbon emissions by 2070 and hydrogen together with renewable energy is seen as key to achieving that goal. For the transition, natural gas is the fuel and the government is looking to raise its share in the primary energy basket to 15 per cent by 2030 from the current 6.2 per cent.

"GAIL has always been committed to the growth of a gas-based economy in India and to India's vision of a greener and cleaner environment. As our country is moving forward with the ambitious goal of achieving a carbon-neutral and self-reliant future, this project is a significant step in that direction," the statement said.

It is expected that this pilot project would help in the creation of a robust standard and regulatory framework in India to cover the aspects of injecting hydrogen into natural gas. This will pave the path for carrying out more similar projects in India.

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