

Hydrogen integration in gas networks is not just a possibility but necessity for energy transition: Dr AK Jain

- PNGRB hosts a major stakeholder interaction on hydrogen integration in natural gas infrastructure to deliberate on the outcomes of the recent study conducted in association with the World Bank and ICF.
- PNGRB reiterates its commitment to ensuring the safety and integrity of the natural gas infrastructure, as hydrogen plays a vital role in decarbonising our economy for a cleaner and sustainable energy future.
- PNGRB emphasises that natural gas pipelines can serve as a critical bridge, connecting regions rich in green hydrogen supply with key demand centres.
- PNGRB reinforces that while efforts are made to secure the integrity of hydrogen infrastructure, it is equally important to address the commercial and regulatory frameworks necessary for hydrogen transportation and distribution.

New Delhi, October 7, 2024: The Petroleum and Natural Gas Regulatory Board (PNGRB) convened a significant stakeholder interaction to explore pathways for integrating hydrogen into India's natural gas pipelines and city gas distribution networks based on the outcomes of a study conducted in association with the World Bank and ICF. The event held in the Capital drew diverse participants from across the energy sector, including policymakers, industry leaders, and technology experts, underscoring the growing momentum behind hydrogen as a critical enabler of India's energy transition.

As the Government of India accelerates efforts towards achieving net-zero emissions by 2070, hydrogen—particularly green hydrogen produced from renewable energy sources—has emerged as a key solution for decarbonising hard-to-abate sectors like heavy industry and transportation. The PNGRB's study on hydrogen transmission, in collaboration with the World Bank and ICF, examined the feasibility of repurposing existing natural gas infrastructure to accommodate hydrogen blends, offering a cost-effective and scalable approach to reduce carbon emissions while maintaining energy security.

Hydrogen: The Future of Clean Energy

In his keynote address, Dr Anil Kumar Jain, Chairperson of PNGRB, emphasised the pivotal role hydrogen can play in transforming India's energy landscape. "Hydrogen blending in natural gas pipelines and city gas distribution systems is not just a possibility; it's a necessity as we move toward a cleaner and more sustainable energy future. As we advance, the safety and integrity of the

infrastructure will remain paramount," Dr Jain remarked. He also highlighted PNGRB's responsibility to create a regulatory framework that ensures the safe and efficient hydrogen transmission. "Natural gas pipelines can serve as a critical bridge, connecting regions rich in green hydrogen supply with key demand centres like fertiliser plants, refineries, and heavy industries," he said. Dr Jain also proposed a comprehensive study in developing commercial and regulatory hydrogen transportation and distribution frameworks. "It could be pivotal in achieving this transition for decarbonising our economy and reducing reliance on imported fuels," he added.

Aligning with the National Green Hydrogen Mission

Shri Abhay Bhakre, Mission Director of the National Green Hydrogen Mission, reinforced hydrogen's potential as a transformative force in India's clean energy journey. "Hydrogen, much like solar energy a decade ago, has the potential to revolutionise our energy system. Green hydrogen, in particular, offers a pathway to deep decarbonisation at competitive costs," Bhakre said, drawing parallels to the success of the National Solar Mission.

The event featured key presentations from ICF, which outlined the necessary steps across the hydrogen value chain and assessed the infrastructure readiness for varying levels of hydrogen blending. Additionally, global best practices were benchmarked to inform India's approach to hydrogen integration. Representatives from the Ministry of New and Renewable Energy, DNV-India, Petroleum and Explosives Safety Organization, GAIL (India) Limited, and Indian Oil Corporation Limited shared insights on the technical and regulatory challenges of hydrogen blending.

Path Forward for India's Hydrogen Ambitions

As India targets 5 MMTPA of green hydrogen production by 2030 under its National Green Hydrogen Mission, this interaction marks a crucial step toward developing the infrastructure, regulatory frameworks, and commercial models necessary to support large-scale hydrogen deployment. By leveraging existing natural gas pipelines, India can facilitate a smoother transition to hydrogen, significantly reducing emissions in critical industries while positioning itself as a global leader in the hydrogen economy. The initiative aligns with India's clean energy agenda and strengthens its role in global climate action. It will contribute to the decarbonisation efforts required to limit global temperature rise in accordance with international commitments.