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Petroleum and Natural Gas Regulatory Board

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PRESS RELEASE

PNGRB approves Guidelines for Injection of Compressed Biogas into Natural Gas Pipeline (NGPL) and City Gas Distribution (CGD) Networks

The Petroleum and Natural Gas Regulatory Board (PNGRB) has approved the Guidelines for Injection of Compressed Biogas (CBG) into Natural Gas Pipeline (NGPL) and City Gas Distribution (CGD) Networks, providing a comprehensive framework for the safe, efficient and standardized integration of CBG into authorised Natural Gas infrastructure.

2. The issuance of these Guidelines marks a milestone intervention by PNGRB towards operationalising grid-based evacuation of Compressed Biogas and fulfilling a critical gap in the CBG ecosystem. By establishing a clear, transparent and standardised framework for injection of CBG into NGPL and CGD networks, the Board has provided Guidelines for facilitating the stakeholders for developing the infrastructure by project developers, CGD entities, technology providers and investors. This step is expected to significantly improve project viability through assured market access, facilitate financing and infrastructure planning, and accelerate scale-up of CBG production across the country. The guidelines therefore, serve not only as technical and safety enablers but also as a strategic growth catalyst for the sector, reinforcing the Government's vision of mainstreaming bio-gas within India's natural gas-based energy transition.

3. The guidelines have been developed through an extensive and inclusive consultative process. A Technical Committee comprising representatives from CBG producers, CGD entities and NGPL pipeline operators was constituted to address the technical, operational and safety aspects specific to CBG injection. The initial draft guidelines were subsequently placed in the public domain to invite comments from stakeholders and the public, followed by detailed deliberations in an Open House meeting.

4. Comments received during the consultation process have been examined and appropriately incorporated into the final guidelines covering the aspects of CBG quality analysers, calibration practices, safety instrumentation, cluster-based pipeline connectivity under the DPI Scheme and Integrity Management Systems, etc.

5. The approved guidelines cover the following key areas –

- Design and technical standards aligned with Technical Standards and Specifications including Safety Standard (T4S) Regulations for NGPL and CGD networks,
- CBG quality and specifications, referencing Access Code Regulations for NGPL and CGD networks & relevant BIS Standards,
- Installation procedures for CBG injection facilities,
- Operational, monitoring, and maintenance practices and
- Safety requirements, including odorization and control systems.

The guidelines also include illustrative schematic drawings detailing typical CBG injection configurations, intended to facilitate uniform interpretation, design consistency and smooth implementation across CGD and NGPL networks.

6. The integration of CBG into the natural gas grid is expected to enhance the availability of domestically produced green gas, reduce dependence on imported LNG, improve energy security, and support India's climate and carbon reduction goals. Pipeline-based evacuation of CBG will also facilitate higher utilisation of agricultural residue, cattle dung, municipal solid waste, and other organic feedstocks. The initiative is further expected to generate significant socio-economic benefits, including assured income for farmers, promotion of a circular economy, reduction in crop residue burning and creation of rural employment specifically from CBG production from waste to energy plants.

7. PNGRB reaffirms its commitment through these guidelines to enabling a robust, safe and sustainable CBG ecosystem in the country.