

## Sector-Specific Materiality Assessment and ESG Integration in the Indian Natural Gas Sector

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### Abstract

The oil and gas sector is pivotal for national energy security & driving economic growth. However, it faces increasing pressure to align with Environmental, Social, and Governance (ESG) standards amidst the global transition to a low-carbon economy. **Materiality mapping (or matrix)**, is a systematic process for identifying, prioritizing, and visualizing key ESG issues— is central to this alignment, with frameworks like GRI, IPIECA, and SASB offering sector-specific guidance. As natural gas increasingly emerges as a transitional or bridging fuel, its unique operational and environmental characteristics call for a more tailored approach to ESG materiality to reflect its evolving role and stakeholder expectations.

This study aims to develop a sub-sector-specific materiality mapping framework for the natural gas industry covering upstream, midstream, downstream, & integrated segments by analyzing how ESG issues vary across these segments. A mixed-methods approach was adopted, combining secondary analysis of ESG disclosures from 100 global natural gas companies yielding over 2,000 materiality topics with benchmarking against GRI, SASB, and IPIECA standards. Primary data were collected through structured interviews with stakeholders across India's natural gas sub-sectors, using a standardized questionnaire to capture ESG priorities and challenges.

The findings were synthesized to evaluate the alignment between global ESG frameworks and regional (Indian) ESG priorities. Based on this analysis, sub-sector-specific materiality matrices were developed to visualize and differentiate ESG concerns across the natural gas value chain, offering a more targeted and informed approach to ESG strategy and disclosure.

Key words: ESG, Materiality, Natural gas, Benchmarking, Low carbon economy