

Ramping-up India's Hydrogen Trading Market

The challenge

India's journey toward establishing a green hydrogen trading market faces several significant challenges. The absence of a hydrogen exchange platform or reliable price indices makes price transparency and investment decisions difficult. Additionally, the market lacks a well-developed hydrogen community, which is essential for fostering stakeholder collaboration and driving market development activities. Regulatory and policy uncertainties in India's dynamic energy landscape further complicate efforts. Engaging local stakeholders to build trust and ensure meaningful contributions to the initiative is another hurdle. Moreover, the market's nascent stage means there is limited infrastructure and technology adoption for green hydrogen trading, making it a complex endeavor to align industry practices and expectations.

- Project developers need to understand the business opportunities associated with hydrogen and what is needed to realise them, and they should be able to develop bankable project proposals
- Financial institutions need the knowledge to evaluate business proposals, mitigate technology-specific risks and reduce transaction costs.

The solution

A robust green hydrogen trading market needs more than just infrastructure - it requires trust, transparency and a supportive ecosystem. The International Hydrogen Ramp-up Program (H2Uppp) plays a key role in addressing these gaps enabling a transparent and dynamic marketplace.

H2Uppp was initiated by the German Federal Ministry for Economic Affairs and Climate Action (BMWK) to promote project and market development for green



GIZ, EEX, and IGX collaborate to develop India's hydrogen trading market.

hydrogen in selected developing and emerging countries, as part of the National Hydrogen Strategy of Germany. The programme aims at enhancing the entrepreneurial drive and the necessary investment crucial to the global scaling of hydrogen markets. With this initiative, BMWK helps meet future green hydrogen demand in Germany and Europe, while enabling valuable technology transfer. Projects carried out under the auspice of H2Uppp also offer local economic benefits, generating jobs, tax revenue, and entrepreneurial growth through the production, use, and trade of green hydrogen and its derivatives.

In line with these efforts, the Indian Ministry of New and Renewable Energy is keen on identifying bankable business cases for green hydrogen/ PtX projects in India and in synergising private sector commitments through appropriate business models.

To support the objectives of H2Uppp and address key challenges in this sector, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) has formed a Public-Private Partnership (PPP) with the European Energy Exchange AG (EEX) and the Indian Gas Exchange Ltd. (IGX) to ramp-up the development of an Indian green hydrogen trading market.

EEX is a leading energy exchange which builds secure, successful and sustainable commodity markets worldwide – together with its customers. While IGX is India's authorised natural gas trading exchange. The exchange features multiple buyers and sellers to trade in spot and forward contracts at designated delivery points.

How it will be done

The partners will conduct a comprehensive analysis on the status of the Indian hydrogen market, examining policies, regulations, and infrastructure issues. Based on this, the partners will create an actionable roadmap for ramping up an Indian green hydrogen trading market. To realise this, a hydrogen community is set up that brings together players from production, trade, transport, consumption and politics to exchange ideas and coordinate strategies, especially for the design of future hydrogen trading platforms or indices that could be based on successful European models.

The PPP-Project combines EEX's technical expertise in the European trading market and form the launch of the first hydrogen index HYDRIX, IGX's technical expertise in trading of energy commodities in India, and GIZ's expertise in India on renewable energy and green hydrogen.

The PPP provides a range of critical services to facilitate the green hydrogen market's development in India. These include the preparation of a comprehensive analysis of the market. Based on this, a roadmap for the development of an Indian hydrogen trading market will be developed. The involvement of stakeholders is crucial and will be discussed at various workshops.

As part of the project, market rules and frameworks will be designed and compared with global best practices to create a solid foundation. Ideas for the development of hydrogen trading indices or platforms that provide price transparency and trading solutions will be conceptualised. The following topics will be addressed:

- Analysis of the Indian hydrogen market
- Launch of a roadmap for ramping up the Green Hydrogen market in India
- Engagement with hydrogen stakeholders

Expected outcome

This project lays a strong foundation to ramp-up the Indian Hydrogen Trading Market, aligned with the country's climate goals and its ambition to become a global hub for green hydrogen. The project's success will generate momentum for a rich hydrogen market, extending far beyond the project's duration.

By enhancing price transparency, the project will boost investment confidence and attract new opportunities. In the long term, the project will foster sustainable technology adoption, encourage emission reductions, and establish India as a leader in green hydrogen production and trading. The collaboration between Indian and European stakeholders will strengthen international partnerships and promote knowledge transfer. The PPP will also create a framework for ongoing collaboration between Indian and European markets, ensuring sustained momentum for green hydrogen market development in the years to come.

The project at a glance

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| Duration | 09/2024 – 08/2026 |
| Country | India |
| Objectives | Ramp up hydrogen trading in India |
| Partners | GIZ and EEX AG and IGX |
| Outputs | <ul style="list-style-type: none">• Comprehensive Study on the Indian Hydrogen Market with focus on Trading• Indian Hydrogen Trading Roadmap• Engagement with hydrogen stakeholders throughout various formats to exchange in hydrogen trading market |

The International Hydrogen Ramp-up Programme (H2Uppp) of the German Federal Ministry for Economic Affairs and Climate Action (BMWK) promotes projects and market development for green hydrogen in selected developing and emerging countries as part of the National Hydrogen Strategy.

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