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From Promise to Purchase: Unlocking India's Green Hydrogen Demand

A playbook for India's green hydrogen uptake to 2030 and beyond

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India's green hydrogen story: Big aspiration, scale potential

India has committed to achieving net-zero emissions by 2070. Green hydrogen will be a critical lever to achieve this aspiration, especially for hard-to-abate sectors, and other industrial segments, that are difficult to decarbonize through direct renewable energy electrification.

Beyond decarbonization, green hydrogen could also help India improve its energy security by reducing its dependence on imports. With more than ample access to renewable energy, India has a natural advantage in setting up a globally competitive green hydrogen ecosystem. Recognizing this potential, the Indian government has set a near-term milestone of creating 5 million metric tons (MMT) of green hydrogen production capacity by 2030. It has also articulated several supportive policy measures in the National Green Hydrogen Mission of 2023 (*see Figure 1*).

This favorable policy environment has succeeded in generating significant supply-side traction. Many large-scale players announced they would set up their green hydrogen production, and the total announced supply is expected to exceed the government's 5 MMT target by 2.5 times.

Figure 1: The government has set a target of 5 MMT capacity for green hydrogen by 2030

The government's ambitious 5 MMT p.a. green hydrogen target by 2030 is backed by initial policy support and investments in the right direction to aid growth

SIGHT Programme ($2.1 billion)		Other initiatives ($0.2 billion)
Direct green hydrogen incentive ($1.6 billion)	Electrolyzer production-linked incentive ($0.5 billion)	$0.15 billion outlay on pilot projects
Direct production incentive: up to $0.5/kg hydrogen for three-year period from FY 2026–30	Base incentive at $54/kW in Year 1 to taper to $18/kW by Year 5 from FY 2026–30	$0.05 billion committed for R&D

Enabling measures

Cost reduction	Export infrastructure	Other incentives
25-year waiver on renewable energy interstate transmission charges	Port authorities to provide land for storage bunker setup	Renewable energy consumed for green hydrogen production included in RPO compliance of consumer

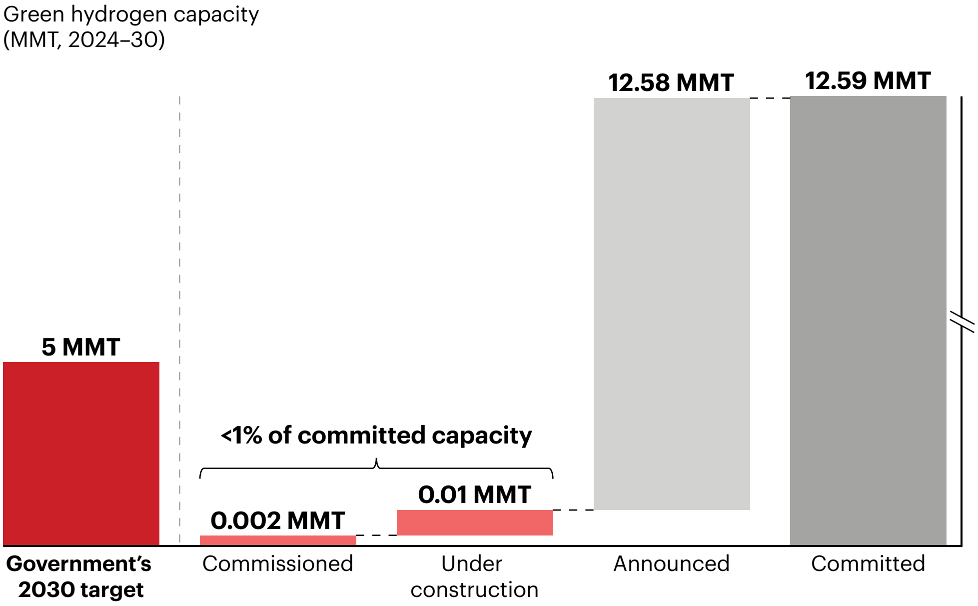
Notes: SIGHT = Strategic Interventions for Green Hydrogen Transition; RPO = renewable purchase obligation
Sources: Niti Aayog; Secondary research

While the supply-side momentum has been encouraging, demand-side excitement has been muted in comparison, and execution of these planned investments has lagged (*see Figure 2*). As of 2024, commissioned green hydrogen capacity, largely comprised of pilot programs, remains below 0.01 MMT.

The slowed momentum primarily stems from the current high production costs along with nascent enabling infrastructure and high financing costs. Current production costs—$4-$5 per kg of green hydrogen vs. $2.3-$2.5 per kg of grey hydrogen typically (some industries may procure at higher costs) —are not yet competitive. While green hydrogen production costs chart their natural path of reduction with economies of scale and technological advancement, there are immediate segments of demand that can be tapped into. Additionally, viable, differentiated sector-level strategies can help accelerate green hydrogen adoption in the interim.

Figure 2: Players have announced investments for many projects, but they have yet to take off

Committed capacity well over 2030's 5 MMT p.a. goal; most projects in planning stage with less than 1% operational



Sources: Government of India Green Hydrogen project database; Market participant conversations; Lit. search

This report identifies five immediate demand-side strategies that can accelerate green hydrogen adoption:

- Blend small amounts of green hydrogen into the grey hydrogen or piped natural gas supply for several high-volume sectors (including refineries, fertilizers, and piped natural gas), while also considering the technological feasibility and price sensitivity of end customers.
- Encourage green hydrogen substitution among niche segments (including glass, ceramics, and chemicals) for whom the switch from grey to green hydrogen is a cost-neutral move.
- Augment domestic consumption via public procurement, especially for green steel.
- Explore green hydrogen and green ammonia export potential with partner countries that are ahead in the green hydrogen adoption journey.
- Explore export opportunities for green hydrogen-embedded products that have global tailwinds.

In addition to the above strategies, this report also focuses on various catalytic measures required to bridge challenges and navigate potential constraints associated with implementing the above strategies. Enablers such as infrastructure build-out, risk-reducing offtake agreements, financial mechanisms (e.g., viability gap funding and sovereign guarantees), and alignment with global standards can accelerate green hydrogen scalability and market viability.

With these interventions, India can transform its green hydrogen vision into a commercially viable reality.

Creating base demand through smart blending

The first option to explore is blending green hydrogen with piped natural gas or grey hydrogen used in various industrial processes, within technically viable limits, to drive gradual adoption. Instead of starting with the maximum feasibility of blending across different sectors, this approach takes an alternate lens that considers the price sensitivity of the end-use customer to arrive at optimal blend rates. For these high-volume, high-premium sectors—refineries, and piped natural gas—we have also explored select mitigating measures (carbon credits, cross-subsidies) to manage the price sensitivity of customers.

Blending in refining operations

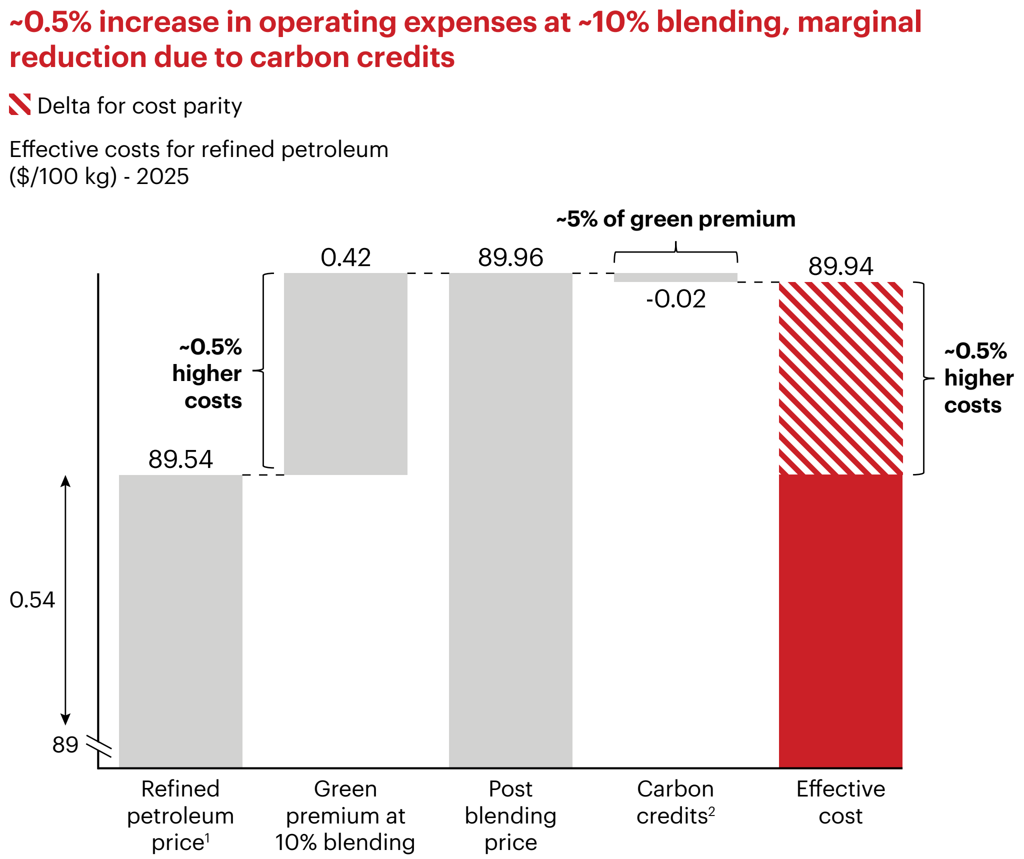
Hydrogen is used extensively in refining processes, primarily in hydrocracking and hydrotreating. However, these hydrogen inputs make up a small share (<5%) of the overall refinement cost stack. As of 2024, the hydrogen demand for this sector stands at 3.74 MMT, accounting for ~45% share of the total hydrogen demand in India.

Green hydrogen can be blended with conventional grey hydrogen in oil refining processes as part of an emissions-reducing strategy. The Petroleum and Natural Gas Regulatory Board (PNGRB) considers blending to be a viable route and cites a 10% blending rate as a possible starting point. A 10% blending strategy could catalyze green hydrogen demand, reaching ~0.4 MMT at current usage levels and ~0.5 MMT by 2030. By 2030, as green hydrogen costs come down to $2.5-$3 per kg, it could be viable to increase the blending rate, perhaps up to 40%, accelerating green hydrogen demand to ~2 MMT by 2030.

This 10% green hydrogen blend would result in a marginal 0.5% cost increase at current cost levels (*see Figure 3*). Higher green hydrogen blend rates—such as 20% or 30%—would elevate refined prices by about 1% and 1.5%, respectively.

The marginal cost increase could potentially be managed by passing on the premium to high-margin commercial and industrial (C&I) customer segments, providing carbon credits for the emissions saved due to green hydrogen adoption, or providing viability gap funding.

Figure 3: For refining, a 10% green hydrogen blend creates a marginal price increase of 0.5%



Notes: (1) Pre-tax price to distributors post-refining; (2) Calculated using amount of grey hydrogen replaced and carbon credits equivalent to $25/ton of carbon dioxide emissions; Assumes the cost of refined petroleum is same as 2025 prices and green hydrogen cost changes from $4.66/kg to $2.95/kg
Sources: Expert interviews; Secondary research; Bain analysis

Blending in fertilizer production

India's fertilizer sector predominantly comprises of urea-based fertilizers. These account for ~62% of production (approximately 31.3 MMT in 2024), and non-urea fertilizers, such as diammonium phosphate, ammonium nitrate, and calcium ammonium nitrate, account for approximately 30% of production (14.5 MMT in 2024). Both categories are heavy consumers of hydrogen (jointly accounting for ~45% of India's current hydrogen demand), with grey hydrogen used for ammonia synthesis via the steam methane reforming (SMR) process.

However, the fertilizer industry faces some unique challenges for adopting green hydrogen:

- The fertilizer sector is heavily subsidized to maintain affordability for Indian farmers. India provides a 100% subsidy to companies through a direct-benefit transfer system. This potentially amplifies the price sensitivity of the fertilizers.

- The production of urea-based fertilizers also requires carbon dioxide, which is traditionally derived as a byproduct of the grey hydrogen production process through SMR. The production of green hydrogen, however, doesn't create carbon dioxide emissions. For manufacturers of urea-based fertilizers, replacing grey with green hydrogen will create further incremental costs to procure carbon dioxide externally.

These constraints need to be taken into account while considering green hydrogen adoption strategies for the fertilizer industry.

While green ammonia manufactured using green hydrogen can replace grey ammonia manufactured using grey hydrogen, it may lead to adverse price implication for fertilizers. A practical starting point is to blend green hydrogen with conventional grey hydrogen in the fertilizer manufacturing process. Fertilizer plants in Spain and the Netherlands are already piloting 5%–10% green hydrogen blends in their operations.

A 5% green hydrogen blend would result in a ~0.2 MMT green hydrogen demand at current usage levels, and a ~0.23 MMT green hydrogen demand by 2030. As green hydrogen production cost decreases, blending rates can gradually be increased to 20%, potentially increasing green hydrogen demand to ~0.9 MMT by 2030.

Blending 5% green hydrogen with grey hydrogen at current cost levels may lead to a ~5% cost increase (*see Figure 4*). Given the high price sensitivity of end customers, it would be challenging to pass these on. The following avenues may help mitigate these cost premiums:

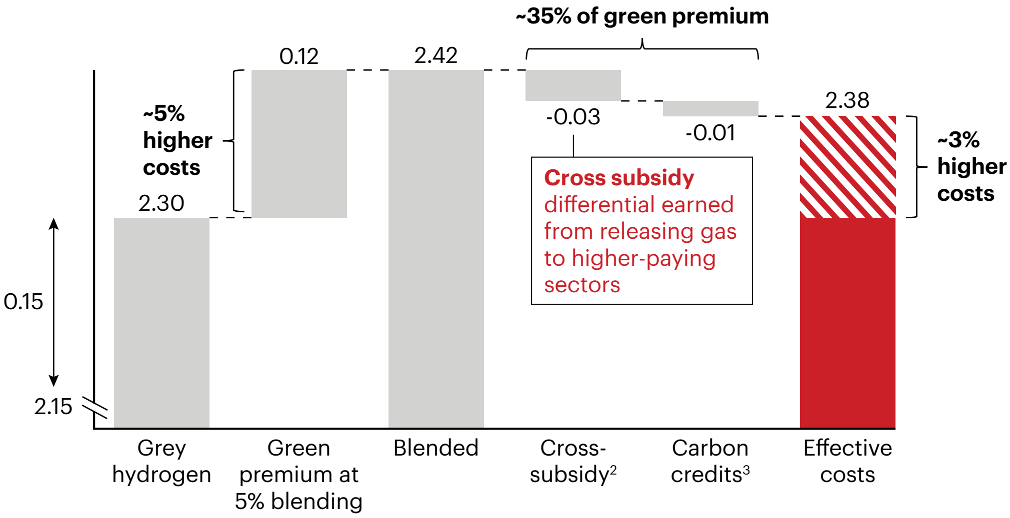
- The green premium could be partially offset by selling relinquished natural gas to other segments and using the additional revenue to cross-subsidize the fertilizer industry.
- Carbon credits for the emissions saved could incrementally reduce the green premium at current price levels.
- Beyond the cross-subsidy and carbon credits, the government could consider bridging the remaining premium via direct subsidies or viability gap funding.
- Specifically for urea fertilizer manufacturers, the additional carbon dioxide cost could be partially mitigated by forming net-zero industrial clusters. Within these clusters, fertilizer players could partner with other nearby carbon dioxide-emitting industries, such as sugar or cement producers, which in turn could qualify for carbon credits or other incentives. For instance, fertilizer players in the Meerut-Muzaffarnagar cluster in Uttar Pradesh can collaborate with nearby sugar mills (operating in a 10–20 km^2 radius of large fertilizer units) to procure low-cost carbon dioxide.

Figure 4: For non-urea and urea fertilizers, 5% green hydrogen blending would lead to a 5%–6% price increase

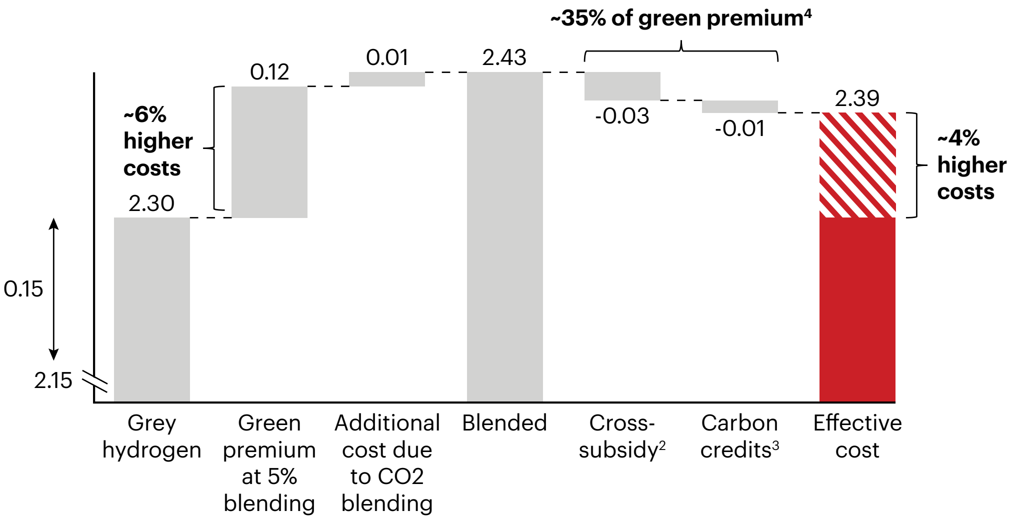
At ~5% blend, green premium for non-urea and urea fertilizers can reduce to 3%–4% due to cross-subsidy, carbon credits

Delta for cost parity

Non-urea: Landed costs for grey and green[1] hydrogen ($/kg) - 2025



Urea: Landed costs for grey and green[1] hydrogen ($/kg) - 2025



Notes: (1) Inclusive of cost-cutting mechanisms such as cross-subsidy and carbon credits; (2) Assumes diversion of relinquished administered price mechanism (APM) gas (~$8–$9/million British thermal units [MMBTu]) to power or other gas-intensive sector at a higher rate of $12–$13/MMBTu, and that power sector's imports can go as high as $17–$18/MMBTu when procured at spot prices; (3) Calculated using amount of grey hydrogen replaced, resultant reduction in carbon dioxide emissions in steam methane reforming process, and carbon credits equivalent to $25/ton of carbon dioxide emissions; Assumes grey hydrogen price is same as 2025, and green hydrogen cost changes from $4.66/kg to $2.95/kg

Sources: Expert interviews; Secondary research; Bain analysis

Blending with piped natural gas

Piped natural gas, which is largely used for residential and commercial heating purposes, comprises various forms of natural gas and traditionally does not contain hydrogen. However, several successful hydrogen blending pilots with piped natural gas have been conducted worldwide and in India. For instance, NTPC Kawas (Hazira) successfully demonstrated the technological feasibility of green hydrogen blending at a 5% blend rate. Because of the potential risk of material embrittlement at higher blend rates, more pilots are needed to test the efficacy of retrofitting distribution pipelines and heating equipment to accept higher green hydrogen concentrations.

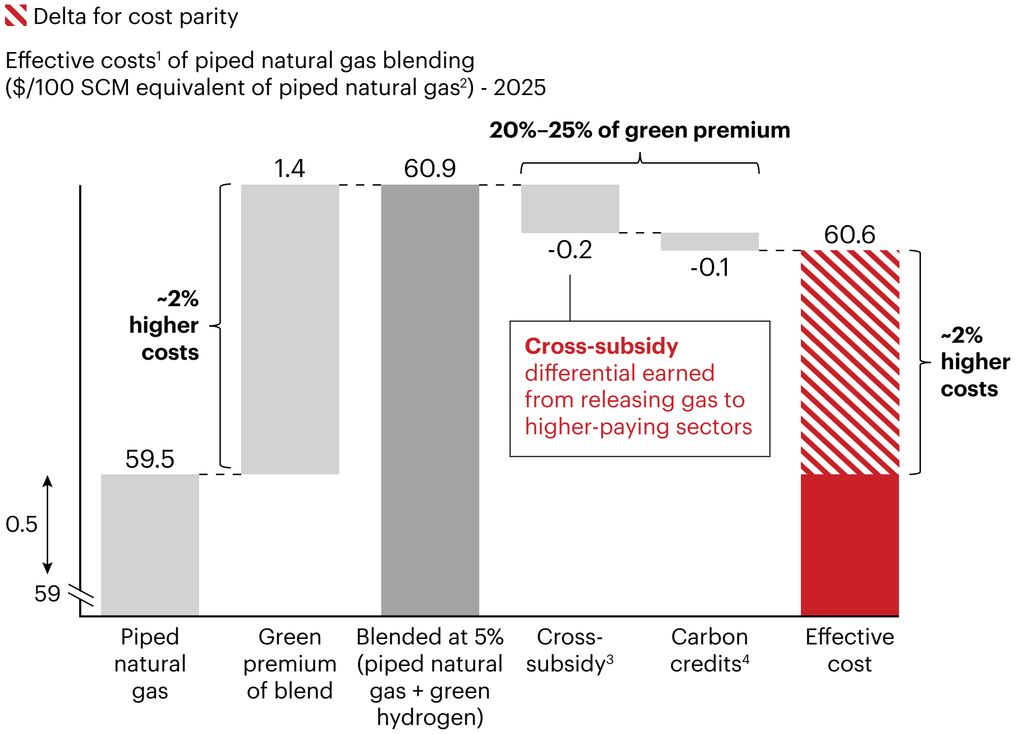
At a 5% blending rate, green hydrogen demand in this sector would reach approximately ~0.03 MMT by 2025, increasing to ~0.05 MMT by 2030. Contingent on technical feasibility, a 10% blending rate could increase green hydrogen demand to ~0.1 MMT by 2030.

Current analyses indicate that blending green hydrogen at a 5% threshold will result in a ~2% increase in piped natural gas pricing for consumers at prevailing market rates (*see Figure 5*). By 2030, as green hydrogen production costs continue to decline, the price impact is expected to lessen as well, with a projected marginal increase of ~1% in piped natural gas rates, even with blending levels rising to 10%.

For a family with a monthly gas bill of INR 1,000, the ~2% premium could increase their expense by ~INR 20. While this could potentially be absorbed, residential customer price sensitivity should be further evaluated. Cost increases in the residential market could also be partially mitigated by carbon credits or cross-subsidies that divert the additional revenue from selling the relinquished natural gas to other industries.

Figure 5: Blending 5% green hydrogen into piped natural gas would lead to a 2% price increase at current price levels

Green premium from blending green hydrogen with piped natural gas at ~2% for ~5% blend, marginally reduced due to cross-subsidy, carbon credits



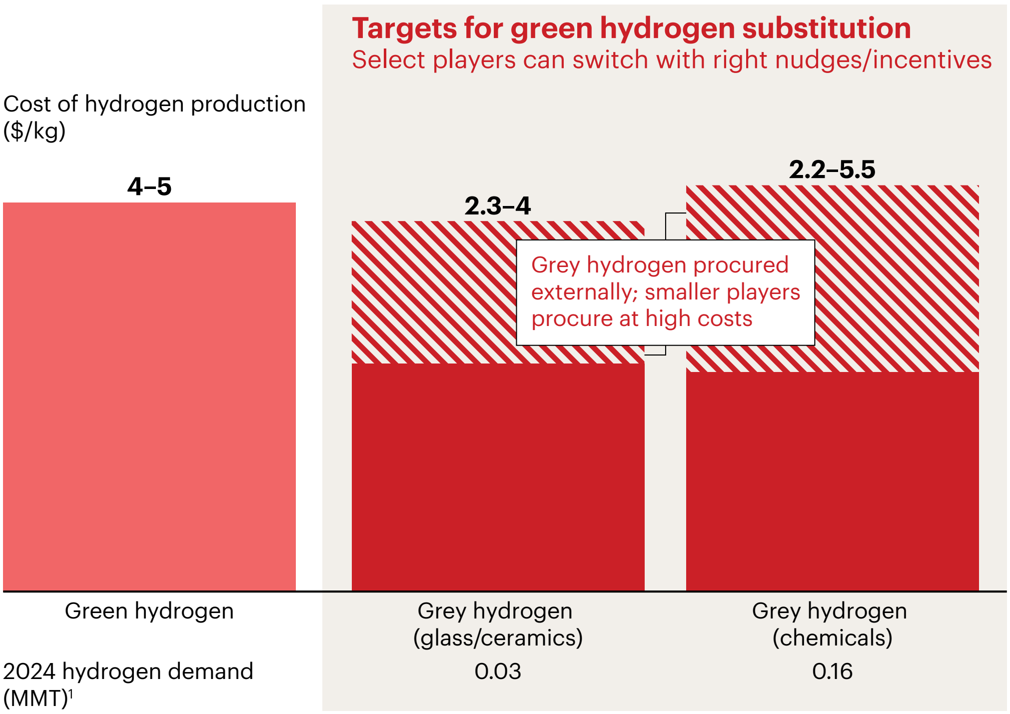
Notes: (1) Inclusive of cost-cutting mechanisms such as cross-subsidy and carbon credits; (2) Standard Cubic Meter (SCM) equivalent of piped natural gas refers to volume of gas/blend providing same calorific value as 1 SCM of piped natural gas and accounts for calorific difference, with calorific value of 1 SCM of piped natural gas = 3.13 x calorific value of 1 SCM of hydrogen, and 10% additional transportation costs for piped natural gas blend; (3) Assumes diversion of relinquished administered price mechanism (~$8–$9/million British thermal units [MMBTu]) to power or other gas-intensive sector at a higher rate of $12–$13/MMBTu, and that power sector's imports can go as high $17–$18/MMBTu when procured at spot prices; (4) Calculated using amount of grey piped natural gas replaced from blending and carbon credits equivalent to $25/ton of carbon dioxide emissions; Assumes the grey hydrogen price is the same as 2025 and green hydrogen cost changes from $4.66/kg to $2.95/kg
Sources: Expert interviews; Secondary research; Bain analysis

Target high-potential niches to make the transition happen

When assessing green hydrogen economics, we always compare its cost with the cost of grey hydrogen for the broader market. But it also makes sense to look at hydrogen procurement through a sector-specific lens. This is especially helpful for niche sectors, such as chemicals, glass, and ceramics production, which use hydrogen extensively both as a fuel and as a key input in the production process.

While the top two or three players in these sectors can procure grey hydrogen at costs as low as \$2–\$2.5/kilogram, smaller players (who collectively make up 40%–50% of the market) lack captive sources of grey hydrogen and have limited buying power. Grey hydrogen costs for these small, fragmented players are as high as >\$4/kilogram, which brings green hydrogen into the range of cost parity (*see Figure 6*). So, these sectors could be nudged to replace grey with green hydrogen even at the current costs. A 10% substitution could drive green hydrogen demand reach approximately ~0.025 MMT by 2025, and a 20% substitution could potentially increase demand to ~0.07 MMT by 2030.

Figure 6: Smaller producers that pay a higher grey hydrogen cost are potential substitution targets at current green hydrogen prices



Notes: (1) Estimated using Niti Aayog 2020 actual and 2030 estimated demand of hydrogen except for glass/ceramics. For glass/ceramics, demand was estimated based on industry expert conversations, while grey hydrogen costs for fertilizer manufacturers, refineries, and steel industries were calculated based on the first six months of FY 2024 gas consumption volume
Sources: Ministry of Petroleum & Natural Gas; PPAC; Expert interviews; Bain analysis

Government and industry can explore potentially working together to create green hydrogen clusters in key geographies where there is significant activity. This would facilitate green hydrogen adoption in these sectors and would especially benefit those smaller, fragmented players that are key to driving demand. Demand aggregation by consortia also offers scale, which could increase buying power and reduce procurement costs. It can also facilitate setting up infrastructure, such as pipelines and storage facilities, near major industry clusters—which could further reduce the overall landed cost of green hydrogen.

Lead with public procurement of products manufactured using green hydrogen

Domestically producing and using green hydrogen-embedded products such as green steel on a large scale could be costlier. The government could therefore potentially evaluate and consider mandating a small 10%-15% share of these products in public infrastructure projects such as bridges and government housing, which would help promote market sustainability. With India's public steel consumption expected to reach ~70 MT by 2030, a 10%-15% share of green steel could create a potential 0.4-0.6 MMT green hydrogen demand. This will need to be assessed from the perspective of price sensitivity of end-users and their ability to absorb the additional cost.

Strengthen export plays with pro-green hydrogen policy nation

Apart from the domestic strategies discussed above, there are significant export opportunities in green hydrogen, green ammonia, and embedded products, which are mentioned in the National Green Hydrogen Mission 2023. As India considers expanding its green hydrogen exports, it could potentially look to global markets that are ahead in their green hydrogen adoption journey and are actively promoting importation of green hydrogen and green ammonia. For instance, within the European Union (EU), Netherlands and Germany have committed €300 million each in a 10-year purchase agreement for green hydrogen and green ammonia imports starting in 2027. Belgium is aiming for 20 Terawatt hours (TWh) of green hydrogen and green ammonia imports starting in the same year. Meanwhile, Japan offers 15-year price support for low-carbon hydrogen, both domestic and imported. South Korea is targeting the deployment of 6.2 million hydrogen fuel cell electric vehicles, including 41,000 buses and 1,200 hydrogen refueling stations, by 2040. If India captures just 5%-7.5% of the green hydrogen import demand of these nations, Indian exporters could generate demand for 0.8-1.1 MMT of green hydrogen by 2030.

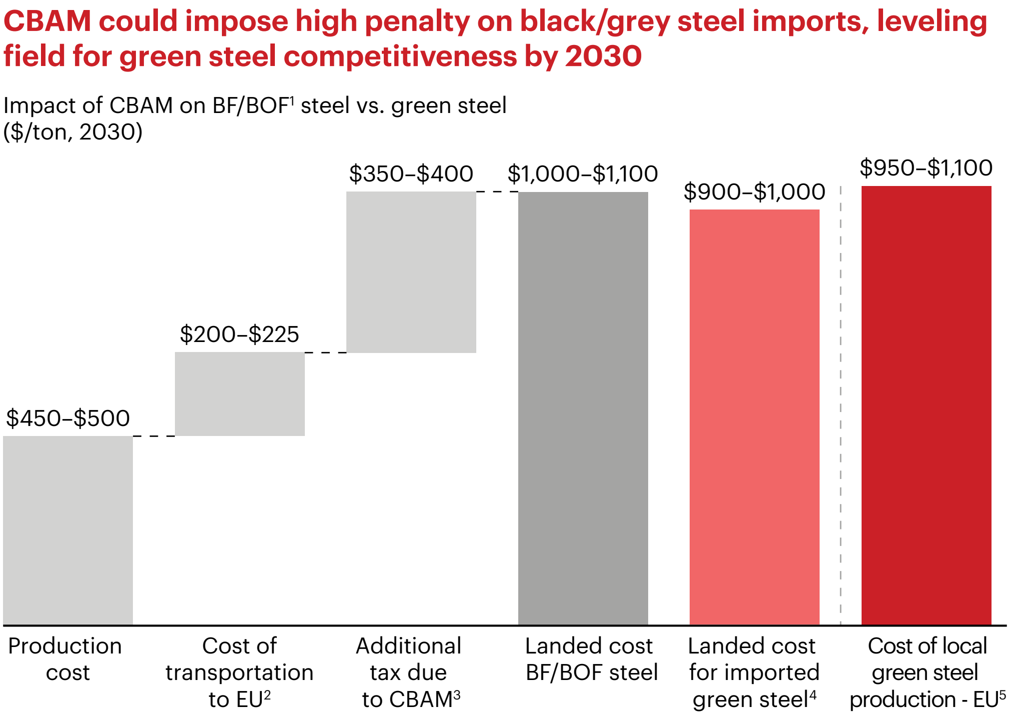
India has a competitive advantage due to its access to ample, cheap renewable energy. But other countries, such as Saudi Arabia, China, and Australia, among others, have their own advantages and are constantly evolving green hydrogen-specific incentives. For India to realize its export potential, it needs to stay up to date on these competitive dynamics and consider taking appropriate actions to maintain its cost competitiveness. This will require India to align with the green hydrogen standards and operating model requirements of other potential importing countries.

Differentially focus on products with high energy transition prospects

The rising global push for sustainable industrial products, such as green steel, aluminum, and refined petroleum, also creates export opportunities for India. For example, the EU's Carbon Border Adjustment Mechanism (CBAM) imposes a carbon cost on imported goods, making grey and black products more expensive to import and lowering the burden for green products to achieve parity. While policies such as CBAM pose a threat for traditional exporters, aligning with EU standards could create a prime opportunity for Indian exporters—for instance, manufacturers of green steel. By 2030, CBAM will raise the landed cost of grey and black Indian steel by $350-$400 per ton, to a total of $1,000-$1,100 per ton. But the landed cost of Indian green steel could be $900-$1,000 per ton, creating a substantial advantage (*see Figure 7*).

India currently exports ~3.3 MT of steel to the EU, a figure that is projected to increase to ~4.5 MT by 2030. If 50%-70% of India's conventional exports transition to green steel, it will generate 0.13-0.18 MMT of green hydrogen demand by 2030.

Figure 7: The EU's CBAM is likely to make imports of Indian green steel competitive with grey and black steel by 2030



Notes: (1) BF/BOF = blast furnace/basic oxygen furnace (2) Estimated based on cost of 1 forty-foot equivalent unit (FEU) (Kolkata to Antwerp) of $5,800 and utilization of 29 tons per FEU; (3) Calculated using emissions of 2.2–2.6 tons of carbon dioxide per ton of steel at €100 carbon duty; (4) Cost of production taken to be ~$800/ton; Freight rates and emissions methodology considered same as BOF steel; emissions level for direct reduced iron (DRI) steel: 0.4–0.5 tons of carbon dioxide per ton of steel; (5) Opex cost of green hydrogen DRI steel in EU
Sources: Expert conversations; Bain analysis; Lit. search

Summing it up: Making India's 5 MMT green hydrogen vision a reality

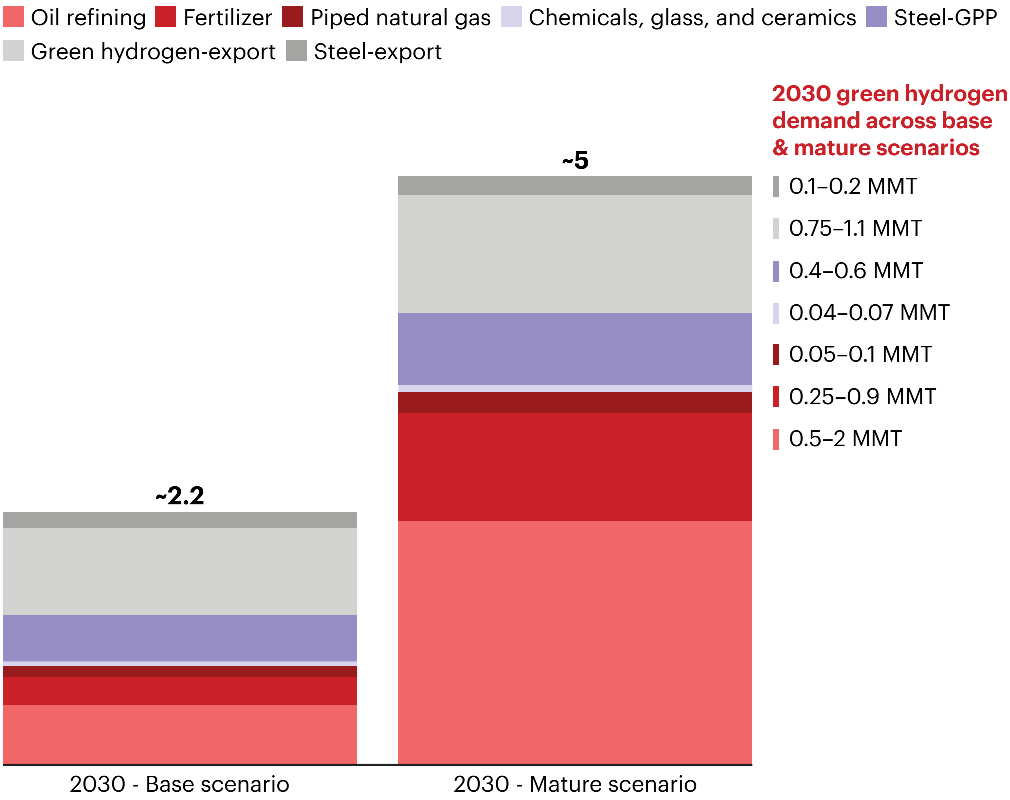
India's pursuit of a 5 MMT green hydrogen demand by 2030 is a bold step toward decarbonization and energy transition. Achieving this target requires a well-integrated strategy that bolsters green hydrogen adoption across industries, infrastructure, and exports.

The adoption of green hydrogen in refineries, fertilizers, and the piped natural gas could serve as a vital near-term accelerator, while public procurement of embedded products such as green steel could help drive sustained domestic demand of green hydrogen. Sector-specific substitution of green for grey hydrogen in chemicals and ceramics could further strengthen the foundation of green hydrogen utilization. The export of green hydrogen, green ammonia, and related embedded products, such as green steel, to countries with decarbonization mandates and supportive policies also offers a great opportunity for India.

Implementing all of these strategies could generate a minimum of ~2.1 MMT of green hydrogen demand by 2030. As the green hydrogen transition matures and there is higher adoption of green hydrogen through the similar strategies, the demand could go as high as 5 MMT by 2030, reaching the government's aspiration (*see Figure 8*).

Figure 8: Of the government's 5 MMT target, 2–3 MMT p.a. could be created by suggested measures, with a faster journey to maturity

Total green hydrogen demand (2030, MMT)



Notes: (1) Base case: 10% in refinery, 5% in fertilizers, 5% in piped natural gas, 10% in glass/ceramics and chemicals, 10% in green public procurement (GPP) of steel, 5% of green hydrogen export market, 50% of European Union (EU) steel demand; Optimistic case: 40% in refinery, 20% in fertilizers, 10% in piped natural gas, 20% in glass/ceramics and chemicals, 15% in GPP of steel, 7.5% of green hydrogen export market, 70% of EU steel demand
Source: Bain analysis

Key catalysts for success

Even as various sectors adopt the green hydrogen strategies discussed above, six additional actions are needed to stimulate demand, reduce startup risk, and manage the cost premium associated with green hydrogen adoption.

- **Offtake agreements:** Given the expectation of continued green hydrogen cost reduction, early adopters are hesitant to sign long-term procurement contracts, which reduces the bankability of these projects. However, green hydrogen projects (and underlying renewable energy projects) are set up for long durations. To mitigate the potential risk of buyers backing out from contracts midway, it is important to enable various measures, such as ladder pricing/indexation and intermediation of contracts by a counterparty with stronger balance sheet.

- **Access to low-cost funds:** Financial mechanisms such as viability gap funding, sovereign guarantees, and demand-side subsidies can be explored. This can help bridge the economic gap between the high cost of production and what the market can realistically pay.

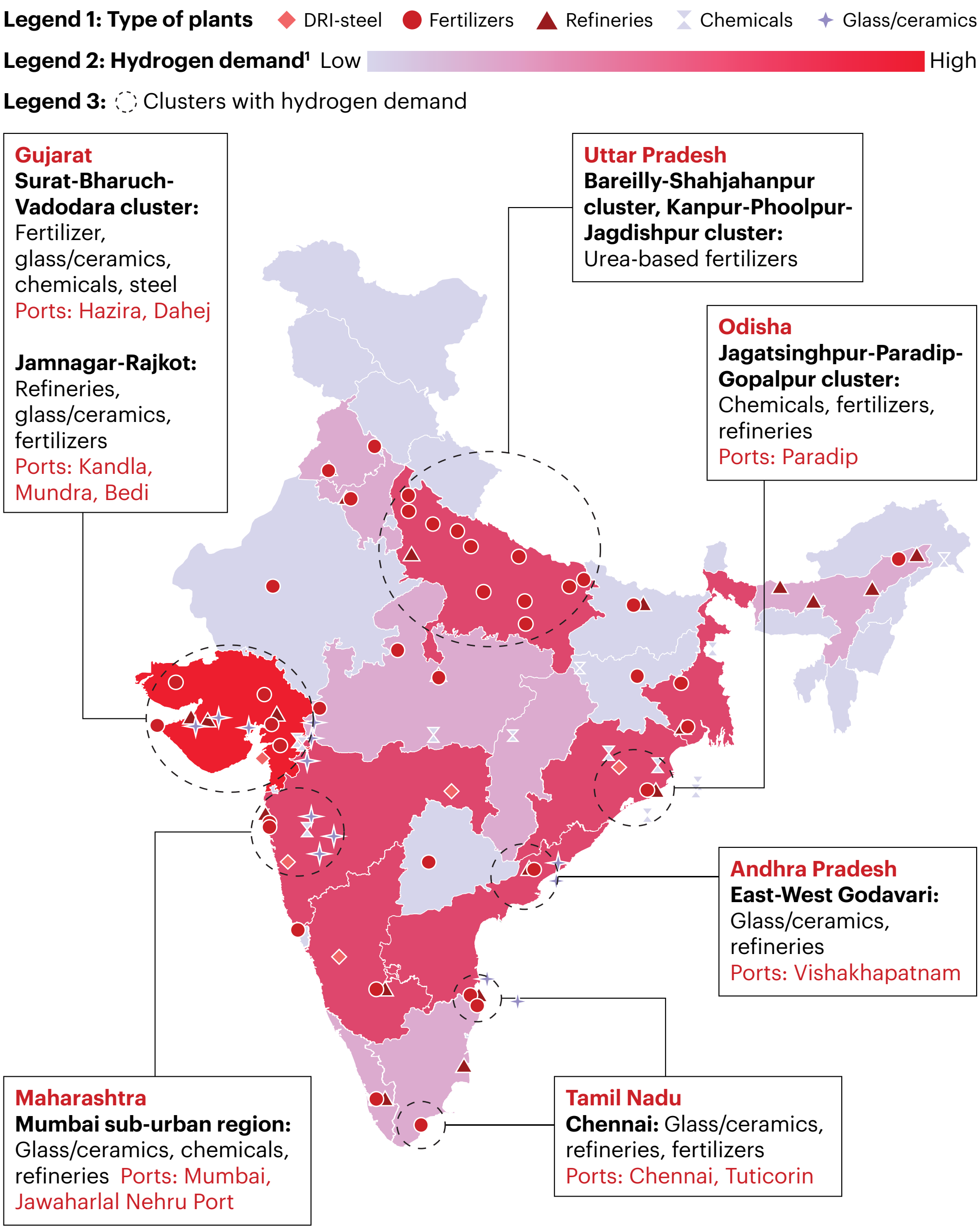
  Beyond public funding, green hydrogen project developers will also need access to private concessional loans, given the industry's high capital costs. A blended financing approach, integrating development and commercial funds, could improve project bankability by reducing capital costs and attracting diversified investment.

  Dollar-denominated green hydrogen contracts can help companies opt for dollar-denominated green bonds, which can cover funding costs and avoid the need for currency hedging. However, buyers will also have to consider the same or incorporate any natural hedges they may have.

- **Optimizing input costs:** While the electrolyzer technology evolution and innovation will lead to green hydrogen cost reduction over the next few years, there could be potential interventions made in the interim to reduce other input costs. Similarly, transmission charge waivers and concessional lands for green hydrogen projects/storage at ports can be explored. Acquisition and speed of laying of green hydrogen pipelines, timely provision of interstate transmission system (ISTS) lines, etc., can be expedited. Moreover, exploring granting "deemed export" status to green hydrogen and derivative process plants that supply the domestic market, along with the extension of all benefits applicable to export-oriented units (EOUs) and special economic zones (SEZs), could enhance viability given the import substitution benefits they drive.

- **Carbon credits:** A robust carbon pricing framework would help offset the current high cost of adopting green hydrogen. India's Carbon Credit Trading Scheme (CCTS) committee, instituted in 2023, is a solid first step toward establishing a countrywide emission trading system (ETS). India could look to global archetypes of carbon pricing, such as the EU's ETS and Canada's carbon pricing framework, for best practices. Similarly, provisions under Article 6.2 of the Paris Agreement, which enable carbon credits from green hydrogen and derivative projects to be sold as Internationally Transferred Mitigation Outcomes (ITMOs), can be evaluated.

Figure 9: Hydrogen hubs around key ports are key to aggregating green hydrogen demand



Notes: (1) Level of hydrogen demand estimated based on production capacity of refineries, fertilizer plants, and direct reduced iron (DRI) steel plants by state and number of chemical and glass/ceramics plants by state; Sources: Ministry of Petroleum & Natural Gas; Sponge Iron Manufacturers Association; Ministry of Chemicals & Fertilizers; The Fertilizer Association of India; GlobalData

- **Hydrogen hubs:** Hydrogen hubs and corridors could be paradigm-altering for India, and especially for micro, small, and medium enterprises (MSMEs). Government and industry leaders could consider collaborating to plan and design sustainable hydrogen hubs, with requisite infrastructure and resources, where producers and early consumers are present (*see Figure 9*). For export-centric hubs, additional port infrastructure is needed. These efforts would require public-private partnerships to aggregate demand and set up strategic infrastructure, such as pipelines, port storage facilities, and access to renewable energy. The Green Hydrogen Valley initiative by the Department of Science and Technology, Government of India, is a step in the right direction, and the potential to amplify the same needs to be considered.

- **Standardized global green hydrogen certification frameworks and bilateral treaties:** With green hydrogen still in its initial phase, there is a lack of global governing bodies to establish harmonized standards. As a result, the definition of green hydrogen is different in different countries (with variations across the EU, Japan, and South Korea, for example)—which poses challenges and increased costs for exporters. India could potentially create an enabling framework and drive bilateral or multilateral alignments to help overcome this challenge. Stakeholders could focus on developing cohesive guidelines that enable translation of Indian standards to international benchmarks, minimizing inconsistencies that may hinder global acceptance of India's green hydrogen. Further, the Indian government could consider expanding existing clean energy partnerships with countries such as Japan and South Korea, and with the EU to develop economically favorable trade corridors. This might involve exploring options for favorable tariffs, joint infrastructure investments, conformity of standards, and exemption from Foreign Subsidy Regulations, which could speed up the offtake of Indian green hydrogen production.

These strategies could help India further accelerate its green hydrogen sector by making its 5 MMT target even more achievable and facilitating a sustainable transition to clean energy.

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