

Pakistan's Hydrogen Economy: Strategic Priorities Amid Regional Instability

Energy security has returned to the forefront of policy making; the 2026 disruption in the Strait of Hormuz, which normally carries around one-fifth of global oil and LNG exports, demonstrated how rapidly geopolitical conflict can interrupt supply, raise prices and transmit shocks to import-dependent economies.

Few are more exposed than Pakistan, which imports 80-85% of its [petroleum](#); each USD 10 per barrel increase adds an estimated USD 1.8-2.0 billion to its import bill, while the International Monetary Fund (IMF) programme commitments leave little room to cushion the impact. This vulnerability is structural and can only be reduced by producing more energy at home. Solar, wind and hydropower, supported by Battery Energy Storage Systems (BESS), can curb fuel imports and meet growing demand. Where electrification falls short, in fertiliser, refining and heavy industry, [low-emissions hydrogen](#) offers one of the few domestic alternatives to imported fuels, provided it is underpinned by clear standards, pricing mechanisms and integrated energy planning.

Hydrogen matters to Pakistan for reasons that extend beyond decarbonisation. It links energy security with industrial competitiveness and directly supports Pakistan's Nationally Determined Contribution 3.0 (NDC 3.0) and the priorities of URAAN Pakistan. Yet the sector remains at a formative stage: a national strategy has been drafted but not adopted, Ghazi Barotha and the Quaid-i-Azam Solar Park have been assessed as candidate pilot sites, and a private [400 MW electrolyser project](#) has secured land in Sindh. With production costs of [USD 3.7-4.3 per kg](#), projects will need deliberate policy support to move forward.

Experience from India, Oman, Morocco and Egypt shows that such support succeeds when it targets specific barriers through demand aggregation, coherent land allocation, credible certification and long-term offtake. Putting comparable conditions in place, backed by risk-sharing finance, will determine whether Pakistan's hydrogen potential translates into bankable investment. This *Policy Dialogue* will bring together policy makers, industry, financiers and researchers to identify the actions that should come first. It will:

- Examine the implications of regional instability and supply chain disruption for Pakistan's energy security, external balance and fiscal position, and quantify where hydrogen could reduce this exposure.
- Identify priority end uses for domestically produced low-emissions hydrogen and ammonia, beginning with fertiliser and refining, and set out a realistic sequence for steel, cement and heavy-duty transport.

- Assess the alignment of hydrogen development with NDC 3.0 and URAAN Pakistan, including the case for a quantified hydrogen or green ammonia measure in the NDC implementation plan.
- Review international experience in moving hydrogen beyond the pilot stage and assess which policy instruments, including demand aggregation, land allocation and offtake contracts, are transferable to Pakistan.
- Set out the policy, institutional, certification, water and financing measures needed to bring first commercial projects to final investment decision, and the role of development partners and international hydrogen corridors in supporting them.

Organisers:

Ms Saleha Qureshi, Lead Pakistan Industrial Decarbonisation Programme & Senior Research Associate, Sustainable Development Policy Institute, Pakistan

Email: saleha@sdpi.org

Engr. Ubaid Ur Rehman Zia, Head/Lead of Energy Unit & Senior Research Associate, Sustainable Development Policy Institute, Pakistan

Email: ubaid@sdpi.org