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Gray to Green: The Conversion of a Hydrogen Plant – PV Gas

PROJECT FACTS

Duration: Dec 2025 – Sept 2026

Country: Vietnam

Partner: Neuman & Esser (NEA)

Strategic Partner: PV Gas

Outputs:

- A techno-economic feasibility study for the construction of a GH_2 plant by PV Gas
- Regulatory framework assessment on DPPA mechanism, infrastructure, environmental and social impact & industrial safety for GH_2,
- Customer portfolio analysis to assess hydrogen and derivative demand across PV Gas' industrial clients, generating insights for broader market understanding in Vietnam
- Dissemination workshop and exhibition at the GH_2 Hub Showroom
- Internship opportunities at NEA

H2Uppp

NEUMAN & ESSER

PETROVIETNAM PV GAS

PROJECT OVERVIEW

The private public partnership (PPP) aims to develop a feasibility study for PV Gas' first green hydrogen (GH_2) plant in Vietnam, marking an important step in transforming the country's main natural gas supplier toward a greener business model. The study will assess opportunities and techno-economic viability of supplying GH_2 and derivatives (e.g. green methanol or ammonia) to PV Gas' existing customers and explore new markets such as transport fuels, fertilizers, and potential exports. It will analyse customer segments based on energy intensity, fuel-switching potential, location, and cost sensitivity to identify priority markets.

The PPP will also evaluate potential sites for the first GH_2 plant, develop a preliminary technical design (electrolysis, compression, storage), and assess transport and distribution options. Safety and environmental and social impact assessments will support safe and sustainable design. Economic and regulatory analyses will evaluate competitiveness, export potential, and possible bottlenecks. Renewable electricity may be sourced from PV Gas projects or renewable energy power purchase agreements, including the direct power purchase agreement mechanism. Finally, the study will assess the maturity of Viet Nam's hydrogen supply chain, identifying strengths, gaps, and capability needs.

OBJECTIVES & EXPECTED RESULTS

The PPP aims to prove the technical feasibility and financial viability of GH2 production by Vietnam's leading gas supplier, PV Gas, and at paving the way for establishing PV Gas' first GH2 production plant and contributing to PV Gas' overall green hydrogen development strategy. In addition, a customer portfolio analysis will be conducted to assess demand across PV Gas' industrial clients. The analysis will generate insights that can be shared with other project developers in Vietnam, helping to highlight the potential of GH2, as well as hydrogen or derivative demand across different industries.

ABOUT H2UPPP

The International Hydrogen Ramp-up Programme (H2Uppp) paves the way for companies to develop the global green hydrogen market through project identification, project development, support and trade.

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