

Blueprinting the HyXchange Spot Market

Publieke samenvatting / Public summary

Aanleiding

Hydrogen is generally expected to play an important role in the transition towards climate neutrality, as a natural complement to the vast technical potential for intermittent renewable electricity production offered by the North Sea basin (see for example (TKI nieuw gas, 2018), (Gasunie & TenneT, 2019) (Berenschot & Kalavasta, 2020)). A dependable and transparent trading platform greatly enhances market access, pools liquidity and reduces transaction costs and trading risks. Such a platform should be expected to catalyse an increasing demand for climate-neutral hydrogen produced by an expanding asset base, driving optimal balancing of supply and demand through transparent pricing.

Doelstelling

The study seeks to establish a robust blueprint for a hydrogen exchange in the Netherlands that enables a gradual build-up of a hydrogen exchange covering an expanding geographical market catalysing the envisioned hydrogen system development. The project charts operational design for a hydrogen exchange in terms of market processes such as nominations, allocation, settlement and reconciliation in context of the hydrogen, electricity and natural gas system and associated geographical - and temporal scope, like temporal granularity, trading periods, gate closure and delivery periods, along with associated product specifications in alignment with coupled power and natural gas markets.

Korte omschrijving

Projectinformatie / Project information

Projectnummer / Project number

TKIETOETKI2022-HyXchange

Subsidiebedrag / Grant amount

€ 288.646,00

Algemene informatie / General information

Penvoerder / Secretariat

TNO

Publicaties en materialen / Publications and attachments

- 31.12.2023

Eindrapport HyXchange (TKI2022 HyXchange)

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The following work packages are foreseen within the scope of this project: • WP 1: Scoping of the project (with participating market parties and public stakeholders) • WP 2: I-ELGAS Optimization Model Preparation • WP 3: Optimization-Based Market Analysis • WP 4: EYE Simulation Model Preparation (bids and offers) • WP 5: Bid-Based Hydrogen Market Simulations • WP 6: Reporting, dissemination of results and next steps

Resultaat

The study is expected to provide a clear line of sight for design of a hydrogen exchange in the Netherlands. It is a precursor for a physical market simulation that can start when a regional start-up market has amassed sufficient liquidity, expected before 2025. Insights resulting from this blueprinting study and the physical market simulation will essentially shape the development of a Dutch hydrogen market and establish the rules for the Dutch hydrogen exchange (HyXchange).

De data in deze applicatie is afkomstig van de Rijksdienst voor Ondernemend Nederland (RVO) en wordt in samenwerking met de Topsector Energie ontsloten.

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Voor meer informatie over de TSE / Energie-Innovatie regelingen die RVO aanbiedt, ga naar www.rvo.nl/tse.