



International Partnership
for Hydrogen and Fuel Cells
in the Economy

The Netherlands Update

34th IPHE Steering Committee Meeting
1 – 4 December 2020
Virtual Meeting

Announcements and/or New Initiatives

The Netherlands



• Investments/Funding/Policies/Initiatives

Since the Hydrogen Strategy in March 2020 a lot has happened:

- Joint Political Declaration of the Pentalateral Energy Forum on the Role of Hydrogen to Decarbonize the Energy System in Europe
- HyWay27: hydrogen backbone study
- Guidehouse study on combined tenders for offshore wind and hydrogen production
- MoU with Portugal in the field of Hydrogen: export-import value chain from Sines to Rotterdam
- Collaboration between the US and NL focused on Hydrogen Technology
- IPCEI Open Call: 83 projects!
- Two residential hydrogen pilots got funding (Hoogeveen 4,4 mln EUR & SaH 5,6 mln EUR)
- H2 Investment plan Northern Netherlands
- Starting preparations for 2022-2025 phase of National Hydrogen Program



Announcements and/or New Initiatives

The Netherlands



• Key Collaborations

- Pentalateral Energy Forum HyWay27: hydrogen backbone study
- Portugal for the development of an export-import value chain from Sines to Rotterdam
- Collaboration between the US and NL focused on Hydrogen RD&D
- Study with Germany: HY3
- With the North Western European countries within CEM to perform a hydrogen regional market and policy study
- Port of Rotterdam exploring global import supply chains
- IEA, IEA-TCP, CEM-H2, MI, IPHE
- IPCEI



Announcements and/or New Initiatives

The Netherlands



- **New Research & Development, Demonstration and/or Deployment Activities**
 - Overview with over 80 projects can be found [here](#).
 - Agricultural applications with local renewable energy production and hydrogen production on site for use in tractors and for heat production. See [video](#).
 - Holthausen partnered with Hyzon to produce H2 trucks in Northern Netherlands, beginning with 500 trucks per year and scaling up to 2000 per year
 - Development of hydrogen burners from Nedmag
 - RWE hydrogen production from residual waste FID 2022 for industrial use
 - Up to 800 MW plans for electrolysis until 2025 f.i. Tatasteel/Nouryon 100 MW, Engie/Gasunie (100MW), New Shell/BP/Nouryon 250 MW project in Rotterdam...



Examples of Lessons Learned and Impact

The Netherlands



Please include up to 3 examples of policies, regulations or mandates that have been used in your country to deploy sustainable energy technologies. Please include a lesson learned for each example (i.e. if you had to do it all over again, what would you do different? Or what worked well?)

Program initiative, policy, regulation or mandate	Lessons Learned/Outcomes
Programmatic approach for Wind Energy	This approach worked well for deploying offshore wind eliminating large risks and should be implemented for linking hydrogen production with renewable energy production in the nearby future



The Netherlands – Profile June 2020

Status of Deployments

- Start upscaling phase of green hydrogen (realizing 1-20 MW electrolysis)
- Kick starting clean hydrogen market

Leading Government Initiatives

- H2 National Program for:
- Reuse of existing gas grid
 - market regulation
 - GoOs & certification
 - Safety
 - H2 & offshore wind
 - Blending obligation
 - H2 in transport, built environment, electricity and agricultural sector
 - International & regional strategy
 - Research & innovation

Goals or Focus Areas

Upscaling green hydrogen production & reducing costs

Deployment Goals

- 3-4GW electrolysis in 2030, 500 Mw in 2025
 - In 2025: 50 tank stations, 15.000 FCEVs en 3.000 heavy duty vehicles
- Pilot projects to enable use of hydrogen for urban heating by 2030

Funding

€ 70 mln subsidy per year (DEI+ & new upscaling instrument) + SDE++ for green and blue hydrogen production



Thank you



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Highlight to Include in IPHE Newsletter (*The Netherlands*)



On 30th October, businesses and government bodies in the Northern Netherlands have published the Northern Netherlands Hydrogen Investment Plan. The plan includes investments totaling up to 9 billion euros and could secure some 66,000 existing jobs in areas like gas infrastructure and mobility and help create between 25,000 (in 2030) and 41,000 (in 2050) new jobs in areas like maintenance and operations. The parties in the Northern Netherlands want to play a pioneering role in this area, ahead of implementation throughout the rest of the country and Europe



Status of Applications and Goals *The Netherlands*

Application	Status (As of <i>June 2020</i>)	Goal (For <i>2030</i>)
1) H₂ Applications		
a. Energy Storage (e.g. MW, GW of capacity)	-	-
b. Electrolyzers	<i>1 MW</i>	<i>3-4 GW</i>
c. Other (e.g., Steel, Marine, Fertilizer, etc.)	-	-
2) Transportation		
a. Light Duty Vehicles	<i>314</i>	<i>300.000</i>
b. Medium and Heavy Duty Vehicles	<i>22</i>	<i>3.500 by 2025</i>
c. Buses	<i>7</i>	<i>300 by 2025</i>
d. Trains	<i>1</i>	-
e. Forklifts	<i>0</i>	-
3) Stationary		
a. Residential	<i>Not known</i>	-
b. Commercial	<i>Not known</i>	-
c. Back Up Power	<i>Not known</i>	-
<i>4) Other (applicable to your country and not covered in the categories listed above)</i>		

