Memorandum for hydrogen

Recommendations for the 2024-2029 legislature

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EXECUTIVE SUMMARY

Previous Belgian governments have shown great ambition when it comes to hydrogen, declaring the intention to become an "import hub for clean hydrogen for the rest of Europe" and to become "a European leader in clean hydrogen". The new Belgian governments should re-confirm and further reinforce and implement this ambition it via the following six concrete action points:

I. ADEQUATE SUPPORT MECHANISM: Ensure **sufficient and competitive support mechanisms (in line with our neighbouring countries)** to bridge the price gap between clean hydrogen and the currently produced hydrogen, so Belgium can maintain its large industrial base and attract/develop pioneering hydrogen production projects at the same time. We should advocate at EU level for a real level-playing field and ensure that EU funding programs, for example take the varying electricity costs among EU countries into consideration.

II. OPEN ACCESS INFRASTRUCTURE: Develop a **fully-fledged open access hydrogen infrastructure** consisting of an internationally interconnected hydrogen transport backbone connecting the Belgian industrial clusters and industrial clusters in the neighbouring countries, a distribution network and import terminals for hydrogen and its derivatives.

III. LIQUID MARKET: Set up a **liquid market for hydrogen and stimulate the use** of clean hydrogen by implementing an adequate and pragmatic certification of renewable and low-carbon hydrogen that is harmonised in Belgium (and at EU-level) and that can be traded on an exchange market/platform (e.g. stimulate the development of test pilots like HyBex, including exploring synergies with initiatives in neighbouring countries). Clarity on the devolution of powers on hydrogen between the regions and the federal level is essential for a workable market in Belgium.

IV. MOBILITY: Establish a **level playing field** for hydrogen mobility (road, rail, barge and aviation) vis à vis neighbouring countries and vis à vis fossil alternatives and develop a comprehensive and standardised network of hydrogen refuelling stations for all modes of transport.

V. RESEARCH & DEVELOPMENT: Stimulate our excellent hydrogen research & development (R&D) with recurring hydrogen calls that **support coherent and focussed research programs, innovative large-scale pilots** along the entire value chain from production to use and support the development of more mature technologies towards full **commercial/industrial scale**.

VI. TRAINING AND EDUCATION: Organize **training and education** on all aspects of hydrogen (including safety) so Belgium secures knowledge as its most important "raw material" that we export worldwide. Also the **broader Belgian society** must be informed via public outreach about the positive role of hydrogen in the future energy system, or we risk ending up with endless appeals and legal court cases against hydrogen production and infrastructure projects.

Overall, Belgium should develop a vision on energy system integration between electrons and molecules by giving a central place to hydrogen in the energy system (as was done at EU level).

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It is widely recognised that clean hydrogen and clean hydrogen-derived energy carriers will play an important role in the energy transition, both as feedstock and as an energy vector as well as a tool of system integration and net balancing. European legislation, which is currently being developed, is also increasingly providing the necessary impulses for this.

Belgium shows the ambition to be a global leader and frontrunner in the hydrogen economy. The federal government declares in its hydrogen strategy that it has the ambition to become an import hub for clean hydrogen for the rest of Europe while the Flemish government is aiming to become a European leader in hydrogen as stated in the Flemish hydrogen vision and the coalition agreement of 2019. Also the Walloon government is currently working on an ambitious hydrogen roadmap that should be finalised mid-2024. Important initiating steps were already taken towards achieving these ambitions, leading to a doubling of employment in Belgium from 500 to 1000 FTEs active in hydrogen in just two years (2020 – 2022)[1].

However, it is our belief as the Belgian Hydrogen Council that the upcoming legislature between 2024-2029 is crucial if we want to realise our ambitions and play a role in the roll-out of the hydrogen economy of tomorrow. Therefore, we call for immediate action in this upcoming legislature with some action points that are crucial if Belgium wants to capitalise on its geographical and technological hydrogen assets.

The most urgent actions are centred around six axes:

1. Ensure sufficient and competitive funding/support for clean hydrogen
2. Develop a fully-fledged open access hydrogen infrastructure
3. Create a liquid market for clean hydrogen
4. Unlock the hydrogen decarbonisation potential in the transport sector
5. Stimulate hydrogen research & development
6. Organise training, education and awareness on hydrogen

In this document the following is meant by "clean hydrogen": Renewable and low carbon hydrogen, more broadly interpreted than the EU's strict definitions.

[1] *Survey done among Waterstof Industrie Cluster members in 2021.*

3 • ENSURE SUFFICIENT AND COMPETITIVE FUNDING/ SUPPORT MECHANISM FOR CLEAN HYDROGEN

Belgium is unique since it already consumes between 400 to 500 kton/year of hydrogen today[2]. This hydrogen is almost 100% fossil-based. Our industrial consumers are ready to shift from grey towards clean hydrogen, but are facing uncertainties (lack of regulatory framework and market) and a significant cost difference compared to fossil-based alternatives. To make clean hydrogen competitive against fossil fuels, economic incentives need to be put in place and scaled up for hydrogen consumers. Our neighbouring countries have installed instruments linked to significant budget to support their hard-to-abate industry and transport. Without these aid mechanisms (both CAPEX and OPEX), we not only risk to miss future investments (pertaining to investments for new, expansion or replacement of assets) of international players in our country and to lose our large industrial base due to loss of competitiveness, which would result in job destruction. In addition to consumption, pioneering clean hydrogen production projects need to have access to funding/support mechanism so expertise can be built and exported abroad.

Action points

- First and foremost, our governments should make room within its own budget for operational (OPEX) support for hydrogen that bridges the gap between the cost of grey and clean hydrogen, thus levelling the playing field in line with our neighbouring countries[3]. This can be done with instruments like tax credits[4], Contracts for Difference or feed in tariffs[5]. In budget negotiations, a minimum of a couple of hundreds of millions per year should be earmarked for clean hydrogen OPEX-support[6].

- In addition, the Belgian governments should advocate for European funds. The EU hydrogen Bank will play a crucial role in this endeavour so industry should be consulted throughout the setting up of this Bank, to ensure support is not restricted to hydrogen production but also covers consumption[7]. Belgian authorities should together advocate for minimum quotas per country in the EU Hydrogen Bank, or an alternative mechanism that supports pioneering projects in every country. This is important because Belgian projects will be put into competition with European projects benefitting from cheaper electricity prices. It is in the interest of the entire value chain that Belgium secures a base of pioneering projects of renewable production, to build a level of expertise, to start collaboration with industries, to develop the market and to contribute to Belgian targets set up in the Renewable Energy Directive.

- Investments in hydrogen production, consumption and infrastructure can be further de-risked by:
    - Developing investment models with a degree of government backing for covering the investment/ revenue gap for early investments in infrastructure.
    - Subsidy schemes such as the Ecologiepremie + in Flanders, where the list of hydrogen technologies should be continuously adapted to needs and aid levels should be increased.
    - Recurring (e.g. annually) thematic calls for investment support throughout the hydrogen chain, as is done in France, The Netherlands , Germany,…

- In the general tax regime, the possibilities for differentiated taxation of energy carriers should continue to be explored and exploited. Like for other emerging energies, all fiscal measures should be investigated and used to stimulate and de-risk hydrogen production and infrastructure investments. However, in shifting taxes to other energy carriers, the technology maturity and feasibility of the alternatives should always be taken into account (e.g. natural gas as feedstock is different from natural gas as energy carrier).
- The recently created Belgian Hydrogen Council should be adequately funded so it can fully take up its role as a national hydrogen council as is the case for other foreign councils like the German Hydrogen Council, Conseil Nationale de l'hydrogène,…

[2] *Hydrogen Demand | FCHObservatory: similar demand to big countries like Italy and UK, but in a far more dense geographical area.*

[3] *As a benchmark, the H2-related support schemes in The Netherlands, Germany and France are listed in annex*

[4] *The US Inflation Reduction Act (IRA) provides a very simple and clear $3/kg for ten years tax credit for low carbon hydrogen production. In addition, they are also working on OPEX mechanisms for hydrogen consumption: US plans $1bn of subsidies for clean hydrogen users as production tax credit fails to attract sufficient offtakers | Hydrogen news and intelligence (hydrogeninsight.com)*

[5] *The (draft) federal climate and energy plan is already going in this direction: 24.04.2023-draft-fekp-nl.pdf (klimaat.be), p. 160. Also the Flemish "Klimaatsprong" is working on a similar OPEX aid instrument.*

[6] *As a-also other organizations like Voka are asking in their memorandum.*

[7] *However, the Bank for now seems to focus on hydrogen production while consumption should also be supported.*

[8] *See Annex I for an overview of Dutch hydrogen subsidy schemes.*

[9] *For example, via the energy investment tax deduction, as announced in the Flemish Climate and Energy plan: Microsoft Word - VR 2023 1205 DOC. Visienota Actualisering VEKP - 2 Bijlage TER (vlaanderen.be), p.123.*

4 • DEVELOP A FULLY-FLEDGED OPEN ACCESS HYDROGEN INFRASTRUCTURE

Infrastructure will play a crucial role in seizing opportunities in the emerging hydrogen economy. Belgium has more than 600 km of hydrogen pipelines already today. We must capitalize on the knowledge acquired over decades for this worldwide unique asset that is specially tailored to supply high-level purity (>99,99%) hydrogen that is needed to decarbonise industrial players by complementing this current private hydrogen pipeline network with an open access network connecting the import terminals, the Belgian industrial clusters and industrial clusters in the neighbouring countries.

Action points

- Space for pipeline zones must be reserved in Flanders and the Walloon Region to connect the Belgian industrial clusters and the neighbouring countries: the route via Zeebrugge, via the Ghent Canal Zone, Antwerp, the Canal Albert and the industrial clusters, between Liège-Mons-Charleroi together with interconnections with our neighbouring countries (NL, FR, DE, UK, …) are key for the development of a hydrogen ecosystem in Belgium. The importance is also being recognized in the ongoing PCI ("project of common interest") approval process where both the H2 backbone and the interconnections with our neighbouring countries have been found eligible for CEF funding. In addition, the permit process should be simplified and its length reduced. The sector is asking for a route selection and permit process within a maximum period of 12-18 months, as the Commission proposes in its Net Zero Industry Act[10]. A clear strategic choice must strengthen the connection with Germany, The Netherlands, Luxemburg, France and the competitive position against other ports.

- Governments should support the development of low-carbon hydrogen production which has the benefit of providing baseload volumes of decarbonized hydrogen to industrial consumers and facilitating the build-out of hydrogen infrastructure through its volume, potential and reliability.

- Our governments should encourage/ensure the right conditions (clear legislation, safety standards,…) for sufficient terminal capacity for import of hydrogen and its derivatives, since studies show that Belgium will need import of clean hydrogen from countries with abundant renewable energy sources in addition to its own production in order to meet the local demand and additionally to supply other EU countries[11]. We should continue to promote and develop cooperation with the respective governments in selected key producing countries in the field of clean hydrogen, on the basis of reciprocal benefit. Our country should be promoted as the country of choice in the EU for hydrogen import (and derivatives), stressing that Belgium is set to becoming a central hub for hydrogen import, transfer to neighboring countries, commercial exchange, and large end-users. Existing international relationships should be strengthened as well as new ones established. The Belgian Hydrogen Council can play its role in assessing what countries deserve prioritization.

- Encourage the development of offshore wind/hydrogen production in the North Sea (with huge potential in UK, NO, DK, NL, …) and facilitate the interconnection with Belgium.
- Monitor and ensure capacity for other modes of transport through rail and barge, sea going vessels for derivatives, as part of our hub function for chemicals and industrial base.

[10] *Hydrogen Europe*.

[11] *Hydrogen Import Coalition, Study on large-scale import of hydrogen from other continents, Study on large-scale import of hydrogen (H2 Import Coalition) (waterstofnet.eu)*

5 • CREATE A LIQUID MARKET FOR CLEAN HYDROGEN

To develop a liquid market and stimulate the use (and trade/exchange) of clean hydrogen, adequate and pragmatic certification of clean hydrogen must be ensured. Currently, hydrogen faces a lack of a clear and well-organized hydrogen certification framework. This situation hinders the development of the clean hydrogen market that connects producers and for customers. To establish hydrogen trading, a hydrogen exchange should be set up to ensure proper market operation and transparent, efficient pricing. Clarity on the devolution of powers on hydrogen between the regions and the federal level is essential for a workable framework. In addition, the regulatory framework in Belgium must be aligned with the EU-approach, neighbouring countries and between the regions so as to facilitate the exchange of hydrogen certificates, lower administrative costs and increase the hydrogen liquidity. These conditions are needed to cover the mandatory and/or unavoidable demand in Belgium.

Action points

- Make sure all actors rapidly have access to a pragmatic and adequate certification system by:
  - Ensuring that GOs and certificates are interchangeable by setting the same standards and make them independent of quality/purity specs or infrastructure type to avoid further market fragmentation and an increase in transaction costs for certification. To avoid double counting, GO and RFNBO certification systems should be interlinked.
  - Striving for maximal centralisation and simplification of the different roles in the certification system and between all policy levels. The Belgian Hydrogen Council-proposal to create one common production registrar across all regions is a minimal starting point that should be adopted.
  - Anticipating EU regulatory proposals and proceeding with (temporary) voluntary RFNBO[12] certification schemes[13]. It is critical that any Belgian hydrogen certification/Guarantee of Origin ("GO") system be compatible with the certification system in our neighbouring countries (DE, NL, FR, LUX). Belgium needs an aligned certification system for both low-carbon and renewable hydrogen, whether locally produced or imported.

- A Belgian hydrogen market exchange should be set up, similar to the Zeebrugge Trading Platform or ZTP for natural gas. The HyBex-initiative is an example of an initiative that (coordinated by Fluxys, Port of Antwerp-Bruges and Hinicio) will develop such a platform and test it on pilot scale. This market exchange will enable the trading of hydrogen as a commodity as well as the according certificates and grid balancing products.

- Belgium should swiftly transpose RED II and RED III by
  - setting up a RFNBO credit system for the transport sector like the HBE-system in The Netherlands, the THG-system in Germany[14], or the TIRUERT-system in France. It is important to stress that the transport sector and large industry cannot be compared one to one in terms of cost structure and possibility to pass-through costs to end customers.
  - Belgium should consult with industry to see how RED III can best be transposed into national law, without blindly copying the system from the transport sector. Any credit system for industry should be subject to an impact assessment.

- Regions should smoothen and shorten the permitting processes for hydrogen infrastructure and hydrogen projects as is foreseen by the EU legislation (RED III, net zero industry regulation as well as under discussion through the revision of the Industrial Emissions Directive). The government should not wait for the official publication of the EU legislation in this regard which would cause unnecessary delay.

[12] *RFNBO stands for renewable fuels of non-biological origin.* ***Broadly speaking, they correspond to renewable hydrogen produced by feeding renewables-based electricity into an electrolyser. At the same time liquid fuels, such as ammonia, methanol or e-fuels, are considered RFNBOs when produced from renewable hydrogen.***

[13] *Like the CertifHy scheme developed by Hinicio.*

[14] *THG quota Buy – Emissionshaendler.com.*

6 • UNLOCK THE HYDROGEN DECARBONISATION POTENTIAL IN THE TRANSPORT SECTOR

Europe's logistics hotspot is formed by the triangle between Europe's largest seaports located in the Scheldt Delta and the Ruhr area, cantered on Europe's largest fluvial port Duisburg[15]. Nowhere in Europe a higher concentration of heavy truck traffic exists. The Belgian mobility and transport sector emissions represent more than 20% of total emissions. If Belgium wants to achieve its climate goals, zero emission mobility needs to be the goal. Hydrogen is expected to play a significant role in this decarbonization with its unique advantages: ease of use for heavy-duty and long-distance transport and easy integration into existing operations. This makes the Belgian transport sector an ideal decarbonization vector, a major employer, an important creator of added value and essential for the smooth handling of hinterland road traffic for the ports of Antwerp, Zeebrugge and North Sea Port. The creation by the Belgian federal and regional governments of a level playing field for Belgian transportation entrepreneurs is crucial to guard against a shift of jobs and value creation to our neighbouring countries. Also the emerging decarbonisation of the maritime, inland shipping and aviation sector should be fully supported.

Action points

- **Technology neutrality** between all zero emission technologies (battery, hydrogen, other) should be maintained as a principle at all time. Policy measures shall be formulated in a technology neutral way, without favouring one zero emission solution over the other.
- A comprehensive network of hydrogen refuelling stations (HRS) should be established in strategic locations.[16] The implementation of the Alternative Refuelling Infrastructure Regulation (AFIR) leads to a bare minimum of 15 HRS in Belgium by 2030. The sector should be closely involved in drawing up the AFIR implementation plan(s) by 2027. The location of the HRS should follow the needs of the transport and mobility sectors. One possible way to do so is to favour ecosystem projects (developing HRS simultaneously with a trucks captive fleet switch to hydrogen).
- Establish a level playing field for Belgian transport operators with neighbouring countries[17] in terms of sufficient CAPEX support for trucks/busses/hydrogen refuelling stations, zero road tax ("kilometerheffing") for zero emission trucks and increased tax deduction for investment in hydrogen refuelling.

- The maritime industry is seen as a 'hard-to-abate sector' and thus requires a variety of measures towards their decarbonisation trajectory:
  - Maritime emissions will be included in the EU Emissions Trading System (ETS). [18]The revenues of the ETS will partly be allocated to the member states. Returning ETS revenues back to the (maritime) industry is crucial in order to provide adequate support for the shipping transition towards the uptake of RFNBO through backing innovation, pilot projects, bunkering facilities and related infrastructure.
  - For the maritime sector, excise duty exemptions are granted for conventional fossil fuels, while alternative fuels (RFNBO's) are often not yet subject to any exemptions. It is important to (at least) match the excise duty of alternative fuels to the tax scheme of conventional fuels in order to raise the demand for these alternatives and avoid any fiscal distortions. Exemptions should always be technology neutral and should not refer to any type of propulsion technology.

- Other transport modes which are allocated as non-road mobile machinery (NRMM), like inland waterway vessels and port equipment, should receive sufficient financial support to enable for use of clean hydrogen and to bridge the investment gap with fossil based propulsion.

- For aviation, the production and distribution of Sustainable Aviation Fuels (SAFs) should be supported.

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[15] *Completed with the TRILOGIPORT in Liège where there are also large possibilities between rail/road/boat in the axes towards Germany and south of Netherlands.*

[16] *Studies show that a parallel roll out of charging and HRS infrastructure leads to cost reduction. For example, with a 90/10 split between battery electric driving (BEV) and hydrogen use (FCEV) in mobility, this could lead to savings for the Netherlands in the order of €8 billion on infrastructure construction: H2-Platform en RAI: voordelen H2-mobiliteit voor kosten netinfrastructuur - H2Platform (opwegmetwaterstof.nl), International Energy Agency, Net-zero by 2050, and Hydrogen Council, Roadmap towards zero emissions: The complementary role of BEVs and FCEVs.*

[17] *In annex you can find an overview of hydrogen related subsidies in our neighboring countries. For example, Germany gives up to 80% of capex support for trucks and HRS.*

[18] *Container and cruise ships above 5,000 GT calling at EU ports, with a gradual roll-out from 2024 to 2026*

7 • STIMULATE HYDROGEN RESEARCH & DEVELOPMENT

The new government should support innovative large-scale pilots along the entire value chain from production to use, taking into account the initial lower cost efficiency of such plants. To make the most of the opportunities of the fast-growing global low carbon hydrogen economy, encourage and support export of technology and concepts, with a particular focus on spearheads, as well as attract foreign investments that strengthen our Belgian industry.

Action points

- Establishing regional research and innovation programs at lower TRL-levels[19] (TRL < 5) with associated funding budget lines, in which Belgian research organizations and industry can (jointly) develop new technologies and intellectual property, which can be valorized and which can achieve maximum results when project results are embedded in larger European research projects and in the roadmaps of industrial companies.
- Support the upscaling of more mature technologies towards full commercial/industrial scale.
- Organizing recurring innovation calls ("impulsprogramma")[20], with the possibility of subsidizing programs across the value chain.
- The main technological developments in Belgium should be monitored and evaluated annually (criteria: # of players, TRL level, customer base, link with academic expertise, export potential, ...) to identify and actively promote the most promising export products or investment opportunities for foreign companies in Belgium.
- Ensure an organized Belgian strategy and framework to weigh on the relevant European research agenda and funding calls such as European Energy Research Alliance (EERA), JU Fuel Cells and Hydrogen, Clean Hydrogen Framework,… and support the working program within the International Energy Agency (IEA) on Hydrogen to foster more European & International collaboration.

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19 *Technological Readiness Level: Technology readiness level - Wikipedia*

20 *As was stated in the Vlaamse Waterstofvisie: 5fad5387b328e9000c00018b.pdf (ewi-vlaanderen.be), p. 12*

8 • ORGANIZE TRAINING, EDUCATION AND AWARENESS ON HYDROGEN

Belgium is a knowledge economy. Knowledge is our most important "raw material" that we export worldwide. Almost all BHC companies are in dire need of new skilled workforce or are looking to reskill their existing workforce. However, at the same time we have very little and fragmented training and education on hydrogen. There is a shortage of all profiles, from technical students up to bachelors and masters. Also our broader society must be informed about hydrogen and the upcoming societal changes, or we risk of ending up with endless appeals and legal court cases against hydrogen projects and pipelines.

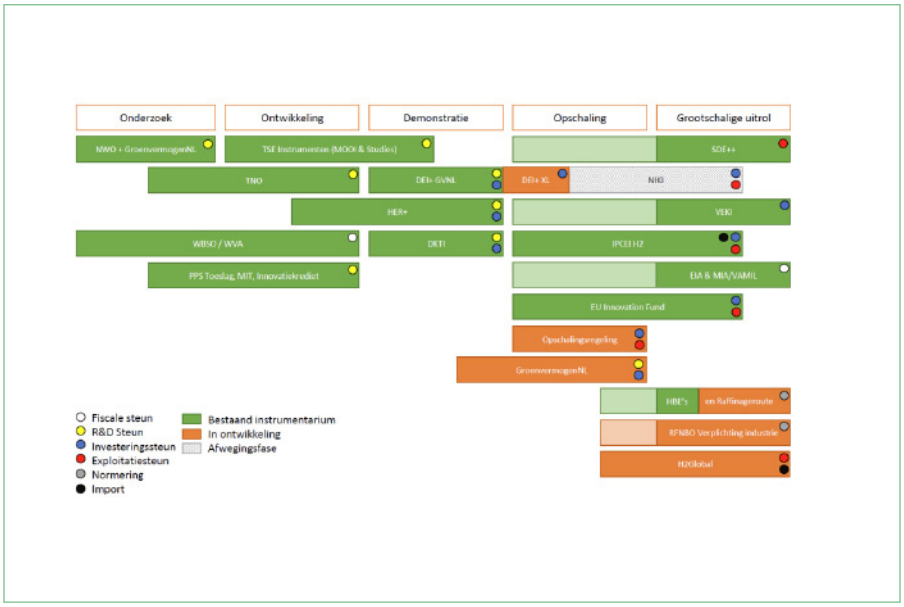
Action points

- Regional governments should launch an information campaign to make technical education attractive. It is important that the topic of hydrogen and its possibilities towards the future are embedded in these campaigns, as this shows the contribution of technical education towards a more sustainable future. One could for example use the development of the hydrogen economy to illustrate the sustainable nature of technical educations. Additionally, inflow of skilled workforce in our industry should be stimulated by incorporating industrial internships in all curricula. Finally, focus shut be put on gender diversity to favor the diversity of profiles.
- Furthermore it is also important to organize formations to reskill and reorient people towards hydrogen industry since focusing on the classic education system only will not be sufficient and fast enough to speed up our economy towards hydrogen[21].
- Broad public awareness campaigns should be set up to inform society about hydrogen and the role it has to play in the energy transition. Safety should be a key element in this.

[21] *The European Commission's Net Zero Industry Act launches the idea of setting up "Net-Zero Industry Academies". These will provide training and education on net-zero technologies, and lead to quality jobs creation: Net-Zero Industry Act (europa.eu).*

ANNEX I: OVERVIEW OF HYDROGEN SUBSIDIES IN THE NETHERLANDS

- Dutch-German program on green hydrogen (R&D – 10 million)
  - Nieuw Nederlands-Duits programma over groene waterstof | NWO
- Hydrogen filling stations and trucks (mobility – 22 million)
  - 22 miljoen subsidie voor waterstoftankstations en -vrachtwagens | Nationaal Waterstof Programma
- IPCEI Hydrogen wave 1: technology (Nedstack – 21 million)
  - Onze waterstof-brandstofcelfabriek produceert evenveel vermogen als een grote kolencentrale» (rvo.nl)
- IPCEI Hydrogen wave 2: industry (production – 800 million)
  - Zeven grote waterstofprojecten in Nederland krijgen subsidie voor elektrolyse | Nieuwsbericht | Rijksoverheid.nl
- IPCEI Hydrogen wave 3: import and storage (Import/Storage - 595 million)
  - IPCEI Waterstof: Import en opslag (rvo.nl)
- IPCEI Hydrogen wave 4: mobility and transport (mobility - 199 million)
  - Stand van zaken IPCEI Waterstof (rvo.nl)
- Call "Direct Use of Hydrogen" (R&D - 14 million)
  - NWO lanceert call van NGF-programma GroenvermogenNL Werkpakket 3 'Direct gebruik van waterstof' | NWO
- Subsidy for zero-emission construction vehicles (HDV - 60 million)
  - Subsidieregeling Schoon en Emissieloos Bouwmaterieel (SSEB) (rvo.nl)
- SDE+ (production – 8 billion for 2023)
  - VoltH2 receives SDE++ operating subsidy for green hydrogen plants in Zeeland - VoltH2
- DEI+ (hydrogen and green chemicals (production – 40 million)
  - DEI+: Waterstof en groene chemie (GroenvermogenNL) (rvo.nl)
  - hy-gro.net/newsitem/toekenning-11-8-miljoen-subsidie-aan-hygro-positief-voor-uitrol-waterstofketen-van-wind-tot-wiel
- Top Sector Energy (TSE) Industry Research & Development Call (R&D – 1,9 million)
  - TSE Industrie Onderzoek & Ontwikkeling (O&O) (rvo.nl)
- Aanschafsubsidie Zero-Emissie Trucks (Mobility – 30 million)
  - Aanschafsubsidie Zero-Emissie Trucks (AanZET) (rvo.nl)
- Grant scheme "Scaling up fully renewable hydrogen production via electrolysis" (Production – 245 million in 2023, 1 billion in 2024)
  - Subsidieregeling Opschaling volledig hernieuwbare waterstofproductie via elektrolyse (OWE) (rvo.nl)
- Groenvermogen: Supporting funding program for OWE (H2 value chain – 500 million)
  - 500 miljoen extra voor groene waterstof en chemie via GroenvermogenNL - Groenvermogen
- Upscaling of hydrogen (Production/import/use – 9 billion)
  - Kabinet investeert fors in opschaling waterstof | Nieuwsbericht | Rijksoverheid.nl
- Subsidy Maritiem Masterplan (maritime - 110 million)
  - Subsidie toegekend voor versnellen energietransitie in de maritieme sector - Alles over Waterstof



Overview hydrogen subsidy instruments in The Netherlands[22]

[22] *file (overheid.nl), p. 1.*