



Ministerie van Sociale Zaken en
Werkgelegenheid



Hydrogen fuels in the Netherlands



Use of Hydrogen fuel

- Transport
 - Cars (not the future)
 - Trucks and busses
 - Boats
 - Airplanes (not possible yet)
- Heating and Cooling
 - Residential homes (experimental phase)
 - Company buildings (experimental phase)
 - (Chemical) Industry as part of the process
- Electricity
 - Residential homes
 - Companies
 - Industry

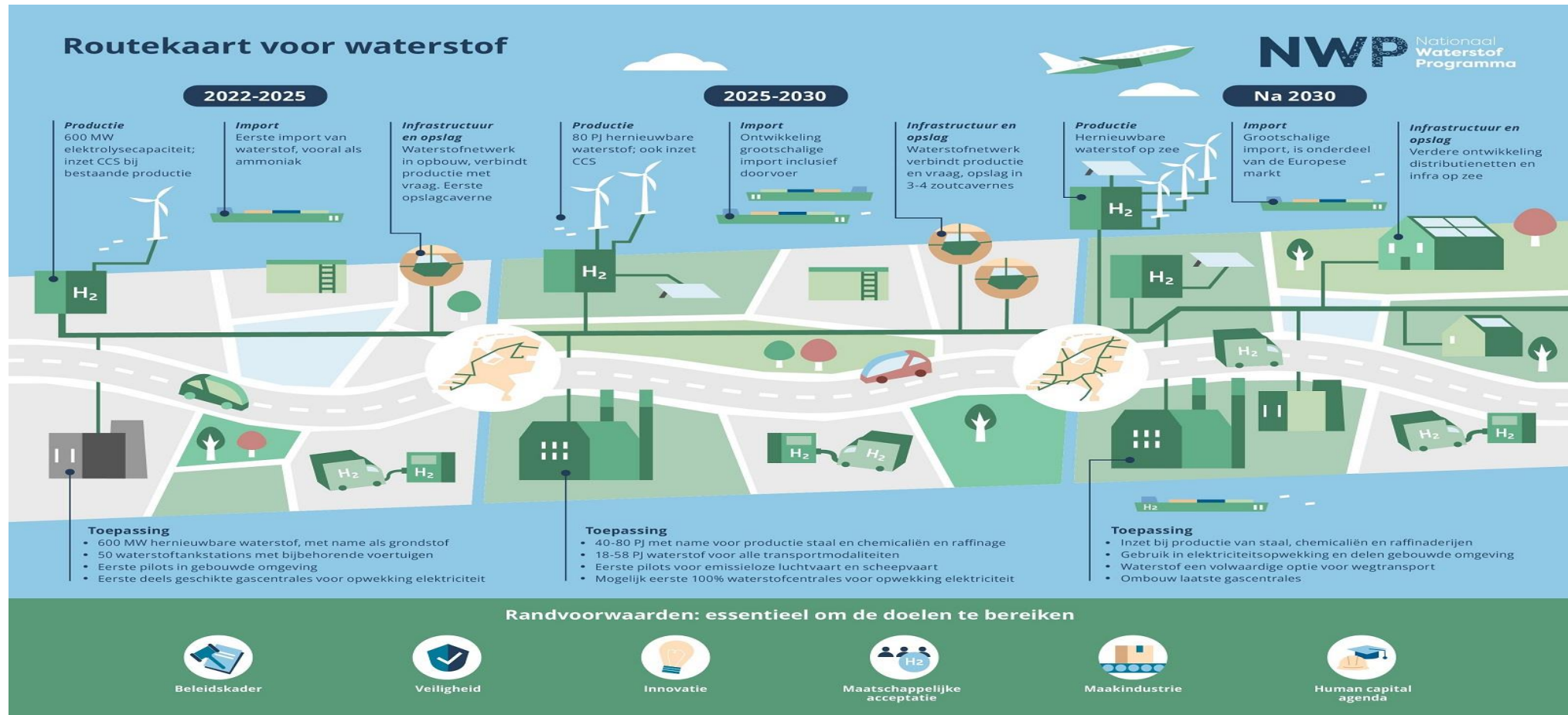


Future use of Hydrogen fuels: Part of Dutch National Hydrogen Program

- Transport
 - Heating and Cooling of buildings
 - Electricity
-
- > Main themes of the Hydrogen program
 - > Production
 - > Import
 - > Infrastructure and storage



Roadmap of the Dutch National Hydrogen Program





Principles for dealing responsibly with safety and health in the energy transition

- The Dutch Ministry of Economic Affairs and Climate Policy has initiated a concept of interdepartmental principles which has been developed for responsible handling of safety and health risks of the energy transition in policy-making, licensing, communication and supervision.
- The draft Principles are currently being made more robust and clearer following a consultation among a broad group of stakeholders.
- The document will then be submitted to the Association of Netherlands Municipalities (VG), the Association of Provincial Authorities (IPO) and the Union of Water Boards, with the question of whether this can form the basis for a government-wide approach. The aim is for national inspectorates and regulators involved to apply the approach, in a manner consistent with their independent assessment role.
- The Principles build on existing policy and reports from advisory councils, with further specification and clarification where necessary.
- They are aimed at all components of our future energy mix, including hydrogen, wind energy and solar energy, geothermal energy, nuclear energy and electricity transport.
- The application of the Principles to hydrogen policy takes the form of a series of guidelines for hydrogen safety, which are being developed in co-operation between several ministries.
- In addition, the core of the Principles has been included in the Roadmap of the Dutch National Hydrogen Program.



The core concepts in the Principles

- **Responsible:**
 - Renewable energy must meet safety and health requirements that are at least as high as for fossil energy. This is laid down in explicit policy choices on the permissible residual risks.
 - Further risk reduction is aimed for. This further reduction has to be weighed against other public interests, to prevent for unnecessary harm to these interests.
 - If the risk is uncertain, precautionary measures will be taken, which are later scaled up or scaled down on the basis of advancing insights.
- **Energetic:**
 - Where needed, additional risk policy is formulated, to bridge the transitional phase in which existing regulations are not yet sufficiently geared to the energy transition.
 - The space for regulated experimentation is utilized and expanded if necessary and possible.
 - Pilot projects and first implementations are monitored in such a way that practical experiences in dealing with risks can be shared widely and serve as input for further policy-making.
 - After an incident or accident, the response facilitates good learning and makes sure that structural improvements can be made in a way that fits the Principles.



Principles for dealing responsibly with safety and health in the energy transition

- **Connected:**
 - The (scientific) knowledge about risks and risk reduction of the energy transition is improved.
 - Communication and dialogue with residents and other stakeholders about projects is open and unambiguous and considers the risk context and risk perception.
 - If obstacles are encountered in projects and implementations due to existing or proposed laws and regulations, the government will help to find a solution if possible.
 - The principles are used by as many governmental parties as possible.