

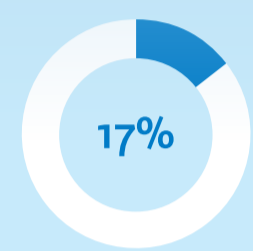


Offshore wind energy

Offshore wind energy plays a major role in the energy transition. The Dutch Government wants to achieve approximately 21 GW of installed capacity in the Dutch part of the North Sea by 2032. This is good for an annual production of approximately 90 TWh of electricity.

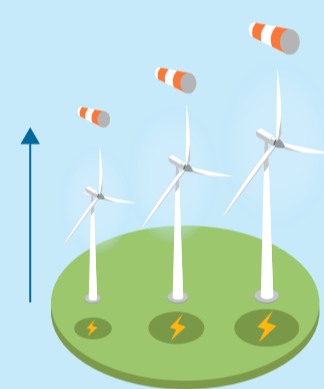
What does it yield?

Offshore wind provides clean and renewable energy. It therefore makes an important contribution to the transition from fossil fuels to a sustainable energy system.



Offshore wind energy plays a major role in renewable energy supply

17% of the total production of renewable electricity in 2022 came from offshore wind energy. This is equivalent to 8 TWh, enough to run all NS trains for almost 7 years.



Larger blades provide more energy

The wind blows stronger higher in the air and offshore. As a result, larger blades catch more wind. For example, tall offshore wind turbines with large blades produce much more electricity.

Offshore wind turbines provide a lot of electricity for the Netherlands

Offshore wind energy is a scalable and cost-efficient way to meet rapidly increasing electricity demand. That is why ambitious goals have been set for scaling up offshore wind energy.



2023
4,5 GW

Equal to 15.8% of current electricity consumption in the Netherlands.



2032
21 GW

Equal to 75% of current electricity consumption in the Netherlands.

Participation

We involve citizens and stakeholders at an early stage in the plans, decision-making and realisation of offshore wind farms.



Subsidy-free wind farms

Thanks to innovations, the cost of developing offshore wind projects has fallen. The first subsidy-free offshore wind farms are now reality.

Want to know more?

Visit www.rvo.nl/onderwerpen/windenergie-op-zee

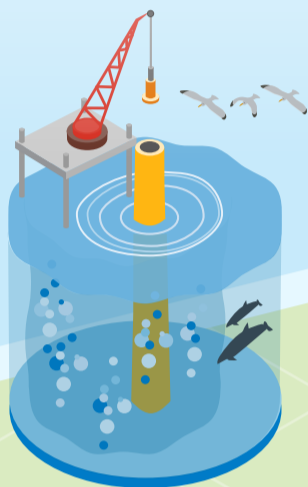
This infographic was created based on data and information from the Netherlands Enterprise Agency, Rijkswaterstaat, CBS and the Ministry of Economic Affairs and Climate in collaboration with Pondera Consult. Version May 2024

What is the impact on nature and the environment?

Large (construction) projects such as offshore wind farms have an effect on our living environment, nature and the environment. Through research, innovation and policy measures, we try to limit negative effects on people, nature and the environment as much as possible and stimulate positive impact.

Impact on nature is limited

Measures are being taken to limit negative effects. For example, during construction, developers use a 'bubble screen' to dampen underwater noise. An operational wind farm also has effects on nature and animals. For example, there is a risk of birds flying into the rotating blades of the wind turbines. That is why there is a policy measure that during large bird migrations across the North Sea, offshore wind farms are temporarily stopped at night.



Opportunities for nature

Because no bottom-disturbing fishing can take place in a wind farm, peace is created in the living environment of animals and plants. This allows the ecosystem to recover. Biodiversity in wind farms can be increased by installing artificial reefs. They are a habitat for oysters, for example, and a potential shelter and food spot for all kinds of other sea animals, such as fish and lobsters.



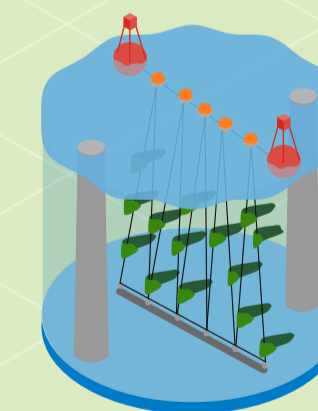
Visibility of wind farms

By using less visible colors and only necessary lighting, developers limit the visibility of the wind turbines from the coast as much as possible.



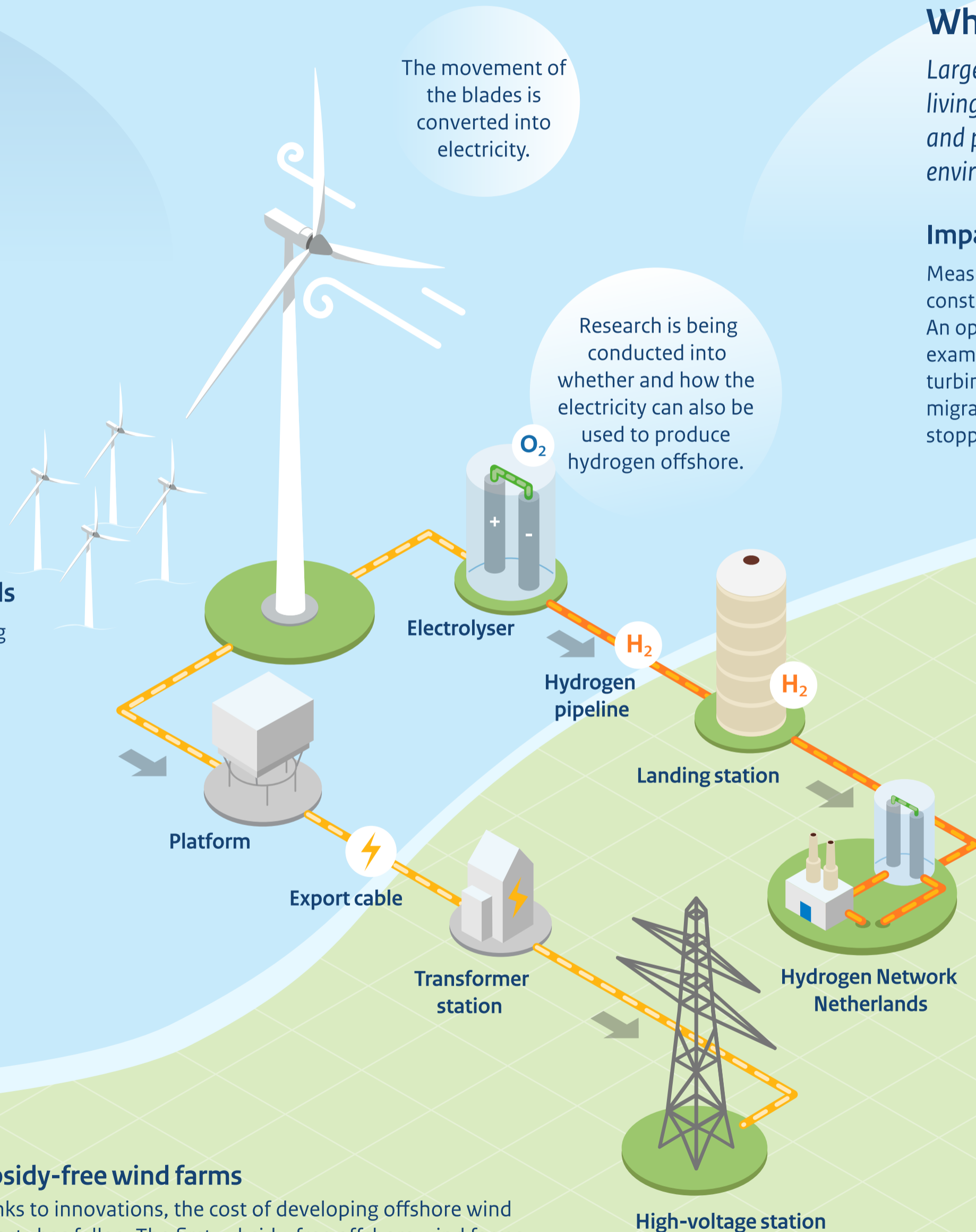
Space for other activities

Shipping, fishing, oil and gas extraction and defense also use space in the North Sea. Before the realisation of wind farms, we investigate how wind farm zones can best co-exist with these activities. We are also investigating options for shared use in the wind farms, such as seaweed cultivation.



Attention to sustainability

The Government, together with developers, trade associations, knowledge institutions and market parties, is investigating how sustainability can be improved throughout the chain. Through collaboration in the sector, for example, we are examining how the recyclability of wind turbines (which are already 90% recyclable) can be increased.



The movement of the blades is converted into electricity.

Research is being conducted into whether and how the electricity can also be used to produce hydrogen offshore.