

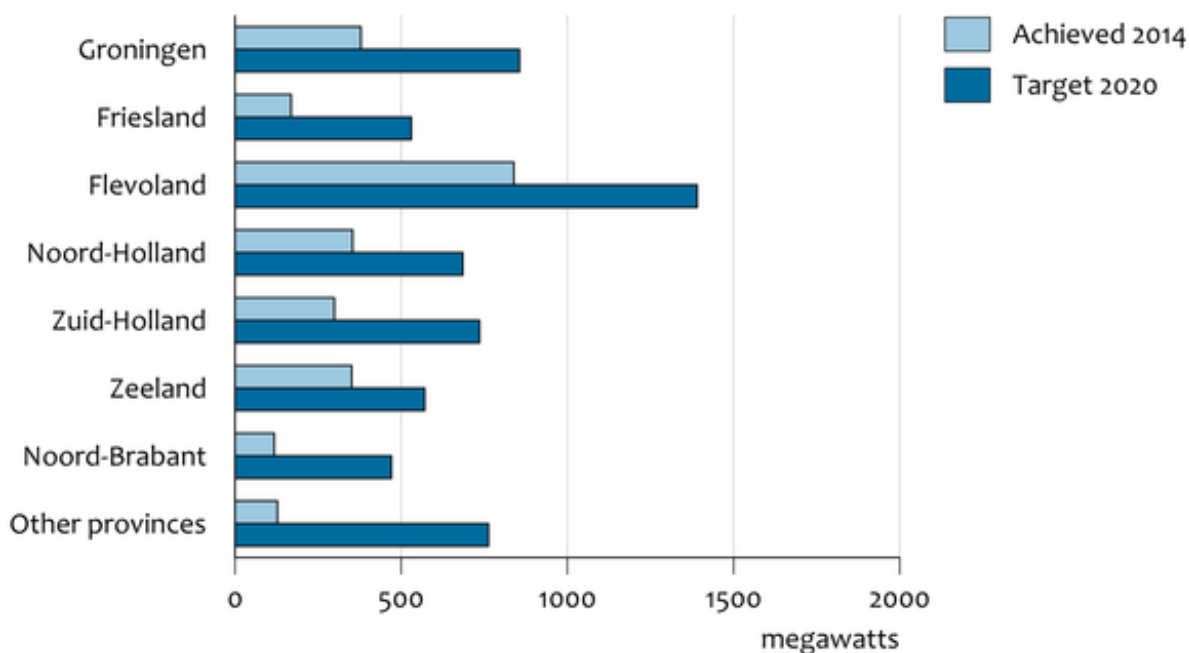
Wind energy capacity, 1990-2014

Indicator | 4 February 2016

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The wind energy capacity increased more than 8% in 2014, bringing the total capacity to 2,865 megawatts.

Wind capacity on land by province



Source: CBS.

CBS/feb16
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Most wind turbines in Flevoland

Looking at the distribution of wind turbines on land, it is clear that most are located in the coastal provinces. This is not surprising, given the fact that the wind blows more frequently in coastal areas. However, the wind resource is not the only factor to be taken into consideration in the positioning of wind turbines. Ideas about the way in which they fit into the surrounding landscape also play an important part and this explains why, despite the fact that it is not the most suitable province in terms of wind resource, most wind turbines are found in the province of Flevoland.

Subsidies crucial for new wind turbines

Electricity production from wind energy is still more expensive than from natural gas, coal or nuclear energy. Subsidies for wind energy are therefore crucial to investors in wind turbines. Wind turbine owners received 289 million euros in subsidies for electricity production in 2014 (RVO, 2015).

Incentive Scheme Durable Energy (SDE+)

On 1 March 2015, the total amount of energy generated by wind turbines with SDE subsidy was approximately 1,900 MW (RVO, 2015). Again, many subsidy requests for new wind turbines under the SDE scheme were submitted and granted. On the basis of awarded subsidies, wind turbines with an overall capacity of 800 MW could be erected. A large proportion will be part of the wind farm in de Noordoostpolder, which is still under construction.

Offshore wind farms

The first offshore wind farm became operational in 2006. The second followed in 2008. Together, these two wind farms account for about one tenth of the wind capacity and one sixth of the electricity production from wind energy. Offshore wind turbines therefore produce more electricity per unit capacity than onshore wind turbines. However, offshore wind turbines are much more expensive. All in all, therefore, electricity generated from offshore wind turbines is more expensive than that from onshore wind turbines (Lensink, 2013).

In 2015, the construction of a third offshore wind farm has been completed and is now becoming operational (Luchterduinen with a capacity of 129 MW). North of the West-Frisian islands of Schiermonnikoog and Ameland, the construction of two wind farms (Gemini, with an overall capacity of 600 MW) will begin in 2015.

Plans for offshore wind farms

The Energy Agreement (SER, 2013) includes an ambitious objective with respect to offshore wind farms: i.e. a planned total of 4,450 MW in 2023. This means that an extra subsidy to fund offshore wind farms with an overall capacity of 3,450 MW must be granted. This year, a tender procedure was launched so that the first offshore sea turbines will become operative in 2019. Subsidy costs are expected to be high. In the Energy Agreement, cost reduction for offshore wind farm projects is essential. Hopefully, technological innovation and productivity gain will help to reduce costs.

Plans for onshore wind turbines

The Dutch government has projected an overall onshore wind capacity of 6,000 MW (EL&I, 2011) for 2020, including existing wind turbines. In June 2013, an agreement was reached about the distribution of the 6,000 MW across the Dutch provinces (IPO, 2013). Permits are granted at the provincial level. The national government is responsible for subsidies.

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CBS, PBL, RIVM, WUR (2016). [Wind energy capacity, 1990-2014](#) [10] (indicator 0386, version 22 , 4 February 2016). www.environmentaldata.nl. Statistics Netherlands (CBS), The Hague; PBL Netherlands Environmental Assessment Agency, The Hague; RIVM National Institute for Public Health and the Environment, Bilthoven; and Wageningen University and Research, Wageningen.

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