



# Renewable energy market?

## Summary

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# Summary

After a period with virtually no newbuild of power plant in the Netherlands, in the years ahead capacity is set to surge. Although some of the new gas- and coal-fired plant will replace older facilities, on balance it there will be a major increase in installed capacity, which by 2020 will up by 70% to 40 GW.

Table 1 Present and future Dutch generating capacity (GW)

	2008	Change	Total, 2020
Centralised	14.9		
- Decommissioned		-6.4	19.7
- Newbuild		11.2	
Decentralised (CHP)	6.5	2	8.5
Wind	2	10	12
Total	23.4	16.8	40.2

Dutch electricity demand is expected to grow from 120 TWh in 2008 to 145 TWh in 2020, an increase of 20%. These figures are based on the scenarios used by the Netherlands Energy Research Centre, ECN, for the government's 'Clean and Efficient' climate and energy programme, corrected for electric vehicles, economic recession and the scope for reducing electricity demand.

Dutch generating capacity must be assessed in the context of the north-west European electricity market, as some of the country's output can be exported to neighbouring countries. As things stand at the moment, there is sufficient technical capacity for exporting 20% of current output, a figure that is even expected to rise. But because substantial new generating capacity is also being built in neighbouring countries, which also have ambitious targets for renewable energy, opportunities for export are economically constrained.

With installed capacity set to rise by 70% and domestic demand by only 20%, with only limited scope for export (i.e. limited foreign demand), overcapacity will result.

To some extent, generators can reduce this overcapacity by not opting to build all the facilities scheduled or by decommissioning older plant sooner. This has been factored into capacity calculations.

In the period through to 2020, the resultant overcapacity on the domestic market may have the following consequences:

- A fall in the electricity price due to wind, coal and nuclear plant and certain cogeneration facilities remaining on-line.
- A reduced electricity price that benefits mainly large-scale users rather than small-scale consumers.
- Given the lower capacity factors of conventional generating plant, less profitable operation.
- A decline in the appeal of renewable energy projects for energy companies, because these would have an added impact on the capacity factors (and thus rate of return) of their gas- and coal-fired plant.
- As input from renewables rises, a need for greater flexibility on the part of conventional generators because of greater fluctuation in net electricity demand (i.e. the moiety not met by available wind power).



- In the absence of additional policy, failure to secure the government's energy targets.

The rate of return for existing and scheduled renewable energy projects will not be adversely affected by the current mode of subsidisation (via the renewables incentive scheme known as SDE). The price differential relative to power from conventional sources (the 'inefficient top') is likely to grow, however, implying a need for additional subsidisation. This will have an impact on total SDE expenditure.

The government regulation 'Priority for sustainability' is designed to give physical, but not economic, priority to renewables when a bottleneck threatens. This scheme therefore provides no solution for the cited consequences of overcapacity.

The Netherlands' 20% target for renewables is a national commitment that has not been passed on to individual generators. Although the SDE subsidy scheme for renewables means generators can produce this electricity competitively, the arrangements in force are still too non-committal. As energy companies have no say in the country's renewable energy targets, with overcapacity in conventional capacity looming they cannot be expected to invest in renewables, too. Generators have no direct interest in such investments, because the incentives (prices, subsidies, obligations) are still insufficiently aligned with the government's energy and climate programme 'Clean and Efficient'. Basing themselves on estimated CO<sub>2</sub> prices (not currently very substantial) and anticipated cost-benefit ratios for renewables, generators see investment in conventional capacity as more appealing than the development of renewables.

