

Measures to Promote Grid Interaction When Applying PV

*Measures under discussion in the Netherlands**



* Based on an article from Edwin van Gastel of [Solarmagazine.nl](https://solarmagazine.nl)

This article lists some of the most important measures under discussion by Dutch officials. From making the use of the power grid more flexible by consumers and SMEs, to a price guarantee for heat networks, boosting energy hubs, applying energy planning to control the locations of large-scale batteries, investing in electrolyzers for hydrogen and putting more strain on the power grid, among other things.

Measure 1: Flexibilization of small-scale users

One of the most important measures proposed by the officials is flexible grid use by small-scale users. This includes all households, but also companies and institutions that have a connection up to and including 3 × 80 amps for which they pay a fixed capacity tariff. Several measures are needed to deploy flexible grid use by small-scale users.

For example, the officials want the Netherlands to advocate in an EU context for standard, open communication protocol(s) for smart devices and energy management systems, and standardization of smart grid-intensive flexible devices. This could be done through an amendment to the Ecodesign Directive. In anticipation of this, standards for smart charging stations, smart heat pumps, home batteries and solar panel inverters should be explored and, if possible, the financial support for heat pumps should only be made available for smart heat pumps from 2027 or 2028.

In addition, the officials propose to subsidize home energy management systems. According to the officials, an energy management system can, for example, help to increase the self-consumption of solar power, which will become more attractive in connection with the phasing out of the net metering scheme from 2027.

In addition, the officials argue in favour of introducing a network tariff that is differentiated in time and volume for small-scale users. A flexibility/peak shaving service for small-scale users should also be introduced on the basis of congestion management and redispatch. In addition to differentiated tariffs, small-scale users can then receive a – small – compensation if they adjust their consumption to the availability of the electricity grid. The grid operator gives a signal to which small-scale users can respond. The officials are also thinking of introducing additional grid protection, which means that production/consumption is automatically limited if there is an acute threat of overloading of the power grid.

Measure 2: increase the share of dynamic contracts

The officials think that increasing the share of consumers with dynamic energy contracts can help reduce grid expansion costs. At the moment, the Dutch government is neutral with regard to the type of contract chosen by consumers.

Currently, more than 400,000 consumers (around 5 %) have a dynamic electricity contract in the Netherlands. ‘Standardisation, such as a minimum share of dynamic contracts sold, encounters objections in European legislation, quite apart from the question of whether it is desirable’, the officials point out. ‘A possible levy on fixed and variable contracts is currently not attractive from an implementation perspective.’ According to the officials, the government should therefore focus on improving the provision of information about dynamic contracts and the subsidy for energy suppliers to increase the purchase of dynamic contracts.

Measure 3: Make large-scale consumers more flexible

Another policy measure proposed by the officials is to make the electricity consumption of large consumers more flexible. They want the government to extend the subsidy scheme for increasing flexible electricity consumption – the Flex-e subsidy scheme – until at least 2030. In their view, this can unlock a greater potential for flexibility.

Measure 4: Control location through energy planning

With location management via energy planning, the officials want local governments to proactively make reservations for the development of demand, flexibility and supply at network-efficient locations.

According to the officials, a stronger focus on placing generation, use and storage capacity closer together can reduce the investment task in the power grid or prevent an additional increase. “Energy storage in the right places in the electricity network and under the right conditions can contribute to reducing the investment task”.

Measure 5: Stronger enforcement of energy saving obligation

The Dutch government requires locations of companies and institutions with an annual use of 50,000 kWh of electricity or 25,000 m³ of natural gas to implement all measures with a payback period of 5 years or less. In 2027, measures with a payback period of 7 years or less will become mandatory. Solar panels are also subject to the energy-saving obligation.

Measure 6: Boosting local energy hubs

Another attractive option, according to the officials, is to strengthen the development of energy hubs. Energy hubs can ensure that companies can better coordinate their supply and demand for renewable energy. This allows them to electrify without a larger connection.

Measure 7: More targeted investment in electrolyzers

This proposed measure aims to tighten up existing or upcoming subsidies for hydrogen projects. The proposal is to make subsidies available for hydrogen infrastructure and electrolysis projects and to use these subsidies to ensure that they are realized in the right place.

Without these hydrogen projects in the right place, the electricity generated must be transported over longer distances and the costs of grid reinforcement are therefore higher. According to the officials, making these subsidies available is necessary because hydrogen projects are not yet profitable.

Measure 8: Heavier load on the power grid

Officials also looked at the possibility of encouraging network operators to release more transmission capacity by taxing grid components more heavily and deploying fault reserves; Even if this increases the security of supply risk.

Measure 9: Price guarantee for heat networks

According to the officials, heat networks can significantly reduce electric grid reinforcement in existing build environment. They believe that this policy option will improve the attractiveness of heat networks for end users of heat networks.

‘Heat networks enable the use of available heat sources such as residual heat and geothermal energy, so that less space is required for the generation of sustainable electricity, such as via wind farms or solar meadows,’ they continue. ‘In addition, the local electricity grid – including above-ground distribution stations in the neighbourhood – does not need to be reinforced as much. Netbeheer Nederland (association of all Dutch energy grid operators) is counting on 2 to 4 new transformer houses for e-cars and solar panels for a district on a heat network with 1 200 residents. If the same district switches to heat pumps, four extra transformer stations will be added.’ ■