

The holding tariff

DSOs could easily include a timing component in their network tariffs, so that the market can account for the economics of shifting.

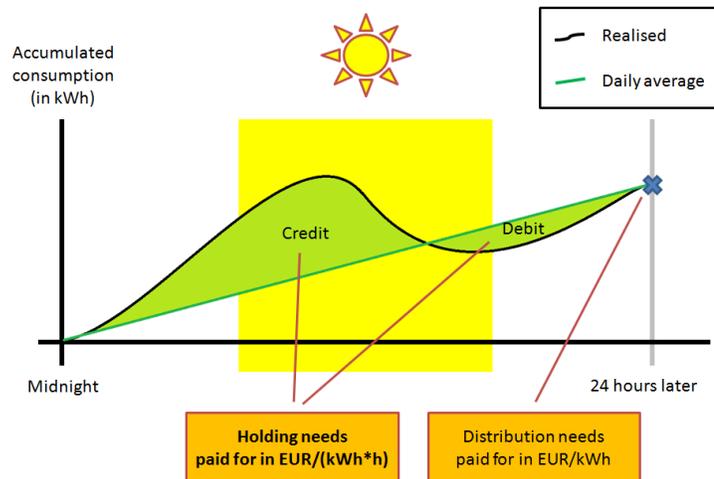
DSOs need a novel incentive system to deal with congestion using flexibility. Their situation is unique because the flexibility they need will come mostly from the demand side. Compared to the beginning of this decade, we now know much more about the specifics of demand-side flexibility. Devices that can shift consumption have a unique characteristic where the longer they hold off, the higher the cost. Similarly, costs for storage devices go up the longer they hold energy. This timing component is a modern trait that incumbent tariffs are not set up to deal with. The experimentation scheme expected to come into force July 1st 2019 is a unique opportunity to try out novel incentives that properly deal with the economics of shifting.

Our proposal is an experiment with a novel tariff that is easy to implement and leaves further innovation to the market by creating the right incentives to act upon. There is nothing dynamic about it, and doesn't require the DSO to forecast the next day, like in the case of a traffic light system. What it does require from the DSO is a relatively simple adjustment in the settlement calculation.

The novel component

The proposed network tariff separates distribution needs from the need to hold energy during the day. The novel tariff component charges grid connections for the volume and duration that they remain at a credit or debit position with respect to their average consumption within a day.

This tariff motivates end users to forecast their daily demand, to reduce their reliance on the grid to hold energy, and to aim for a flat power profile.



About the proposers

Felix Claessen and Nicolas Höning are ex-scientists working at Seita, a spin-off of Centrum Wiskunde & Informatica (CWI) from a group dealing with mechanism design and automated negotiation, specialised in power pricing. They are proposing this idea as part of an NWO funded feasibility study for CWI into application of payment schemes for lending energy.