

Position paper: *Smart meters, smart grids: new challenges for the distribution grids*

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Date: 23/04/2018

Description

The increasing attention for the greenhouse effect and the wish to reduce greenhouse gas emissions has large consequences for the energy sector as well. Of course, attention is paid in the first place to the fuel mix and to reducing the use of fossil fuels, but the impact on electricity distribution is not to be neglected either. It concerns a few specific aspects of the management of the distribution sector:

- smart meters: the aim is to have a better view of energy consumption by end consumers, and to be able to handle some installations or appliances by remote control in order to manage distribution grids in the best way.
- smart grids: in principle, distribution grids are not conceived to connect local production units; this is why smart grids should allow more and more (often intermittent) electricity sources to have access to the grid in order to inject power, so that electricity consumers can also become electricity producers (“prosumers”), without disturbing the equilibrium of the grid; this is possible by allowing electricity to run in both directions, and where possible to use in the best way the interruption/modulation capacity of consumers, or to appeal to all sorts of electricity storage, e.g. via heat switchers, batteries (e.g. of electrical cars), ...
- tariffs: according to the principles of the electricity directive (tariffs should be non-discriminatory, transparent and cost reflective), costs on the distribution grids should be charged to those who cause them; the arrival of producers on the distribution grids therefore inevitably implies a debate on the tariff components for the local production.

Objectives of Febeliec

Febeliec supports the climate objectives of the Belgian authorities and strives to transpose these in the most efficient way into an effective reduction of greenhouse gas emissions. Smart meters and grids can play a role in this, but they also represent an important investment cost. A permanent monitoring and a detailed cost-profit analysis are therefore necessary in order to make the right policy choices. More specifically, Febeliec insists on the following issues:

1. As concerns smart meters, the industry has been investing for years in sophisticated appliances in order to monitor in the best way the consumption (and often production) on its sites, and if necessary to be able to command from a distance (*demand side management* or DSM). The extension of the use of smart meters to SME's and households offers the huge advantage that small and medium users can take part directly into the market and react rapidly to price signals. It is thus needed to evaluate this advantage in comparison with the cost of smart meters and the possible economies of greenhouse gases. This debate is still running amidst the regions, who are fundamentally in favour of the use of smart meters for all (or almost all) users. Febeliec thinks that prosumers, who can either take off or inject electricity into the grid, should be equipped with a smart meter in order to determine and calculate the exact price of their electricity (surcharges included) and the grid cost ;
2. The industry is in favor of using bidirectional grids that go along with new opportunities regarding production and storage; the industry is therefore in favor of developing smart grids, but also asks a thorough cost-benefit analysis;
3. Febeliec continues to support the three principles of the electricity directive for tariffs (non-discrimination, transparency and cost reflectiveness) and hence accepts that the distribution sector charges costs to those who cause them. Febeliec asks however:
 - that these principles are applied in a consistent way to all grid users;
 - that the injection costs on the distribution grids are spread in an equal way about the several players;
 - that possible additional grid costs are taken into account when supporting some of the new energy technologies.