febeliec
federation of belgian industrial energy consumers

Demand response in a liberalised market

Barriers and solutions

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Febeliec represents
the industrial consumers
of electricity and natural gas
in Belgium

Demand Response - background

- Radically changing electricity supply / demand situation
- New unmet challenges in terms of security of supply and competitiveness / prices
- Storage and / or additional (reliable) generation may not be optimal
- Demand response likely to offer positive contribution

Basic principles:

- On a voluntary basis only
- Against a fair remuneration (by market or TSO)
- Not primarily for structural generation shortages
- Could contribute to better integration of renewables

How to make it happen?

- Give **visibility :** the first objective of industry is to produce
  - Changing production planning
    - requires anticipation
    - has a cost
  - DR potential can be increased via process adjustments requiring investments
    - ➢ Need for **a stable framework** with **fair remuneration**

- **Enable the cheapest solutions to emerge**
  - Most critical issues are limited in duration
  - The products proposed should enable a whole range of responses via **a proper segmentation of criteria**
    - Minimum size of product (MW) + measurement method
    - Maximum duration & number of activation
    - Response time, seasonality, etc.

Barriers and solutions

- Lack of consistency between legislations/regulations and lack of visibility/sustainability of energy policies

- Lack of harmonization of (national) grid codes
  - EC/ ENTSO-E / ACER / COM : consider developing a specific code for demand response

- Balancing products
  - Thresholds for market access → remove or reduce barriers in grid code(s)
  - Generally based on generation needs / possibilities
    - grid code(s) to take into account demand specifics
    - adapt definition of standard products
  - Portfolio needs → let the market work – define and stimulate role of aggregators

Barriers and solutions

- Pre-qualification criteria (incl testing) → specify
- Lack of Intraday and balancing markets coupling
  - ➢ Finalize Target Model
- Lack of transparency
  - Access to essential information (designed for generators, not for load)
  - Aggregators operations
    - ➢ more transparency required (rules, market impact, …)

Barriers and solutions

- Lack of incentives to consume more in moments of higher than expected intermittent power generation (manufacturing / products can be used as “storage”)
  - improve market access
  - Adapt grid tariffs to avoid additional costs / adapt remuneration

- Commercial and contractual constraints - Who is the owner of load flexibility ?
  - all flexibility must be able to find its way to the market or to TSO products (balancing / strategic reserve)
  - Legal intervention needed ?
  - Constraints can concern either sourcing (relation with supplier / BRP) or production (internal constraint) issues

Barriers and solutions

- There should be no discrimination between generation and load in the tendering procedures for balancing products, strategic reserves nor other flexibility products/markets

- Auto-production is not always stimulated to help the grid (“consume or sell”)
  - Network charges when supplying → grid tariffs
  - Lack of support for back-up solutions (ex. boiler for steam)
  - Watch out for interference with support for cogeneration

Barriers and solutions

- Overall (opportunity) costs of DR actions can be very high (generally a multiple of power price)
  - Very process/sector specific
  - Diverging fixed costs / variable costs
  - Diverging preference for variable / fixed remuneration
  - Safety aspects (e.g. Seveso plants)
  - Efficiency impact (higher modulation might lead to less efficiency – no compliance with EED?)
- Introduce appropriate remuneration (fixed / variable)
  - Market value (DA/ID)
  - tariff / remuneration

Barriers and solutions

- Create awareness
  - Used to regulated systems where flexibility did not have a value (mind-set change)
  - Lack of motivation and information

- Grid tariffs and grid tariff structure : DR should not lead to extra grid costs
  - Deviating from nomination mostly comes with a penalty
  - Catching up lost production later on is penalised
  - No level playing field with generators as often they are not subject to grid tariffs and/or no penalties are applied to them