

Workshop Demand Response

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

Why do we urgently need more demand response?

- Fast development of intermittent RES-E without balancing responsibility
- Mothballing or decommissioning of older or non profitable capacities
- Lack of investment in non subsidized capacities

➤ Security of supply questioned

- Solutions will involve all stakeholders :
 - BRP responsibility !!
 - Supply side :
 - stop potential RES over-subsidization and inefficiencies
 - reduce political and regulatory uncertainty to create a stable investment climate
 - Grids : infrastructure development to achieve the IEM
 - Demand side : **increased flexibility**

- **Important imbalances for a limited duration**
 - Elia load curve 2012:
 - Last 400 MW : 13 hours (2013: 7 hours)
 - Last 1000 MW : 100 hours

- Several mechanisms already exist today but :
 - **Increased visibility needed** to capture the full potential
 - **Cost efficiency** to be used as a guiding principle

- **Demand Response is :**
 - **greener, faster and more cost efficient** than other alternatives
 - The **right answer** to supply/demand imbalances limited in duration

Industry can be an important and cost efficient contributor

- EU industry is confronted with **uncompetitive energy prices**:
 - Gas prices 3 to 4 times higher than in US
 - Electricity prices 2 times higher than in US and 3 times than in China
- Power intensive industry can be an important contributor to DR :
 - **Power intensive process tools** (electrolysis, electrical arc furnaces, rolling mills, etc.) equivalent to ~ 100 MW each
 - **Indirect power storage** capacities (industrial gases and other chemicals, slabs...)
- Less power intensive industry can also play a role via aggregators
- Promoting **DR schemes enabling to capture the industrial potential** (on a voluntary basis) will at the same time
 - Deliver the most cost efficient solution
 - Improve competitiveness

How to make it happen?

- **Give visibility** : the first objective of industry is to produce
 - DR can only be introduced on a voluntary basis
 - 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, hours) + measurement method
 - Maximum duration & number of activations per year
 - Response time
 - Seasonality, etc.

- Timing
 - Day-ahead (load participation in day-ahead markets)
 - Intraday (after day-ahead clearing)
 - Balancing (reserves, interruptible contracts)

- Initiative
 - Market driven (incl. through aggregators)
 - TSO driven

- Compensation
 - Capacity remuneration
 - Energy remuneration

➤ **An opportunity to maximize DR potential**

Improvement is needed to make it happen now

- Capacity mechanisms start to be implemented on a national level without a proper segmentation of the real needs
- **Cost efficiency** is not enough perceived as a key criterion to choose between various options
 - diversity of responses perceived as a problem while keeping all actors in the game is the cheapest solution
 - priority too often given to generation solutions
- Important for TSOs to:
 - Properly **assess the need**
 - **Involve demand side representatives** (industry, aggregators...)
in order to **capture the full potential of DR**

- Plan Wathelet: mix of renewables and gas by 2025
 - Gas price differential dropping (US spot +/- 12 €/MWh, B at 19€)
 - Will renewables costs fall ? Will storage work ?
 - Is it the right bet ??
 - Either way: how to guarantee competitive prices for industry ?

- Tender for new gas powered plant:
 - Dutch Claus plant (RWE) only candidate ?

- Nuclear: D2/T3 out again
 - D4 to return to grid on 16 April
 - D2/T3 no certainty before half June – definitively out ?
 - Market: B spot price links to NL

- Uncertainty till at least Mid-June (D3/T2)
 - What if D3/T2 out for longer period ?
 - Gas powered plants become marginal in Belgium → higher prices
 - Interconnectors ? Import capacity down to < 3000 MW
 - Demand response is no answer to structural shortage...

- Winter 2014-2015
 - D3/T2 ? (2000 MW)
 - D1 + D2 to be closed in Feb 2015 (further 800 MW)
 - Strategic Reserve (800 MW or more ??)

- Set at 800 MW for 2014-2015 BUT before closure D3/T2
→ to be extended ?
- Elia position : 70% generation – 30 % demand (240 MW)
- Proposed products seem to favour generation
(2 x 400 MW C/OCGT ?)
- A lot of work still to do for demand response (criteria, competition with generation, ICH participation...)

More info ?

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