

DEMAND RESPONSE: ISSUES TO BE CONSIDERED – THE POINT OF VIEW OF GEODE

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- **GEODE was founded in 1991**
- **GEODE represents more than 600 independent electricity and gas distribution companies from 12 European countries**
- Our members are independent companies public and private owned
- Our members supply more that **100 million people**

WHAT IS DEMAND RESPONSE (DR)?

- DR is part of energy efficiency measures
- DR will facilitate changes in consumer energy consumption pattern due to tariff signals
- DR is a tool to help DSOs to cope with future challenges introduced through 20/20/20 objectives
- Demand Side Management (DSM) - direct load control and interruptible load - is part of DR
- DR will enable reduction or increase of electricity during critical periods
- DR is a stepping stone on the way towards Smart Grids

WHAT DEMAND RESPONSE REQUIRES? (I)

- Active involvement of **consumers**
 - DR should be made simple and accessible to consumers and their needs
 - Clear economic incentives needed without reducing the convenience
- **Regulation** to avoid confusing situations for the customer and to consider the interest of different parties (suppliers / DSOs)
- Cooperation and **coordination** between suppliers/DSOs
- Huge **investments in Smart Grids and Smart Metering Systems**
- **Data security and privacy** has to be safeguarded

WHAT DEMAND RESPONSE REQUIRES? (II)

- DR requires the **involvement of DSOs**
 - DSOs have close relationship with their domestic customers and are the only operators that will always be connected to them
 - Due to the need to understand the load of local networks conditions before reducing or increasing demand
 - DSOs need to influence the demand being placed on the grid because DSOs are responsible for quality and security of supply

ROLE OF DSOs REGARDING DEMAND RESPONSE

both as market facilitator and market participant (I)

- To ensure security and quality of supply while DR is utilised by other market actors
 - To use and coordinate DR, especially DSM (e.g. load control of electric vehicles – demand storage), to ensure their networks operate in the most efficient, economic and secure manner possible
- DR is an important stepping stone of a SG and allows DSOs to
 - Minimise simultaneity in behaviour of network customers causing additional congestions and peak loads in the grid
 - To defer or possibly negate additional network reinforcement or extension of grid components
 - To integrate huge number of decentralized generators using RES

ROLE OF DSOs REGARDING DEMAND RESPONSE both as market facilitator and market participant (II)

- To provide information in a neutral, secure and effective way to different market actors
 - DR will require the exchange of large volumes of data, already held by DSOs in most of countries
 - DSOs are neutral stakeholders and obliged to operate in a non-discriminatory manner without favouring any particular market actor

DR THROUGH TARIFF SIGNALS

- DR includes market offers such as time-of-use tariffs and dynamic rates or pricing
- From GEODE's point of view DSOs should have opportunity to use functionalities of Smart metering systems to offer flexible grid tariffs
 - The key figure for planning and dimensioning electricity grids is the expected load (kW)
 - More focus on a capacity based tariff component (kW), including time of use aspects, is a step towards a fair cost tariff system for DSOs
 - More capacity orientation will help to flatten the load curve (reduce peak loads)

WHAT WILL FACILITATE DEMAND RESPONSE? (I)

- **Smart Grids and Smart Metering** deployment
 - It implies huge investments to be undertaken by DSOs *
 - DSOs will never reap enough internal benefits from these investments to cover the costs
 - SG would mean less costs compared to business as usual, but higher costs than Today

* in most European countries DSOs are responsible for metering respectively the roll-out of smart metering systems

WHAT WILL FACILITATE DEMAND RESPONSE? (II)

- **National regulators** have to empower DSOs to take an active part in developing Smart Grids and Smart Meters:
 - Current incentive based tariff regulation models (like price cap=RPI-X), focusing on short term cost reductions, do not leave room for innovation and do not take into account the new grid challenges
 - Smart Regulation is required, providing them clarity about cost recovery
 - Sustainability, investment and innovation friendliness should guide new tariff regulation

CONCLUSIONS (I)

- Active participation of DSOs in DR is necessary
- No DR without DSOs
- DR, specially DSM, is an important tool for DSOs to handle future challenges and to avoid the risk of increasing grid costs
- DSOs should play a role as coordinator/facilitator to ensure reliability and stability of the system while safeguarding commercial interest of other market actors and customers
- Participation of customers is a prerequisite

CONCLUSIONS (II)

- Capacity oriented grid tariffs using functionalities of smart meters are an important step towards an fair cost and future oriented grid system
- Smart Regulation/Regulators is/are required to allow DSOs to handle future challenges (go towards SG).
- An evolution of the RPI-X-models to set grid tariffs following the principles sustainability, investment and innovation friendliness is necessary (cost recovery)
- The role of DSOs should be more emphasized in CEER paper

Thank you for your attention!

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