Meter Data Management
Decentralized solution

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acie ASOCIACIÓN DE COMERCIALIZADORES INDEPENDIENTES DE ENERGÍA

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1. ACIE
2. Demand response to market prices and smart metering
3. Importance of smart metering functionalities
4. Access to information on consumers metering values
5. Taking advantage of smart meters

1.- ACIE

- Founded in **1999**, ACIE aims at representing the interests of independent energy suppliers within the framework of the liberalization of the energy sector.
- ACIE is a member of the Advisory Group in Electricity to the Spanish Energy Regulator (CNE) as well as a member of the Market Agents Committee (body set up to oversee the financial management of the system and to propose measures to improve the running of the electric power production market –OMIE-).
- ACIE is currently composed by **10 energy suppliers**, representing around 6.5% of the **electricity** supplied in Spain.
- ACIE has recently created a division in charge of the gas businesses.

2.-Demand response to market prices and smart metering

- **Demand –response by all kind of customers is a key factor** within the liberalization process in the gas and electricity markets.

- **Suppliers will play a central role** in providing an efficient response. However, some **prerequisites must be set**:
  - Generalization of the remote reading and end of the monopolies on the meter reading
  - Standards for smart metering systems (appropriate binding specifications on minimum functionalities and communication protocols)
  - Customer data access and efficient switching procedures

- Smart meter is the **interface between the user** (customer and/or microgenerator) **and the network**:
  - The smart meters enable customers and suppliers to be informed about the energy flows
  - Customer and micro generators can modify their consumptions and production rates according to price oscillations and supply conditions

3.-Importance of smart metering functionalities

3.1.- Smart Meters functionalities requirements to promote demand side response and competition - Recommendation COM(2012)1342 on 9 March 2012:

Customer

a) Provide readings directly to the customer and any third party designated

b) Update the readings frequently enough to allow the information to be used to achieve energy savings.

Metering operator

c) Allow remote reading of meters by the operator

d) Provide two-way communication between the smart metering system and external networks for maintenance and control of the metering system.

e) Allow readings to be taken frequently enough for the information to be used for network planning

Commercial aspects of energy supply

f) Support advanced tariff systems

g) Allow remote on/off control of the supply and/or flow or power limitation

Security and data protection

h) Provide secure data communications

i) Fraud prevention and detection

Distributed Generation

j) Provide import/export and reactive metering

3.-Importance of smart metering functionalities

3.2.- Smart Meters functionalities requirements to promote demand side response and competition – main issues:

- Need for **EU** **binding specifications on minimum functional requirements** to be implemented at national level.

- **Bidirectional communication** (favoring distributed generation and, as a result, microgeneration)

- **Open Access Standard** for Smart Multi-Metering Services (Standardization Mandate M/441)

- **Consumer data stored in the smart meter** for long periods (additionally to meter data repository storage)

3.-Importance of smart metering functionalities

3.2.- Smart Meters functionalities requirements to promote demand side response and competition – main issues: (cont.)

- The **technology chosen to transmit data should not constitute an obstacle for competition**:
  - Transmission of Smart Meter measurements through different technologies (Wireless; PLC). Readiness of the device to be connected through different technologies.
  - Interoperability between different sorts of smart meters (electricity, gas, water, etc).
  - Smart meter functionalities should be agnostic to the delivery mechanism, protocol, and technical solution, but provide the same outputs to the end customer.

- **Decentralized or centralized systems should be equally accessible to third parties** (lessons to be learnt from positive rollout experiences)

4.- Access to information on consumers metering values

4.1.- Regulatory changes to be undertaken

- **Binding specifications at EU level** on minimum functional requirements
- Under the current Spanish regulation, DSOs are sole responsible for reading electricity meters. **Liberalization in the meter reading** would lead to:
  - Benefits for billing purposes
  - Quicker procedures for dealing with customers complaints
  - Improve service quality levels (information provided by the SIPS depends on DSO diligence on meter reading)
  - New market for competition
- **Operational regulatory changes**: penalties on energy deviations for residential customers should be based on actual readings instead of on profiles; etc.
- Establishment of a **standardized open gateway** (access by suppliers specifically foreseen by binding regulation)

4.- Access to information on consumers metering values

4.2.- Standardized open gateway

- Key driver for enhancing competition
- **Non discriminatory, timely and efficient access** should be preserved
  - It will lead to the intended competition
  - It will prevent abuse of dominant position
- National point of contact should be appointed in order to oversee the appropriate functioning of the gateway. **Avoiding conflict of interests:**
  - neutrality
  - independence from incumbent companies.
- Role of the DSOs: Depending on the communication technology, the DSO will have a more or less active role. In any case:
  - DSOs should facilitate the market. Not participate in it
  - Subject to unbundling condition (keeping DSOs obligations inherent to the manager of the distribution network –eg: interruption of power supply, surveillance of frauds, etc.)
  - Neutrality

4.- Access to information on consumers metering values

4.2.- Standardized open gateway (cont.)

- Decentralized or centralized systems should be **equally accessible to third parties**.
- **Common functionalities should be binding** and applicable both to decentralized or centralized systems.
- **Potential benefits of a centralized solution**:
  - Managing meter data will become a challenge for suppliers (from readings every two months to hourly or less). A centralized open gateway will avoid current IT difficulties stemming from the communications with different electronic interfaces set by DSOs (each DSO keeping its own data storage).
  - Less operational costs incurred by suppliers would lead to more competitive prices offered to customers.
  - Etc.

4.- Access to information on consumers metering values

4.3.- Data protection issues

- **Data protection should be preserved** regarding customers consumption patterns.
- However, the **approach given by National Data Protection Authorities and National Courts regarding access to customer data should be taken into consideration**.
  - Spain: DSOs are obliged to keep a data base of meter points (SIPS).
  - SIPS has become a key driver in order to foster competition (as recognized by National Courts, Competition authorities and the Legislator itself)
  - Competition cases against DSOs launched in 2007.
  - Spanish National Data Protection Authority: SIPS is compatible with data protection laws.
  - Consumers can deny access to their data with a written objection
  - Cumbersome access to basic customer data could become a barrier to switching process as well as to market entry for retail market suppliers.
- **Minimum open access to customer data should be preserved** in order to maintain and enhance competition.

5.- Taking advantage of smart meters

- Need for **easy and inexpensive access to data storage.**

- Provided that appropriate access to customer data is guaranteed, the likelihood for suppliers to offer their customers dynamic electricity pricing (better corresponding to the customers needs –eg. Index prices, use of time-differentiated electricity prices, etc.) will be also linked to the existence of **appropriate network tariffs.** (e.g. flat nonflexible network tariff)

- Information requirement set by regulation: the array of concrete services offered by suppliers to customers will result from a competition.

Thank you for your attention