

Consumers and active demand

in a smart energy system

Active Demand: the future of electricity
ADDRESS international workshop

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 ALTROCONSUMO

Consumers and active demand in a smart energy system

- Assessing costs and benefits of smart grids
- Protecting consumers' rights
- Empowering consumers
- Privacy concerns
- Environmental impacts

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- Assessing costs and benefits of smart grids
Active demand implies a smart energy system (i.e. smart grid, but not only) and time of use tariffs. There is a need to assess real costs and attended benefits from smart grids and ensure regulatory authorities take them into account when setting grid tariffs. Benefits has to be pass on the consumer bills

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- Protecting consumers' rights
There are new risks arising from the new "smart" functionalities:
 1. Remote control of smart appliances and remote disconnection
 2. Control over bill and data (consumer should have access to and control over the vast amount of data generated by the smart system about his/her individual profile)
 3. Price volatility risks transferred to consumers /risk of higher and unpredictable bills
 4. Noisy/intrusive systems or interference with other home networks
 5. Consumers in vulnerable situations (consumers with sensorial impairment; old and/or low income people that may be adversely affected by new pricing practices as they have little flexibility in energy use and are often forced to use it at peak times)
 6. Switching problems due to technology or long term contracts with supplier
 7. Active demand (or demand response) should be done on a voluntary basis and kept simple

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- Empowering consumers

Consumers acceptance is a prerequisite for any roll out of new technology or changes in the energy network which offers chances for more renewably produced energy, different consumption of energy or changes in mobility.

It is crucial to constantly communicate towards consumers so as to ensure they understand the ongoing changes (especially on time of use tariffs, the protection of privacy or the role of new players in the market) and feel included.

At the same time regulatory measures need to be present to allow consumers to make informed choices and to improve accountability of energy “players”.

As far as distributed generation is concerned, grid tariffs should not foreclose this market for consumers.

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- Privacy concerns

1. Privacy concerns: data access and ownership, permissions to gather data and interact with home appliances; optimum frequency of data.
2. Make sure meters will not be tampered with or hacked into. Smart meters and grids must be safe from infection with viruses and malware.
3. Privacy should be designed into smart energy systems. We plead for the “privacy by design” principle be mandatory which includes the principle of data minimisation and data deleting.

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- Environmental impacts

The smart energy system with active demand can be a key factor in promoting a more environmental friendly energy production and consumption, but consumers need to see the results of their efforts (so make environmental gains real and visible)

We consider necessary also to take into account the environmental impact of the technology changes: materials lifecycle should be checked prior to roll-out. It's worth to think about developing ecodesign criteria for smart metering.

**Thank you
for the attention**

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**Merci de votre
attention!**