

Encouraging Flexibility in Electricity Market Design

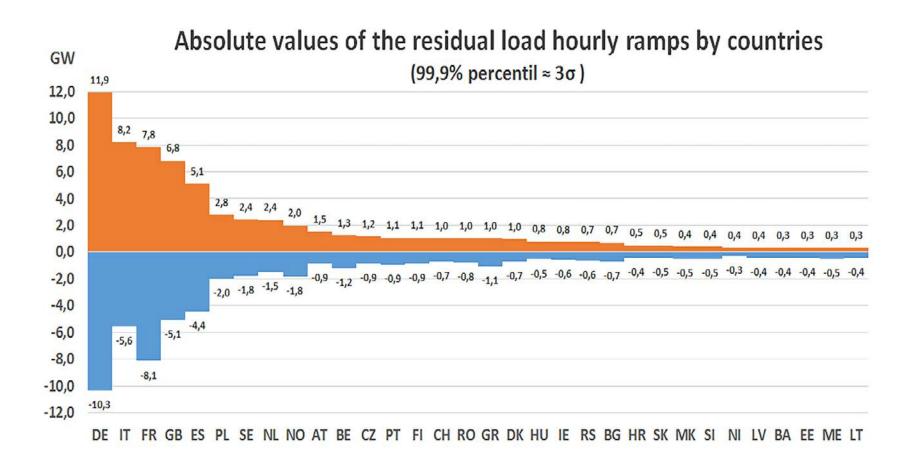
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The Flexibility Challenge





Implicit vs Explicit Demand Response Implicit Demand Response

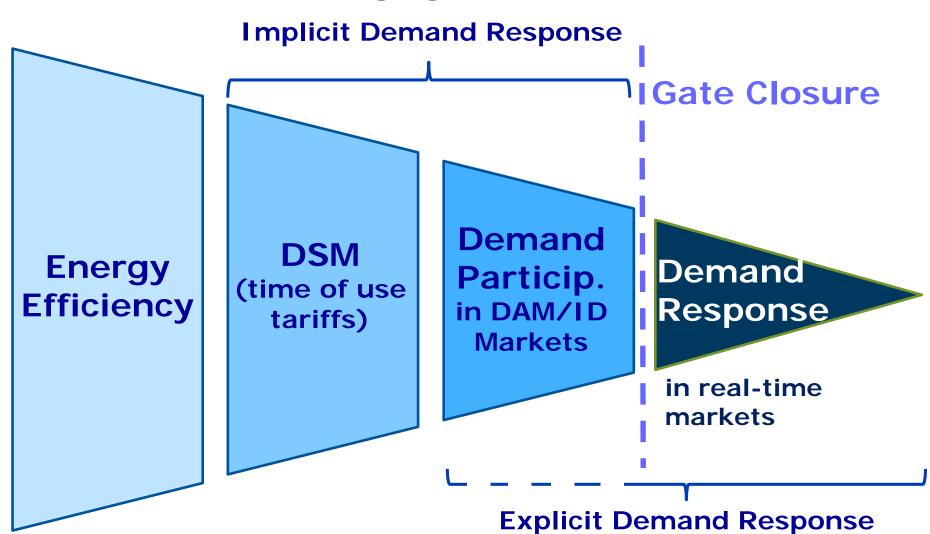
- Consumers:
 - choose to be exposed to time-varying electricity prices and/or time-varying network tariffs
 - react to those price differences depending on their own objectives, possibilities and constraints

Explicit Demand Response

- Demand response in real time, sold upfront on electricity markets, directly by large industrial consumers or through demand response service providers
- Consumers receiving a specific reward to change their consumption upon request (and possibly to commit to respond)



Demand-Side Engagement





Availability vs Activation - Compensation

- In Implicit Demand Response:
 - No distinction between Availability and Activation
 - Resulting schedule to be respected in real time
- In Explicit Demand Response:
 - Availability: traded and paid in long-term (capacity) or short-term (reserve) markets
 - Activation: in real-time (balancing) markets
- Compensation
 - Activated (Explicit) Demand Response:
 - reduces demand (consumption) wrt to schedule (i.e. what otherwise should have been respected)
 - should be paid (as energy by the TSO)
 - relates to energy which was scheduled, and therefore bought and paid/payable



