Keys for Demand Response

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Energy policy drivers....

- Regulation of Monopolies
- Primary Energy Sources
- Reliability and Quality
- Capacity
- Innovation and Competitiveness
- Consumer empowerment
- Internal Market
- Security of Supply
- Sustainability
- ETS
- Climate Change
- 20/20/20
....significant change of energy systems
Demand Response in the EU framework...

...to be understood as voluntary changes in respond to market signals and rewarded.

**Legal basis**
- Electricity Directive 2009/72/EC

**Policy paper**
- COM(2011) on SG
- RECOMM OJ L/73 13/03/2012
- COM(2013)7243 on IEM and Public Intervention
- SWD(2013)442 on DR
Energy Efficiency Directive

Art 15.8 Member States shall ensure that national energy regulatory authorities encourage demand side resources, such as demand response, to participate alongside supply in wholesale and retail markets.

Member States shall ensure that transmission system operators and distribution system operators, in meeting requirements for balancing and ancillary services, treat demand response providers, including aggregators, in a non-discriminatory manner, on the basis of their technical capabilities.

.... where their national regulatory systems so require, transmission system operators and distribution system operators in close cooperation with demand service providers and consumers, to define technical modalities for participation in these markets on the basis of the technical requirements of these markets and the capabilities of demand response. Such specifications shall include the participation of aggregators.

Realization: ACER Framework Guidelines and the ENTSO-E Network Codes
Commission Communication C(2013)7243, 5.11.14
"Delivering the internal electricity market and making the most of public intervention"

http://ec.europa.eu/energy/gas_electricity/internal_market_en.htm

Staff Working Documents

i. Generation adequacy in the IEM – guidelines on public interventions
ii. EC guidance for the design of RES support schemes
iii. Guidance on the use of RES cooperation mechanisms
iv. Notification forms and model agreements for cooperation mechanisms
v. Incorporating demand side flexibility, in particular demand response, in electricity markets
Key features for demand response as a win-win market instrument

- Simple and understandable
- Provide choices
- Provide benefits
- Transparent and verifiable
Is DR already happening in the EU?
Demand Response Benefits and Potential

**Consumer bills reduced**
- Individual energy saving/reduction by 2-5%
- Potential shift to cheaper periods: 10 to 20%+
- Lower system costs

**System cost efficiency**
- Reduced peak generation: 60GW
- Reduced grid needs

**Vicarious benefits**
- Consumer engagement
- More RES and benefits for environment/CO2
Building the market for DR

Creating market-based and transparent incentives

- Dynamic pricing + tariffs and rewards
- Data security/privacy

Opening up the market to exploit DR potential

- Equal footing with supply
- Contractual/Technical clarity

Bringing technology into the market

- Smart meters and smart appliances
Final remarks

- DR is a market-based mechanism
- DR integral part of the consumer-centric vision
- DR can happen now
- But some steps needed...