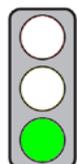


## KEY ISSUES

**Objective of the Communication:** The Commission recommends financial incentives to increase demand-side flexibility in the electricity market ("demand response").

**Affected parties:** Private and commercial electricity consumers, energy suppliers, network operators



**Pro:** (1) Demand-side response increases the flexibility of electricity demand and can contribute to network stability.

(2) Standardisation of demand response technologies prevents expensive parallel developments and allows the interoperability of instruments for measuring and controlling electricity demand.

(3) The data protection measures are suitable for compliance with the requirements of EU data protection law.

## CONTENT

### Title

**Guidance document SWD(2013) 442** of 5 November 2013: **Incorporating demand-side flexibility, in particular demand response, in electricity markets**

**Communication C(2013) 7243** of 5 November 2013 on **Delivering the internal electricity market and making the most of public intervention**

### Brief Summary

In the absence of any indication to the contrary, references relate to the guidance document SWD(2013) 442.

► **Overview: Four guidance documents and accompanying Communication on intervention by Member States in the internal electricity market**

– In order to minimise the differences within the EU between the types of intervention in the electricity market, the Commission has drafted four non-binding guidelines in the form of recommendations for "best practice".

- Guidance on generation adequacy in the internal electricity market [SWD(2013) 438, see [cepPolicyBrief](#)],

- Guidance on the design of renewable energy support schemes [SWD(2013) 439, see [cepPolicyBrief](#)],

- Guidance on the use of renewable energy cooperation mechanisms [SWD(2013) 440 and 441] and

- Guidance on state intervention to increase demand-side flexibility (Demand-side flexibility guidelines) [SWD(2013) 442, see this [cepPolicyBrief](#)].

– The guidelines are explained in more detail in Communication C(2013) 7243.

► **Context and objectives**

– The demand-side flexibility guidelines will contribute to the completion of the internal electricity market and to achieving the energy policy objectives of the EU. These objectives include [C(2013) 7243, p. 2]

- a secure energy supply at "competitive" prices,

- climate change targets by 2020 (see [cepAnalysis EU-Energy Policy](#), p. 10 et seq.),

- renewables development targets (Renewable Energy Directive 2009/28/EC, Art. 3 (1), Annex I, Part A, see [cepPolicyBrief](#)) and

- the improvement of energy efficiency [Energy Efficiency Directive (2013/27/EU); see [cepPolicyBrief](#)].

– State intervention in the energy sector may be necessary to [C(2013) 7243, p. 5]

- secure a "level playing field" in the EU,

- overcome "market failures" and

- foster technology and innovation.

– State intervention should be designed so that [C(2013) 7243, p. 7]

- interventions are coordinated EU-wide,

- distortion of competition is largely avoided and

- it is restricted in length to the period of the problem to be solved.

► **Importance of increased demand-side flexibility in the electricity market**

– Until now, electricity consumers were regarded as passive participants in the electricity market with little possibility or incentive of adapting their electricity consumption to temporary fluctuations in supply.

- More flexible demand for electricity on the part of consumers is gaining increasing importance
    - due to the higher proportion of renewables – such as wind and solar energy – being used for electricity production since the availability of these types of energy varies at different times,
    - for the development of "smart grids" [COM(2011) 202, see [cepPolicyBrief](#)].
  - Financial incentives for people to increase the flexibility of their own electricity consumption voluntarily ("demand response") may save "several tens of billions of Euros" by 2020 due to (p. 4)
    - the reduced need for generation capacity in the EU because a capacity of 60 GW is no longer needed at peak demand times, which corresponds to 10% of peak demand [C(2013) 7243, p. 6 et seq.]
    - greater capacity utilisation of the distribution and transmission networks and
    - lower electricity costs for consumers who shift part of their electricity consumption to low-price periods.
  - Currently only 10% of the potential for demand-side response is being used – predominantly by energy-intensive industrial companies. Small companies and private households hardly use demand-side response at all.
- **Technical requirements for demand response**
- In order to achieve extensive demand-side response in small companies and private households, "smart meters" need to be installed. Unlike conventional electricity meters, these inform the electricity consumer of the amount of electricity consumed during specific intervals of time (e.g. every 15 minutes). Smart electricity meters are currently used to varying levels around the EU. The Commission is examining a cost-benefit analysis and national plans for rolling out smart metering by 2020 which the Member States will have to submit to the Commission [Annex I (2) Single Electricity Market Directive (2009/72/EC); see [cepPolicyBrief](#)].
  - In order to be able to use the potential for demand-side response in private households, the following is needed:
    - comprehensive and immediate provision of intelligent metering and control systems as well as efficient appliances which meet the requirements of the Ecodesign Directive (2009/125/EC; see [cepPolicyBrief](#)) and the Energy Labelling Directive (2010/30/EU; see [cepPolicyBrief](#)).
    - the adoption of demand response technologies when extending distribution and transmission networks,
    - technological developments enabling greater use of the storage potential of heating and hot-water systems.
  - In order to guarantee EU-wide "interoperability" of equipment for metering and control of electricity demand, the European standardisation organisations will develop standards by the end of 2014 [C(2013) 7243, p. 18].
- **Financial incentives to use demand response**
- The Commission calls for greater use of both "price-based" and "incentive-based" demand response schemes. Both offer electricity consumers an incentive to avoid using electricity when it is in short supply and therefore more expensive (p. 5).
  - In the case of "price-based" demand response, consumer tariffs vary in the course of the day according to fluctuations in wholesale prices. The Commission wants
    - such real-time pricing to be available to all electricity consumers,
    - state regulation of electricity prices, which still exists in two-thirds of Member States, to be abolished,
    - the network charges contained in the electricity prices
      - to be "fair and transparent" and
      - to reflect the cost-saving potential of demand response (p. 8).
  - In the case of incentive-based demand response, electricity consumers are compensated for switching off machines and electrical appliances during periods of high demand for electricity ("peak demand times") (p. 5). The Commission wants to create the conditions necessary to allow small companies and private households to use such programmes.
- **Data Protection**
- Network operators, operators of smart metering systems and other energy service providers who have access to private electricity consumer data are only permitted to use such data without the prior consent of the consumer where it is
    - of a purely technical nature and
    - cannot be traced back to an individual ("personal data") (Art. 2 (a) Data Protection Directive 95/46/EC).
  - The transfer of data required by the distribution network operators for local balancing should be "safe and limited to the necessary" [C(2013) 7243, p. 17].
  - Electricity consumers should be allowed to pass on their consumption data without restriction, e.g. to supply companies or other service providers, so that these are able to offer customer-specific electricity tariffs or demand-response contracts.

## Statement on Subsidiarity by the Commission

The Commission makes no reference to questions of subsidiarity.

## Policy Context

Under the Internal Electricity Market Directive (2009/72/EC, see [cepPolicyBrief](#)), Member States are obliged, following a positive cost-benefit analysis, to equip at least 80% of consumers with smart meters by 2020. The implementation of this requirement will take place in the form of binding national plans ("smart meter roll-out plans"). In the Communication on the Internal Energy Market [COM(2012) 663, see [cepPolicyBrief](#)] the Commission already called on the Member States to abolish price regulations and to promote remuneration models with time-based electricity tariffs. Under the Energy Efficiency Directive (2012/27/EU, see [cepPolicyBrief](#)) Member States have to ensure that electricity consumers are able to take part in demand response. In the Communication on Smart Grids [COM(2011) 202, see [cepPolicyBrief](#)], the Commission pointed out data protection problems in relation to the use of demand response.

## Options for Influencing the Political Process

Directorates General: DG Energy

# ASSESSMENT

## Economic Impact Assessment

### Ordoliberal Assessment

Wind power and solar energy plants cannot reliably supply the grid with electricity at all times. **Demand response increases the flexibility of electricity demand**, so that it can adapt more effectively to the fluctuations in electricity supply, **and thereby contributes to network stability**. Since the proportion of renewables used for electricity supply will continue to increase, demand response will become more important in the future.

### Impact on Efficiency and Individual Freedom of Choice

The expansion of demand response may lead to cost savings for network operators and electricity producers and thus ultimately for electricity consumers as well. It remains to be seen whether the Commission's expected "several tens of billions of Euro" will materialise by 2020 as substantial investment will also be required. **In order for the demand response to be economically worthwhile the resulting cost savings must be greater than the investment put in**. In addition, problems of fluctuating electricity production and in particular the ability to cover peak loads can also be solved by the provision of conventional reserve capacity (e.g. gas-fuelled power plants). The method of compensating for unexpected fluctuations in the electricity supply should ultimately be decided by the price on the electricity balancing market.

**Standardisation of demand response technologies prevents expensive parallel developments and allows the interoperability of instruments for measuring and controlling electricity demand.**

Electricity prices which are based on network capacity provide electricity consumers with an incentive to react to fluctuating shortages in electricity. As the Commission suggests, the first step should be to abolish state regulated prices and – where technically possible and desired by the consumer – to offer tariffs based on the time of day.

Electricity consumers will only accept cheaper prices in return for demand-side flexibility and a certain amount of outside control if concerns about data protection are dealt with. The Commission rightly points out, therefore, that the transfer of sensitive data on electricity consumption must be secure and kept to a necessary minimum. **In principle, only the consumers themselves should be able to decide the extent to which their consumption data can be passed on** to suppliers, network operators and other service providers. In order to increase competition with respect to time-of-day tariffs, consumers should have a choice of different providers and be able to pass on the data about their electricity consumption without restriction.

### Impact on Growth and Employment

Negligible.

### Impact on Europe as a Business Location

Negligible.

## Legal Assessment

### Legislative Competency

The EU can adopt measures to ensure the functioning of the energy market, promote renewable forms of energy and ensure security of the energy supply (Art. 194 (1) (a), (b) and (c) TFEU). In particular, in order to achieve these objectives, the Commission can issue non-binding guidance documents on demand-side flexibility in the form of "best practice" recommendations.

### Subsidiarity

Unproblematic.

### Compatibility with EU Law in other Respects

When private data on electricity consumption is transmitted and processed there is a risk that will be misused. **The data protection measures** proposed by the Commission – restriction of data transfer to purely technical rather than personal data and to "the necessary" amount – **are basically appropriate for compliance with the requirements of EU data protection law** (Directive 95/46/EC; cf. also Commission proposal COM(2012) 11 for a Basic Regulation on Data Protection, see [cepPolicyBrief](#)). These state, in particular, that personal data can only be collected and processed for the specified purpose and with the prior consent of the person concerned (Art. 6 (1) and Art. 7 Directive 95/46/EC). A final assessment can only be made on the basis of the actual provisions of the Member States on demand-side flexibility.

## Conclusion

Demand-side response increases the flexibility of electricity demand and can contribute to network stability. In order for the demand response to be economically worthwhile the resulting cost savings must be greater than the investment put in. Standardisation of demand response technologies prevents expensive parallel developments and allows the interoperability of instruments for measuring and controlling electricity demand. In principle, consumers should decide on the extent to which their consumption data is passed on. The data protection measures are suitable for compliance with the requirements of EU data protection law.