



CEER

**Council of European
Energy Regulators**

Fostering energy markets, empowering **consumers**.

**Ensuring Market and Regulatory
Arrangements help deliver Demand-
Side Flexibility**

Public Consultation

Evaluation of Responses

Ref: C14-SDE-40-03a
26 June 2014



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1 Introduction

As part of its Work Programme, CEER launched a public consultation on the Regulatory and Market Aspects of Demand-Side Flexibility (DSF) in November 2013. The public consultation sought to collect a range of evidence on the barriers and opportunities affecting the emergence of demand-side flexibility measures across Europe¹.

To establish a starting point, an internal survey was conducted amongst National Regulatory Authorities (NRAs) to explore how demand-side flexibility arrangements operate in different countries (with a particular focus on regulatory responses to the implementation of the Energy Efficiency Directive 2012/27/EC). Although non-exhaustive, these experiences revealed a wide range of activity amongst regulators and provided a useful first impression.

In addition to the consultation CEER held a stakeholder workshop on 18 November to help gather views². The consultation closed on Friday 20 December 2013, having received 39 responses (one confidential) from a variety of pan-European and national stakeholders. This note summarises the key issues/positions raised by the respondents. It should be read in conjunction with CEER's Advice: Ensuring Market and Regulatory Arrangements help deliver Demand-Side Flexibility (ref: C14-SDE-TF-40-03) and the full overview of all non-confidential responses³.

1.1 Consultation questions

The consultation document set out the background, definitions and high level issues for consideration, and posed a series of consultation questions.

Consultation questions

- 1) What do you see as the main opportunities and benefits for demand-side flexibility in existing/future markets and network arrangements?**
- 2) What do you see as the main barriers (e.g. legislative/market/regulatory) to the emergence / functioning of demand-side flexibility?**
- 3) In what way will the implementation of the Energy Efficiency Directive (EED 2012/27/EU) affect your organisation/involvement with demand-side flexibility arrangements?**
- 4) Have you undertaken/are you aware of studies examining the cost-benefit of demand-side flexibility measures (for your country or for your organisation), and/or their cost-effectiveness relative to other measures?**
- 5) Are there any other/wider considerations which we should take into account?**

¹ Further details of the public consultation can be found on the CEER website [here](#).

² Further details including presentations and a summary of the discussions from the workshop can be viewed [here](#).

³ Full responses can be found on the CEER website [here](#).



1.2 Consultation responses

39 responses (1 of which is confidential) were received from a wide variety of stakeholders: 7 network operators, 2 power exchanges and representative bodies, 14 European representative bodies/trade associations, 5 private companies, 9 energy supplier/generators, and 2 government bodies.

[Annex 2](#) provides a full list of respondents, including information on their activity (where provided) in relation to DSF.

1.3 Next steps

As a result of the public consultation and workshop, CEER used the feedback received to prepare a final deliverable: Advice on Ensuring Market and Regulatory arrangements help deliver Demand-Side Flexibility (ref: C14-SDE-TF-40-03).

The Advice is divided into five sections:

- CEER definition and explanation of Demand-Side Flexibility
- Potential benefits of DSF
- Potential barriers to DSF (as viewed by stakeholders)
- Future developments
- Conclusion (key principles and specific measures to enable DSF)

The final section of this Advice (pages 22-23) includes key principles and recommendations which seek to reflect the responses received to the consultation.

CEER looks forward to continued cooperation with stakeholders in the further development and facilitation of DSF across Europe.



2 Responses per question

Responses to the consultation were of high quality, and often technical in nature. Due to the length/complexity of the unabridged responses, the following section summarises stakeholder views and provides a brief CEER reaction.

As noted above, the full detailed responses are available on the [CEER website](#).

Question 1 Main opportunities and benefits for DSF (39 responses)	CEER reaction
<p>Stakeholders agreed that DSF measures can offer an additional source of flexibility for the operation of the network, contribute to security of supply, support increased RES penetration, (potentially) contribute to environmental goals and enable delayed/avoided investment in network reinforcement.</p> <p>Both residential and industrial consumers were identified as benefiting through reduced energy bills if/when their flexibility is made available to the market and they are properly remunerated for this. DSF was also identified as contributing to energy markets through increased system stability, market liquidity and creating the space for new actors/business models and clean technologies (such as electric vehicles and heat pumps) to emerge.</p> <p>Some stakeholders mentioned that the potential for demand response is severely under-utilised in part due to the lack of incentives for market participants to trade flexibility. This results in DSF mainly being used by large industrial companies and facilitated by TSOs in the wholesale balancing market. Current energy markets are managed only from the supply side with DSF not forming a viable option for domestic consumers.</p> <p>Whilst significant, stakeholders felt that realising the benefits of DSF would depend on a number of factors, including:</p> <ul style="list-style-type: none"> • Respecting subsidiarity requirements within member states; • Encouraging DSOs to work as neutral facilitators/technical enablers of DSF; • Access to dynamic pricing within the spot market; • Comprehensive consideration of DSF within the relevant European Network Codes, and • The monitoring and validation of DSF services (to avoid fraud/inappropriate market activity). 	<p>CEER welcomes the detailed responses, and notes the positive reaction from stakeholders to the benefits and opportunities presented by DSF.</p> <p>We agree that there is scope to broaden the potential towards smaller consumers.</p>



Question 2 Main barriers to DSF (39 responses)	CEER reaction
<p>Most respondents highlighted similar barriers but classified them differently (under headings such as legislative, regulatory, market and other). The principal barrier identified under the various headings was the lack of an overall framework for DSF.</p> <p>Stakeholders also mentioned that balancing responsibility should be clearly defined, and that the determination of the 'baseline level of consumption' would be crucial in properly measuring and verifying DSF, with conflicts of interest to be avoided at all costs.</p> <p>Related to this, a lack of clear roles for all market participants (in particular aggregators and other third parties) was highlighted. Issues around market access and transparency (including the ownership of the flexibility to be traded) and product design requirements were also mentioned as real barriers to the emergence of third parties in this space.</p> <p>Furthermore, engaging consumers as active participants in DSF was seen as a key challenge to allow DSF to expand beyond its current status (mainly a tool for large industrial consumers and TSOs in the balancing market).</p> <p>A role for regulators and other national authorities was recommended in ensuring consumers were both informed and protected regarding DSF, and that particular consumer groups do not benefit at the expense of others – It is important that all consumers should benefit from the emergence of DSF in the market.</p> <p>The role of DSOs, tariffs, and smart grids/smart meters were three other key challenges which stakeholders agreed needed to be addressed and which were seen to be interrelated.</p>	<p>CEER recognises the barriers raised by respondents and agrees with a number of the positions noted.</p> <p>Clarifying the roles of the different actors is of key importance for the future development of the internal energy market, and features in the ACER Paper – Energy Regulation; A bridge to 2025⁴.</p>

Question 3 Impact of the Energy Efficiency Directive (EED) (29 responses)	CEER reaction
<p>Most respondents agreed that proper implementation of the EED could substantially contribute towards removing barriers and enhancing the emergence of DSF. However, stakeholders also expressed concern at the slow progress in implementing the EED across Member States.</p> <p>Respondents made recommendations along the themes of the previous two questions regarding the role of DSOs, tariffs, smart meters and consumers, but also mentioned standards, incentives and storage as areas where the EED could have an impact.</p>	<p>Through its member NRAs, CEER is working closely with Member State governments to help implement the EED. This includes participation in various working</p>

⁴ At the time of publication, this paper was under public consultation. The consultation paper and pages can be found here: http://www.acer.europa.eu/Official_documents/Public_consultations/Pages/PC_2014_O_01.aspx



<p>Specifically on standards, stakeholders felt that the criteria from the EED should be taken into account / help inform technical specifications for Smart Grids, and that NRAs should ensure that the functionalities of Smart Meters allow for demand response.</p> <p>On incentives, one stakeholder noted that no artificial incentives should be given to DSF measures, which should compete alongside other forms of flexibility on a market price basis.</p>	<p>groups focussed on successful implementation of smart grids, smart meters and associated governance structures across Europe.</p> <p>The points raised during this consultation will be reflected in these working group discussions.</p>
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Question 4 Cost-Benefit Analysis (CBA) & studies (24 responses)	CEER reaction
<p>Numerous studies were referenced by respondents as providing either CBA data in regard to DSF or valuable information in related areas such as smart grids and tariffs. Several stakeholders also referred to ongoing work in this field which would be published in 2014.</p>	<p>CEER welcomes the additional information provided by respondents and will follow the cited ongoing work with interest. Detailed references to published and ongoing work are included within the Advice document.</p>

Question 5 Other considerations (15 responses)	CEER reaction
<p>Mostly, the responses received under this section reflected the previous questions, such as the role of DSOs, standards, consumers etc.</p> <p>One stakeholder mentioned the need for clarity in definitions/terminology, such as the importance of distinguishing between demand side response and demand side management, and the functionalities of smart grids and smart meters.</p>	<p>CEER notes the additional considerations provided by respondents.</p>



Annex 1 – CEER

The Council of European Energy Regulators (CEER) is the voice of Europe's national regulators of electricity and gas at EU and international level. Through CEER, a not-for-profit association, the national regulators cooperate and exchange best practice within and beyond Europe's borders. CEER includes national regulatory authorities from 33 European countries (the EU-28, Iceland, Norway, Switzerland, FYROM, Montenegro and growing).

One of CEER's key objectives is to facilitate the creation of a single, competitive, efficient and sustainable EU internal energy market that works in the public interest. More specifically, CEER is committed to placing consumers at the core of EU energy policy. CEER believes that a competitive and secure EU single energy market is not a goal in itself, but should deliver benefits for energy consumers.

CEER works closely with (and supports) the [Agency for the Cooperation of Energy Regulators](#) (ACER). ACER, which has its seat in Ljubljana, is an EU Agency with its own staff and resources. CEER, based in Brussels, deals with many complementary (and not overlapping) issues to ACER's work such as international issues, smart grids, sustainability and customer issues. European energy regulators are committed to a complementary approach to energy regulation in Europe, with the Agency primarily focusing on its statutory tasks related to EU cross-border market development and oversight, with CEER pursuing several broader issues, including international and customer policies.

The work of CEER is structured according to a number of working groups and task forces, composed of staff members of the national energy regulatory authorities, and supported by the CEER Secretariat.

This report was prepared by the Sustainable Development Task Force of CEER's Electricity Working Group.

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Annex 2 – List of respondents

No.	Organisation (Member State)	Involvement with Demand-Side Flexibility (as indicated by respondents)
1	Anode energy (Belgium)	<p>1. We offer a 24/7 dispatch to offer balancing services to TSO's in BE and NL. The main focus is emergency power generation units, but the technology is capable of handling the shutdown of solar and wind generation if needed.</p> <p>2. Demand side management through a trading platform for industrial consumers and green energy producers. Direct access to the wholesale markets, including balancing.</p> <p>All products are available at TSO and DSO level, but only with AMR type metering. (no residential or small business)</p>
2	Austrian Chamber of Labour (Austria)	The Austrian Federal Chamber of Labour (BAK) is the legal representation of interest for about 3.2 million employees and consumers in Austria. The BAK represents its members in all social, educational, economical and consumer policy matters both at national and at Brussels EU level.
3	CEDEC – European Federation of Local Energy Companies (pan-European)	Represents Distribution System Operators and local public utilities
4	Cefic (pan-European)	Cefic strives for more market flexibility for the European Chemical industry companies going hand in hand with fair conditions in a future DSR market for its members.
5	CEPI - Confederation of European Pulp & Paper Industry (pan-European)	Not indicated
6	COGEN Europe (pan-European)	Broad membership covering the full cogeneration supply chain and including service providers, and manufacturers of cogeneration equipment
7	Consumer Futures (United Kingdom)	Consumer representation
8	DKE Germany (Germany)	DKE is the national organization responsible for the creation and maintenance of standards and safety specifications covering the areas of electrical engineering, electronics and information technology in Germany
9	E.ON (Sweden)	Not indicated
10	EDF (France)	A supplier with a long experience of time-based tariffs
11	EDF (United Kingdom)	A supplier of electricity in Britain to both domestic, and other, customers, with 5.5 million domestic energy (whether electricity, or gas) customer accounts
12	Edison S.p.A. (Italy)	Traditional time of use tariffs and new offers (fixed price, discount or all inclusive)
13	EDSO for Smart Grids (pan-European)	EDSO for Smart Grids represents Distribution System Operators cooperating to bring smart grids from vision to reality. Our members see clear opportunities for demand-side flexibility are currently exploring them through various studies and projects.
14	Electricité Réseau Distribution France (France)	Electricité Réseau Distribution France is the largest French Distribution System Operator. As the future distribution networks will have to be designed to meet a mix of variable generation and consumption, DSOs should have the possibility to request and enable flexibility from generation and demand in order to optimise network



No.	Organisation (Member State)	Involvement with Demand-Side Flexibility (as indicated by respondents)
		availability in the most economic manner.
15	Elexon (United Kingdom)	Great Britain electricity settlement
16	Energy Solutions (Luxembourg)	ICT solutions to manage 'Energy load forecasts'
17	Energy@home (Italy)	Energy@home is a non-profit association that, for the benefit of the environment, aims at developing & promoting technologies and services for energy efficiency in the home based upon device to device communication.
18	ENTSO-E (pan-European)	Not indicated (response received separately)
19	ESB Networks (Ireland)	ESBN, as DSO, has a legal obligation to ensure that the power quality and security of the distribution system is maintained and that the rights and needs of all our customers are met in an efficient, secure, equitable and open manner.
20	ESMIG – the European Smart Metering Industry Group (pan-European)	Not indicated
21	Eurelectric (pan-European)	EURELECTRIC is the EU-wide trade association representing the interests of electricity generators, wholesalers, traders, distributors and retailers in Europe.
22	European Energy Exchange (Germany)	Since its creation in 2002, the European Energy Exchange EEX has evolved from a pure energy exchange to a leading trading platform for energy and energy-related products with international partnerships. Participants can buy and sell power, natural gas, CO2 emission allowances and coal at the wholesale level on the markets of the EEX Group.
23	Europex (pan-European)	Not indicated
24	Evonik (Germany)	Not indicated
25	Finnish Energy Industries (Finland)	An organisation representing DSOs and suppliers in Finland.
26	Fortum Markets (Finland, Norway, Sweden)	Engaged in a broad range of market development initiatives/projects, also related to DR
27	GDF Suez (France)	GDF SUEZ is engaged across Europe in several projects aimed at engaging and empowering consumers. The GDF SUEZ Energy Europe Business Line integrates activities such as gas supply, power generation, energy management, trading, as well as marketing and sales of energy and customer services. With more than 27,200 employees, present in 14 countries, the Business Line offers to its 23.7 million European client's gas and electricity solutions and services. GDF SUEZ is present in retail market to end-customers households, commercials and industrials but also in the wholesale and ancillary markets.
28	GEN Nederland BV (Netherlands)	Solutions and services for Energy Supply companies; Consultancy and Quantitative analysis on market model design for System Operators and Grid Operators; North-West Europe, Power and gas market, projects with Transmission System Operators, Regional Grid Operators, Energy Supply Companies, Energy Trading Companies, Balance Responsible Parties
29	GEODE (pan-European)	Represents Distribution System Operators



No.	Organisation (Member State)	Involvement with Demand-Side Flexibility (as indicated by respondents)
30	IFIEC Europe (pan-European)	IFIEC Europe and its member federations advise their member companies on opportunities for demand response and on how to actively participate in the electricity market.
31	Independent Electricity Suppliers in Sweden (Sweden)	Engaged in creating simplicity for the customer, in terms of contracts, switching rates and meter readings
32	Landis+Gyr AG (Switzerland)	Landis+Gyr is the global leader in smart metering technology: in 2012, Landis+Gyr had total sale of USD 1.7 billion, and 33% of the world smart metering market share (excl. China). Landis+Gyr is active in 30 countries worldwide and engaged in major smart metering and smart grid projects on 5 continents
33	Ministry of Industry and Trade of the Czech Republic (Czech Republic)	Ministry of Industry and Trade of the Czech Republic (MIT): - involvement in development of energy legislation - cooperation with the Czech NRA (regulatory rules) - management of the project National action plan for Smart grids implementation (NAP SG) in compliance with the request in Communication issued by European Commission on 15th November 2012
34	National Grid Electricity Transmission (United Kingdom)	National Grid is the Transmission System Operator for England and Wales, operating the GB network and we are the residual balancer for the electricity market
35	SEDC – Smart Energy Demand Coalition (pan-European)	Our members are Smart metering technologies and feedbacks technologies manufacturers; Our members are involved in Commercial and Industrial Demand Response services, home and building automation, communication networks for cities and DSOs and Demand-side consulting services; Among electricity markets our members are active in: retail market, intraday and day-ahead markets and balancing markets.
36	ORGALIME- The European Engineering Industries Association (pan-European)	Orgalime is a non-profit organisation of technology provider throughout entire energy system. It speaks for 38 trade federations represents some 130,000 companies in the mechanical, electrical, electronic, metalworking & metal articles industries of 23 European countries. The industry employs some 10.3 million people in the EU and in 2012 accounted for some €1,840 billion of annual output. The industry not only represents some 28% of the output of manufactured products but also a third of the manufactured exports of the European Union.
37	UK Electricity Storage Network (United Kingdom)	UK network representing manufacturers, operators, developers and researchers of electricity energy storage. Provide support and advice on offering system flexibility via electricity energy storage
38	VERBUND AG (Austria)	Virtual power plant active in spot, intraday and balancing markets
39	Confidential	Confidential