



# HARMONIZING THE IMPLEMENTATION OF EC'S DEMAND SIDE FLEXIBILITY OBJECTIVES

## USEF'S RECOMMENDATIONS AND CONSIDERATIONS ON 'CLEAN ENERGY FOR ALL' WINTER PACKAGE

- Winter package is an important step to allow participation of customers and demand side throughout EU
- USEF provides a coherent framework for implementing this package, its use stimulates harmonized implementations throughout EU, lowering entry barrier for market parties to provide and obtain flexibility services

### USEF's work on Aggregator Implementation Models provides clear guidance on interpreting and implementing the provisions of Demand Response in the European Commission's 'Clean Energy for All' package.

The European Commission (EC) recently published its 'Clean Energy for All' package to keep the European Union competitive as the clean energy transition is changing global energy markets. The Universal Smart Energy Foundation (USEF), which aims to maximise demand side participation in the EU energy system as a key enabler for the transition to a carbon-free society, has long anticipated this important step towards legislation.

The USEF Foundation and members of our 'Aggregator Implementation Models' task force represent all major stakeholders in demand side flexibility. We share the belief that this winter package will provide the solid framework necessary for an efficient and reliable transition to a sustainable energy future. In this paper, we focus on the EC's view of demand site-participation within the energy market and identify how our framework can support the ongoing development and implementation of this legislation.

### USEF's view on the 'Clean Energy for All' package

We believe that the EC's package has delivered a strong foundation for demand side flexibility (including Demand Response (DR), Distributed Generation and Storage) to participate in all organized markets and products on equal footing with (central) generation.

Additionally, we would like to emphasize that:

1. The specifics of DR included in the energy directive leave its implementation to individual member states (MS) which will likely lead to large differences between them. To achieve its aim of harmonizing existing energy markets and balancing products, we believe that the EC needs to go further in ensuring that the implementation of the DR directive is consistent. USEF provides a generic framework to facilitate this while allowing scope for member state-specific implementations. We believe

that its use could have a significant impact on achieving the harmonized implementation which is necessary for effective demand side participation.

2. The package contains certain definitions and articles that leave room for interpretation. We provide recommendations about how to create more clarity on the objectives of the package in the section below.
3. We believe that implementing the regulations on DR will pose significant challenges to national governments and regulators, yet we are confident that these can be solved. We provide concrete solutions and recommendations to help accomplish this.

### Our view on the proposed text

Our focus is on the Common rules directive<sup>1</sup>, articles 2 (definitions), 3, 13, 15, 17, 23, 24, 40 and recital 2, 53-55, as well as the Electricity regulation<sup>2</sup>, articles 3-8 and 11-13. All references to specific articles below refer to the Common rules directive.

The core elements of both the directive and regulation fully correspond with USEF's aims, principles and framework.

Our framework can therefore be regarded as a consistent elaboration/implementation of the EC's objectives, which are:

- Level playing field for DR in all organised markets and products
- Full participation of active consumers in the energy system
- Market based approach for all ancillary services and TSO/ DSO congestion management products, including redispatch mechanisms
- Standardisation of information exchange between market participants

1. Proposal for a Directive of the European Parliament and of the Council on common rules for the internal market in electricity (recast) (adapting Directive 2009/72/EC)

2. Proposal for a Regulation of the European Parliament and of the Council on the internal market for electricity (recast) (adapting regulation 714/2009)

Based on a detailed analysis in USEF's Aggregator work stream, which includes all major stakeholders from different member states, we see an opportunity to strengthen the text and to provide further clarification. A short elaboration is provided below.

#### Recommendations for strengthening the proposed text

- Article 13 includes several provisions on customer protection. USEF recommends treating customer protection for DR less strictly since the supply chain is reversed: the electricity customer is providing the flexibility and the Aggregator is buying that flexibility. This should, however, not violate the level playing field between Suppliers providing aggregation services and independent aggregators.
- Article 17-4 does not address the possibility of an Aggregator assigning its own Balance Responsible Party (BRP) to assume responsibility for any imbalance its DR activations may cause (e.g. when less or more energy is activated during an event than requested by the TSO for ancillary services). It also fails to recognise the possibility, or need for, a perimeter correction between the Supplier's and Aggregator's BRP, both to neutralize the Supplier's BRP position (as referred to in this article) and to enable the Aggregator to trade energy on wholesale and balancing markets. We recommend to explore the possibility/need for a perimeter correction, and to explain how the Aggregator should source the energy it sells on wholesale or balancing markets.
- Article 17.3d lacks clarity about what is included and excluded from the 'compensation' referred to, since it only addresses the Aggregator-Supplier relation. It is unclear, for example, whether a corrected model is in line with the EC's intention and how this paragraph would apply in a case of load enhancement (or generation curtailment). We believe this should be further clarified.

USEF has developed a complete overview of Aggregator Implementation Models which details all possible combinations of perimeter correction, Supplier compensation and single- or dual-BRP models. This overview can provide clarity when discussing which models are allowed and/or preferred by the EC.

#### Recommendations for clarifying the proposed text

- Article 2, elements 4 and 5, distinguish between the Residential segment (household customers) and the Commercial and Industrial (C&I) segment (non-household customers). DR in the C&I segment has quite different characteristics compared to DR in the Residential segment. Our work demonstrates that each segment requires a different approach and, to some extent, a diversified regulatory framework. In its text, the EC addresses Customers, Customer Groups and Consumers, often without specifying which segment is being addressed. We recommend that clear distinction is made about which articles apply to which segments.
- Article 2, element 15, defines an 'Independent Aggregator' as an aggregator that is not affiliated to a supplier or any other market participant. We propose the defining of 'independent aggregation' from the Customer's perspective as 'a situation where an Aggregator serves a Customer with valorising its flexibility, without having a contractual relationship with, or consent from, the Supplier serving that Customer'. This allows both an incumbent player to perform independent aggregation (level playing field) and a third-party Aggregator to associate with an existing BRP, to bear responsibility for possible imbalances caused by DR activations, in line with the EC's intentions (cf. article 4 of Electricity regulation).
- Article 2, element 16, defines DR as implementable through an implicit (price-based) mechanism or an explicit (incentive-based) mechanism. Some articles (most noticeably article 17) seem to target explicit DR specifically. We recommend clearer distinction between the two to address the responsibilities of different market roles. USEF also provides recommendations on the conditions in which implicit and explicit DR can, or cannot, be combined.
- Article 2, element 18, defines a smart meter as a meter that can be remotely accessed. It is not clear whether this (always) concerns the meter at the connection point (in most member states operated by the DSO). As sub-metering plays an important role in DR, we recommend that the smart meter definition is made unambiguously and that the role and governance of sub-metering is further elaborated. USEF's results provide many recommendations in this area and address the relationship with split-supply models.

- Article 17-3a allows market access for each Aggregator without the consent of market participants. We recommend further specification of the market participants this refers to. Does this apply to Suppliers and BRPs only, or also to TSOs and DSOs? More specifically, clarity should be provided about any circumstances in which DSOs and/or TSOs would be allowed to deny customers access to DR services.
- Article 17-3c requires the full protection of commercial data for market participants. In certain conditions, this conflicts with the information needs of specific market participants to conduct their role(s) and responsibilities. USEF has identified these needs, and the relevant circumstances, and proposes to find the optimal balance between the information needs of specific roles and the protection of commercial data.

### USEF's contribution for implementing a regulatory framework for DR

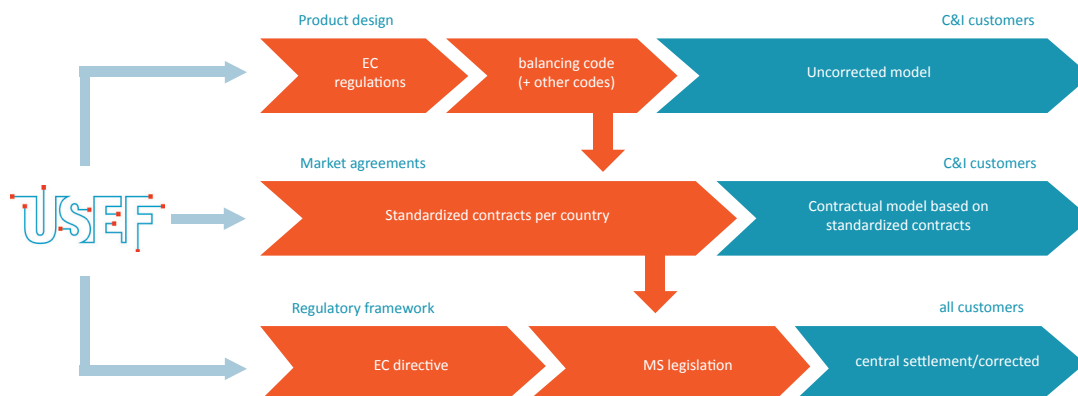
In addition to a complete overview of possible Aggregator Implementation Models, USEF provides recommendations about which models are suitable, or unsuitable, for any given market/product and segment combination. Every model, to a larger or lesser extent, still contains complexities that need to be solved, either through standardized contracts (in the case of contractual models) or through a regulatory framework (for non-contractual models) and/or on product/market level.

USEF provides further recommendations and considerations for tackling these challenges, the different options available and their consequences. Through this set of recommendations, the standardization of regulatory frameworks throughout the EU can be accelerated. Our recommendations also demonstrate that the challenges, albeit complex, can be solved to the satisfaction of all major stakeholders.

The main challenges identified and addressed are:

Challenge	Description
Information exchange and confidentiality	Finding a balance between transparency (information need) and confidentiality
Transfer of Energy	Understanding when and how to neutralize both the energy position of the Customer's Supplier, and the balancing position of its BRP, in response to a DR activation by the Aggregator
Relationship between Implicit and Explicit DR	How to separate both impacts unambiguously
Baseline Methodology	Defining roles and responsibilities and selecting appropriate baseline methodologies
Portfolio Conditions	How to participate in TSO/DSO products through a portfolio
Measurement and Validation	Ensuring correct and trustworthy data; governance of sub-metering.
Rebound Effects	Who is responsible for the possible impact after a DR event

We believe that USEF's work will provide valuable input to member states that yet need to develop a regulatory framework for Demand Response. Since the implementation of a regulatory framework may take several years, USEF can also provide input to parallel activities that can speed up parts of this market. As depicted below, USEF principles can be applied to capacity products based on an uncorrected model, or can provide input to standardised contracts in the contractual model.



### Next steps

USEF continuously presents and discusses its findings and results with a broad audience across Europe and updates its framework with all possible Aggregator Implementation Models. These include detailed descriptions of relevant flexibility market processes and information exchange.

USEF is constantly looking for partners that wish to co-develop the framework on a European level or customize it to reflect local circumstances. Please contact us through our website for further information.

### About USEF

USEF was founded by seven key players, active across the smart energy industry, with a shared goal - one integrated smart energy system which benefits all stakeholders, from energy companies to consumers. USEF's ongoing development is managed by the USEF Foundation, a dedicated core team tasked with coordinating expertise, projects and partners while safeguarding the integrity and objectives of USEF.

Our website: [www.usef.energy](http://www.usef.energy)

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### About USEF's Aggregator Work stream

International experts from TSOs, DSOs, Aggregators, BRPs and Suppliers have co-developed a comprehensive set of recommendations and considerations for shaping the Aggregator role in EU markets. The results can be found in the [publications section on the USEF website](#) which includes:

- USEF Aggregator work stream Interim results  
7 implementation models for effective aggregation
- Recommended practices for DR market design Solutions and recommendations for effective implementation of the aggregator role in the Commercial & Industrial segment
- (Due for Q2 2017) Recommended practices for DR market design - update. This includes recommendations for the Residential segment.

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