



DYNAMIC REGULATION TO ENABLE
DIGITALISATION OF THE ENERGY SYSTEM
A CEER PUBLIC CONSULTATION

View of European Energy Retailers



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Founded in 2017 by:

ACIE: Asociación de Comercializadores Independientes de Energía / Association of Independent Retailers – SPAIN

AFIEG: Association Française Indépendante de l'Electricité et du Gaz / French independent association for electricity and gas – FRANCE

AIGET: Associazione Italiana di Grossisti di Energia e Trader / Italian Association of Energy Traders & Suppliers – ITALY

BNE: Bundesverband Neue Energiewirtschaft e.V. / Association of Energy Market Innovators – GERMANY

Oberoende Elhandlare / Independent Electricity Retailers – SWEDEN

1. What impact do you consider that digitalisation will have on the energy system and which are the most important?

Digitalisation of the energy system is not an end in itself, but a vector to support overarching goals such as decarbonization and competitive markets. The digital transformation in combination with the energy system transformation (power is no longer fully generated from centralized and conventional power plants, but increasingly produced from variable renewable sources connected at distribution level) breaks through the linear structure of the energy business models from the past.

Smart metering is becoming the core of the digital energy industry: Operating metering systems, particularly for most household and commercial customers (for industrial customers the case is slightly different), is changing from reading one data point once a year to managing large and constantly changing data clouds. The data streams need to be made available to third parties (companies such as energy service providers / aggregators / suppliers and others, prosumers and other final consumers).

For economic success of the digitalization in the energy sector, it is necessary to enable market actors to develop value-added services and create additional business opportunities. The basic challenge is this: Which economic advantages can be achieved by using the data streams in the core business of the market partners?

Network operators will benefit from new tools to manage their grids more efficiently and integrate increasing amounts of intermittent renewables into the system. In the long term, interaction between intelligent appliances, smart grids and home platforms will be key for unlocking consumption patterns based on automation and remote controls.

Obstacles related to the smart meter roll-out which need to be overcome include: **data privacy and cybersecurity concerns, lack of standardization and interoperability**, as well as **data access organized in an efficient and non-discriminatory way for all authorized parties and market actors.**

Many of these challenges will only be mastered if the regulatory framework is fit for purpose and all types of data are covered by consistent and appropriate regulation.

2. What are your views on the changes for the energy system highlighted in this chapter and are these the most relevant?

Generally, EER agrees with CEER's perspective on digitalisation. We also believe that digitalisation has the potential to enhance productivity of the current energy system, offers the opportunity to develop new products and services, including greater variety of pricing models, and also may disrupt and transform the way the sector transacts.

a. Increases the productivity of the existing system;

EER supports the views presented in Chapter 2.1.1.

b. Enables new products and services that alter electricity demand; and

EER supports the views presented in Chapter 2.1.2.

c. Brings new digital marketplaces that transform the way the sector transacts?

EER supports the views presented in Chapter 2.1.3.

3. In your view, what are the most important value propositions for consumers, which should be prioritised?

EER fully agrees with the consultation paper's assessment that it is important to distinguish between different consumer categories; the level and possibility of engagement differs vastly between large industrial consumers, SMEs and household consumers.

With respect to household consumers, we agree with the analysis that the value proposition basically relies on either cost savings, convenience, choice, consumer participation or some form of combination of these four elements.

4. In your view, will digitalisation lead to more consumer participation in energy markets? Please provide your reasoning.

Technological innovations and digitalisation are likely to stimulate consumers' interest and desire to actively engage and participate in energy markets. However, this is neither a causal relation nor a sure-fire success. Especially, if consumers need help from third party service providers in order to realize any of the above-mentioned benefits, they will not give consent to access their data if they are not well informed about the benefits of doing so. Equally important to technological innovations are information campaigns to consumers explaining the benefits and advantages of the new services available.

5. What are the key enablers needed to unlock the benefits of digitalisation for consumers?

An enabling smart grid infrastructure / smart meters with appropriate functionalities and the availability of real-time metering data:

Smart meters are an enabling technology that can be used to provide services that may result in a wide range of benefits for all parties across the electricity supply chain, including consumers.

Regrettably, the penetration of smart meters and their regulation regarding data access differs from one EU Member State to another. Countries like Spain or Italy show a high percentage of installed smart meters, but this does not mean that metering activity and data transmission is working well in these countries because of the following factors:

- Many of the installed smart meters are not effectively integrated with DSO systems for lack of hardware or regulation, so they are not really in use.
- Installed smart meters are linked to the provider systems specificities, so they are only compatible with systems of the corresponding DSO. This is creating a technical barrier for data access by independent retailers or other 3rd-party service

providers as many of the installed smart meters are not able to provide data through interaction with different technologies.

- Installed smart meters not always comply with common minimum functionalities as defined by the European Commission in its recommendations of March 2012 on preparations for the roll-out of smart metering systems (2012/148/EU).

Additionally, national regulation in some EU Member States reserves the real-time access to smart meter data to the DSO and the consumer, so retailers may not help consumers to correctly handle their consumption habits in an efficient way and the Balancing Responsible Party (BRP) may not be able to balance their perimeter.

In addition, standardization is necessary at DSOs level, both in terms of hardware and data flows from the IT systems communicating with suppliers. This standardization is essential to facilitate the deployment of solutions developed by suppliers for energy consumption monitoring. Otherwise, it would be a technical barrier. The case of French local distribution companies is very demonstrative. The lack of standardization of IT systems and smart meter hardware in these areas makes any form of competition almost impossible, at least without dissuasive additional management costs, both for supply and for services.

Common minimum functionalities as defined by the European Commission (2012/148/EU) need to be implemented on national level. In addition, those functionalities need to be refined further, based on a reasonable balance between cybersecurity considerations; standardization and interoperability needs and market-driven technological developments while bearing in mind the costs and principles of proportionality.

Effective Unbundling:

If DSOs are involved, appropriate unbundling will be essential. A true level-playing field should prevent cross-subsidization of energy supply or energy service activities by means of using profits or information advantages from regulated business activities as this leads to market

distortions. Such unfair practices are extremely hard to control, even more so in Germany with the high number of not fully unbundled business entities. (Currently, more than 90% of DSOs in Germany are not fully unbundled due to the high de-minimis threshold – in the case of electricity, that is 800 out of 875!)

Market-driven electricity prices:

For producers and consumers to react increasingly flexible to the intermittent supply of electricity from renewable energy sources, it will be essential to allow for market price signals as undistorted as possible.

An innovation-friendly regulatory framework:

An agile approach to regulation is a critical enabler of innovation. It needs to be ensured that existing regulatory frameworks evolve so that they do not hamper the development of technology or new business models. Furthermore, there is the need to ensure that where emerging technologies or business models create regulatory grey spaces, that regulators respond with new governance frameworks that address the issue, that business can practically apply and that can keep pace with technological development.

The regulatory framework needs to ensure well-functioning markets. This in particular means that all market players should compete on a level playing field, that freedom of contract should be respected and that technology neutrality needs to be respected. It also means that a stable regulatory framework which focuses on defining enforceable principles must be preferred over detailed and prescriptive rules.

6. What are the main risks for consumers arising from digitalisation of the energy sector?

Avoid lock-in by proprietary systems that are not interoperable with other systems:

Interoperability is one of the most critical aspects in a digitized economy and a not to be underestimated risk consists of consumers being locked-in by proprietary systems (provided by the DSOs) that are not able to communicate with other systems. This remains one of the main issues in several Member States, including Spain (in this context, also see the point on smart-meters above).

Data privacy & Data security:

Ensuring data privacy and protection is key and needs to be embraced by any energy market party or system operator. GDPR provides a useful framework from this perspective. Protection of privacy is one important aspect of a secure infrastructure; another extremely important aspect is data security – also referred to as cybersecurity. However, "safety and security at all costs" should not kill innovation altogether. Regulators should strive for a reasonable balance between security, costs and time to implement.

Ability to navigate complex markets:

Greater variety of (bundled) products and (personalized) services means more complexity for the consumer. From our market-driven perspective and experience, we strongly caution to aim for a fully regulated and pre-defined comparability of products, as this would mean that companies will be forced to limit their offers to standard products, thereby discouraging – or even worse, entirely preventing – innovation. In our view it's key that:

- Contractual terms and conditions are fully transparent and easily understandable by the consumer. They also need to be communicated in a transparent way.

- The terminology used in a bundled product offer, contract and bill is fully consistent, as it should be the case with any single product. Under these conditions, the consumer should be able to take an informed decision.

Avoid social upheavals as a result of energy transition & digitalisation:

For the social acceptability of the energy transition enabled by digitalisation it will be of utmost importance to avoid disproportional disadvantages by the digital divide. Equally important, the overall system must be kept fair to all customers, especially for those who cannot or wish not to take an active part in the market.

7. What would a “whole energy system” approach look like – would this unlock more benefits of the digitalisation of the energy system?

A “whole energy system” approach would support sector integration and apply digitalisation to enable services and bundled products, which may include electricity, heating & cooling as well as transport. For example, there are considerable efficiency potentials, if the consumption-dependent measurement and billing of heating, hot/cold water costs for private and commercial properties could be combined with digitalized electricity and gas metering.

8. Do you agree with the analysis presented here on the key areas in which energy regulators should focus?

The presented document is quite complete and extremely relevant regarding the challenges related to the digitization of the system. Furthermore, the document raises the right questions for regulators to provide appropriate answers for. As CEER rightly points out, the key challenge for regulators will be to ensure that policy and regulation does not create an unjustified barrier to innovation while continuing to empower and protect consumers during the transition. The NRAs must also monitor the deployment and interoperability of smart meters in order to ensure a high level of quality of service to the consumers.

9. Which of the specific draft proposals should regulators pursue? Which should they not undertake? In both cases, please explain the reasoning for your answer. Bearing in mind that resources will not allow progress on all actions by regulators simultaneously, please indicate your top 5 priorities for action by regulators in the near term.

We would suggest focussing on the following essential topics and draft proposals:

Draft regulatory proposals 1 and 2 on data availability:

On 20 March 2019 European Energy Retailers (EER) and ESMIG jointly organized a workshop on access to energy data to discuss what the current barriers are and how they can be overcome. The presentations and discussions revealed that the current regulatory environment on national level is not yet suited for an efficient introduction of energy / flexibility management. For example, in some countries there are delays in the access of consumption data by retailers of up to a week. Moreover, in self-consumption facilities retailers receive the consumption data but not the generation data. Therefore, retailers and other service providers cannot offer to consumers tailored services to enable actionable information. It will be crucial to define processes and procedures for sharing measurement data with all authorized energy market participants in an open and non-discriminatory manner. In case of deficiencies, it helps if the regulatory authority is imposing sanctions.

Draft regulatory proposals 7 and 9 on network tariffs:

The structure of network tariffs is key when transitioning to and achieving a future-proof energy system with high shares of renewable energy, enormous flexibility needs and crucial sectors such as transport and heating & cooling being electrified and decarbonized: The network tariff structure makes or breaks new business models!

With the introduction of prosumers and larger peak demand requirements (e.g. from electric heating and electric vehicles), costs imposed on the

grid are less and less linked to consumed volume (on which tariff structures traditionally depended). For example, PV systems and batteries allow grid users to react to the way electricity supplied through the grid is priced. PV enables consumers to self-produce energy and thereby lowers the net energy need from the grid, while batteries enable self-producers to regulate both their grid energy flows and capacity parameters.

The new situation implies a challenge on historic network tariff structures in that users are not always paying the costs that they inflict on the grid, while instead socializing this cost on the grid users leading to discrimination. This may be the case for resources that are exempted from network tariffs but still impose costs on the grid through e.g. reverse flows or continued reliance on the grid in some periods. On the other hand, network tariff structures which address the cost socialization problem should not prohibit self-consumption. Finally, one crucial aspect should not be neglected: the grid infrastructure still needs to be financed!

In addition to the discrimination / cost socialization problem, there are other challenges which need to be addressed in the network tariff design discussion: In terms of sector coupling and electrification (> transport, > heating & cooling), high volumetric charges discriminate the use of electricity against oil and gas. There is a systemic disadvantage in price which hampers the electrification of those sectors and thereby, prevents decarbonization.

In terms of flexibility, high volumetric charges can also be problematic as they prevent increased consumption which for example could help to absorb electricity in times of oversupply by RES (for example heating water with electricity). Rigid fixed capacity charges can also pose challenges to flexibility needs. In Germany for example, those providing demand-side flexibility may face higher network tariffs as the regime is incentivizing consumers to maintain a flat consumption profile, often removing any business case for demand response.

In summary, we strongly encourage NRAs to review network tariffs to ensure they are fit for the future while making sure that all consumers are paying a fair contribution towards the fixed costs of the system and that network tariffs in some way reflect the scarcity of capacity in the network.

Draft regulatory proposal 10 on market-based procurement of flexibility services by DSOs:

Distribution System Operators (DSOs) are facing many challenges in adapting to the new reality of a highly digitalized, decarbonized and decentralized energy system. The main challenge is the occurrence of grid constraints / local congestion. Active congestion management is becoming increasingly important. The use of flexibility – i.e. adjusting the demand profiles to the supply peaks in renewable generation – can help DSOs to prevent local congestion and avoid power quality problems. In the short-term, flexibility can help releasing pressure on the distribution network and in the long-term, flexibility can serve as an alternative to network reinforcement when it is more cost-efficient than traditional reinforcement measures. These overall developments and the suggested use of flexibility put the role of the DSO in accessing flexibility services and the needed update of accompanying regulatory frameworks into the spotlight.

We fully support a regulatory framework that allows and incentivizes DSOs to procure flexibility services through the market: the question is which tools and principles to enable flexibility use at the distribution level go hand in hand with neutrality on part of the DSO. In order to avoid market distortions, it remains essential that DSOs are neutral when performing their tasks and are sufficiently unbundled from the interests of flexibility providers.

The following proposals seem less essential:

Draft regulatory proposal 3 on data privacy:

We fully agree that data privacy is a fundamental issue. At the same time the EU has just adopted the GDPR which should tackle most of these concerns.

Draft regulatory proposal 5 on consumer protection regarding new products:

This is relevant and required by the Electricity Directive. We would agree that trying to maximise reliance on general consumer law will help. More cooperation between regulators across sectors is also crucial.

10. Do you have any other general observations to make on the topic of this consultation paper?

This CEER document is quite comprehensive and provides a relevant analysis of most key issues related to the digitalisation of the energy sector. The purpose of this document, however, and which concrete processes will result from it, could be specified in more detail. It might be useful to link this work stream with the current discussions in the Smart Grid Task Force Expert Groups and in addition, with the study currently carried out by PWC and Tractebel on behalf of the European Commission an “Assessment and roadmap for the digital transformation of the energy sector towards an innovative internal energy market”.