

**EPIA CONTRIBUTION
TO THE ACER PRE-
CONSULTATION
“ENERGY
REGULATION: A
BRIDGE TO 2025”**

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Introduction

EPIA welcomes this pre-consultation, which opens a debate on the necessary adjustments to the target model at the eve of the deadline for its full implementation. The crucial role of flexibility, the weak link between wholesale and retail electricity markets and the increasing importance of the latter are rightly identified by ACER as some of the main challenges ahead. Regulators play a central role in ensuring that the delicate balance between market and regulation is struck. Hence, they should take the lead – under ACER and CEER umbrellas – in the debate on the future system design.

EPIA – representing the solar photovoltaic (PV) sector in Europe – is conducting an internal analysis of system design features and options allowing for a further, sustainable PV growth in Europe. Hence, we would be happy to further exchange on this and related topics with the Agency and its members.

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Overarching paper

→ **Question 1: do you agree with this overall approach? Would your emphasis be any different?**

EPIA agrees with ACER's approach, which consists in ensuring the proper implementation of the existing European regulatory framework while identifying the needed adjustments.

In particular, EPIA would like to encourage ACER to fully use its scrutiny power in the European network codes adoption process. EU network codes, complemented by EU standards, should introduce innovative practices in system planning and operation with the twofold objective of enabling renewable energy integration and enhancing flexibility. Draft electricity network codes – as they stand now – do however not sufficiently do so¹. Moreover, they pay little attention to interactions between transmission and distribution grids in a context of progressive decentralisation of the power system. Hence, EPIA feels that it is necessary to either adjust these network codes or to complement them with further EU guidance.

→ **Question 2: do you agree with this broad analysis and/or do you have further suggestions?**

By and large, we agree with ACER's analysis of the energy system evolution.

1 In particular, EPIA has followed the ENTSO-E drafting process of the network code on electricity balancing. Our views are summarized in a cover paper accompanying our reply to last summer's public consultation: http://www.epia.org/index.php?eID=tx_nawsecured!&u=0&file=/uploads/tx_epiaositionpapers/EPIA_EB_NC_cover_letter.pdf&t=1386153119&hash=389d4353565942635eaac41ecf283f2ae776db16

Assumptions / Among the assumed elements of the future energy system, EPIA suggests adding decentralisation – especially of production – having an impact on infrastructure planning and operation, on roles of and interactions among existing and new actors and on market functioning (and even on the rise of new markets – e.g. for services at distribution grid level). In particular, EPIA believes that consumers’ ability to become producers and to consume their own energy (self-consumption) in a responsible manner and in compliance with system security rules should be mentioned as an important assumption for the future energy system².

Drivers / EPIA would like to point out that innovative technologies (e.g. communication infrastructure), new business models (e.g. for aggregators) and the redefinition of DSOs’ and service providers’ roles should be expected not only in relation to active *demand* participation in the system but also in conjunction with the integration of distributed renewable energy (DER) *production* in the system. In some cases, production and demand will share the same connection point to the grid (prosumers: e.g. households, supermarkets, industries); in some others, generation connected to the distribution grid will not be linked to a consumption point (e.g. ground-mounted PV power plants).

Markets / We suggest adding to the list of market-related evolutions influencing future policies the following: the possible inadequacy of electricity markets in their current design to ensure sufficient revenue streams for renewable energies, the inability of market prices to reflect grid constraints and to orientate long-term investment decisions.

→ **Question 3: do you think the list of suggested measures is complete or do you have further suggestions?**

3.1 Efficient RES Integration with Flexibility / We suggest adding to the mentioned action points the following:

- Encourage analyses of the ability of market prices and system operation procedures to ensure sufficient revenue streams for renewable energies and reflect the value of decarbonisation
- Encourage analyses of the ability of market prices to:
 - reflect grid constraints and
 - orientate long-term investment decisions
- Encourage adaptation of spot and balancing market rules and products so that electricity and services from variable renewable energies (VRE) can be sold on markets on a level playing field with conventional technologies (e.g. short trading periods, products of short time blocks, lower confidence levels, etc.)³
- Encourage regulatory, market and technical adaptations to allow DER to participate in markets via intermediaries (e.g. pre-qualification procedures for portfolios of plants, lower market entry fees, communication infrastructure, etc.)
- Invite policy makers to limit the use of subsidies particularly for technologies that do not flexibly complement VRE (e.g. base-load, mid-merit order technologies) and that today benefit from “natural” priority dispatch (must-run).

3.2 Encouraging competition / We suggest including the following points:

² Cf. EPIA position paper on self-consumption:

http://www.epia.org/index.php?eID=tx_nawsecured!&u=0&file=/uploads/tx_epiaipositionpapers/Self_and_direct_consumption_-_Final_version_of_the_Position_Paper_02.pdf&t=1386252886&hash=5e9db2c50940b6146bedfd4f2be46b59a5a3175c

³ As for the provision of system services from PV and wind, cf. REServices project, wind and PV ancillary services capabilities and costs: <http://www.reservices-project.eu/publications-results/>

- Promoting the transfer of benefits from competition on wholesale markets (e.g. declining prices thanks to renewable energy expansion) to retail markets
- Promoting consumers' ability to become producers and to consume their own energy in a responsible manner and in compliance with system security rules.

3.3 A smarter demand side: smarter grids and smarter markets / we would like to stress again the following:

Facilitating DER participation in the system and allowing active demand integration in markets are equally important objectives, which are reached via the roll-out of the same or similar market, technical and regulatory enablers. DER (sharing the same connection point to the grid with consumption or not) could respond to price signals from system operators and from markets if signals themselves are strong enough and if a proper communication infrastructure is in place. Relative costs for market entry and flexibility provision become reasonable only if the behaviour of many generators is aggregated and managed remotely. However, barriers to the emergence of aggregators – spanning both market rules and commercial arrangements – still have to be lifted. EPIA encourages ACER to take due account of these challenges in its future work.

Paper on Electricity

→ Questions E1 to E5: flexibility

EPIA believes that short-sighted discussions on generation adequacy should be expanded so as to cover the wider system flexibility subject as a matter of priority.

A preliminary step in the identification of the needed system flexibility is the performance of accurate and EU-widely accepted calculations of how much dispatchable capacity (and related CO₂ emissions, fuel and cycling costs) can be decommissioned by introducing VRE in the system (capacity credit). This entails:

- The analysis of the correlation between VRE production and consumption and of how such correlation can be improved,
- The assessment of the joint capacity credit of different VRE technologies⁴ and
- The assessment of the flexibility (e.g. frequency and voltage support) that can be provided by VRE if relevant regulatory, market and technical adaptations are made.

All measures to address the net load (total load minus load covered by VRE generation) should then be analysed together against a series of indicators. Member States should resist the temptation to conduct such analyses in isolation; in light of both the regional expansion potential of flexibility measures (e.g. interconnections) and the regional impact the roll-out of such measures can have; actions should be agreed upon in concerted, multi-national fora⁵.

The introduction of innovative practices in system operation can facilitate flexibility provision by VRE, thus limiting the need for flexible capacity; but it must be assured that market rules and products are adapted so that capacity reservation is made short time ahead of delivery and for short time periods

⁴ Cf. Connecting The Sun, chapter 3, full report, EPIA, 2012: <http://www.epia.org/news/publications/connecting-the-sun/>

⁵ In this context it is worth considering the IEA GIVAR III project, within which an economic assessment of different flexibility options and of their relative cost/benefit is being performed: <http://www.iea.org/topics/renewables/givar/>

and capacity activation decisions are made as close as possible to real-time, can be adjusted as often as possible close to real-time and are made for very short time intervals.

Many renewable energy generators and active consumers are connected to distribution grids and are much smaller and more numerous than conventional power plants: it is therefore urgent to facilitate the provision of flexibility via aggregated units (this could imply e.g. the redefinition of pre-qualification procedures) and to roll-out a standardized communication infrastructure allowing responsiveness to price signals.

The provision of (certain) services from distribution grids to transmission grids could make technical and economic sense. At the same time, an increased need for services is arising in distribution grids. As a matter of priority, the following actions should be taken:

- The definition of a new regulatory framework as well as of commercial arrangements for the provision of services at distribution grid level. In this respect, possible adjustments of the natural power production from renewable energy installations to delay network reinforcements and to support distribution network operations should be seen as services; hence, they should be framed within contracts or commercialized on local markets and should be adequately remunerated
- The definition of a new governance in a context of an increased number of actors and interactions⁶ and the performance of optimization analyses that allow understanding under what circumstances DER and active demand should reply to signals from spot markets, TSOs or DSOs.

→ Questions E8 to E11: Encouraging Competition

Subsidies for renewable energies have been introduced very recently to support the integration of immature, CO₂-neutral technologies in a system designed for mature conventional energy technologies, which are mostly exempted from the internalization of their negative externalities (e.g. weak CO₂ price instruments). Subsidies for renewable energies have greatly helped these technologies not only to gain non-negligible market shares but also to decrease their costs; and the further cost reduction potential of some of these technologies is still very important. Contrariwise, subsidies for fossil fuel-based and nuclear power plants granted today (e.g. Spanish subsidies to local coal and UK feed-in-tariff for nuclear) and under discussion (e.g. capacity schemes for gas power plants) are and would be given in spite of the very limited cost reduction potential of these technologies.

Renewable energy growth, supported by favorable policies, has brought many advantages to the system, such as the reduction of conventional power plant running hours and of related CO₂ emissions and fuel costs. The fact that some renewable energy technologies are distributed and are located close to the consumption has also contributed to a certain extent to the avoidance of losses linked to power transmission. As ACER correctly points out, by and large, subsidies for renewable energies have been passed onto power consumers via a very easily identifiable, specific component of electricity bills. At the same time, the introduction of RES with very low marginal costs in the system has led to cost savings on the wholesale market via a downward pressure on prices and a reduction of the running hours of power plants with the highest short-run costs. The latter effect would have been registered even if other instruments than subsidies had been used to support RES

⁶ In this context, the Italian regulatory authority (AEEG) ran a public consultation on modalities for the provision of balancing services from distributed generation. It proposed three models, whereby 1) DER would provide balancing services to TSOs upon agreement of the DSO and would provide services to the DSO 2) DSOs would buy services from DER and would transfer them to their connection TSOs and would buy services for their grids 3) DSOs would be responsible for keeping their exchanges with the transmission grid balanced and would buy services for their grids from DER; DER would not participate in balancing markets. <http://www.autorita.energia.it/it/docs/dc/13/354-13.jsp>

expansion. Unfortunately, decreasing wholesale price trends have not corresponded to a contraction of the energy component of retail electricity prices. This phenomenon would certainly deserve a thorough analysis on the part of regulators as it is important that benefits related to the expansion of renewable energies – and not only costs – become visible to consumers.

The current market design (and not RES subsidies), which is centered on the short-run costs of the various technologies, penalizes flexible generators, typically with high marginal costs. At the same time and also in light of the centrality of short-run costs, the current system design is unlikely to ensure adequate financing for renewable energies if subsidies are phased-out. In this context, a reflection on the part of regulators is needed so as to identify the right modifications that that would guarantee sufficient remuneration of renewable as well as flexible technologies, while penalizing inflexible power plants. EPIA agrees that regulators should seek ways to adjust RES support schemes so that these become more market-oriented. However, it is of outmost importance to implement such adjustments in conjunction with adaptations to market rules and products. Only in this way will RES technologies be allowed to participate in markets on a level playing field with conventional technologies. Adapting support schemes without modifying the market functioning would mean exposing RES to excessive risks in an environment designed for the incumbent players.

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