European Economic and Social Committee

TEN/577
Launching the public consultation process on a new energy market design

Brussels, 20 January 2016

OPINION

of the
European Economic and Social Committee
on the
Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Launching the public consultation process on a new energy market design
COM(2015) 340 final

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Rapporteur: **Lutz Ribbe**

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Rue Belliard/Belliardstraat 99 — 1040 Bruxelles/Brussel — BELGIQUE/BELGIË
Tel. +32 2 546 9011 — Fax +32 2 513 4893 — Internet: http://www.eesc.europa.eu

On 15 July 2015, the European Commission decided to consult the European Economic and Social Committee, under Article 304 of the Treaty on the Functioning of the European Union, on the

> *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Launching the public consultation process on a new energy market design*
> COM(2015) 340 final.

The Section for Transport, Energy, Infrastructure and the Information Society, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 7 January 2016.

At its 513th plenary session, held on 20 and 21 January 2016 (meeting of 20 January), the European Economic and Social Committee adopted the following opinion by 212 votes to 4, with 7 abstentions:

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1. Conclusions and recommendations

1.1 The EESC welcomes the communication and supports many of the proposals put forward, which are the logical outcome of the discussions on the European Energy Union.

1.2 The market improvements which the communication outlines, including intraday trade, getting rid of rules which distort competition, demand-side management and creating the right price signals are in principle appropriate and important measures for redesigning the energy market, which in future will be more strongly geared to the specific nature of variable, decentrally produced renewable energies (VRE).

1.3 The safe and affordable supply of businesses and households with (cleaner) energy provides a vital basis for the economy and people in today's society. In principle, therefore, the supply of energy is a matter for the whole of society and ensuring this supply requires a careful balance between the market and regulation. To date, this has not been properly discussed at the political level and nor does the communication do so.

1.4 The goal of a low-carbon energy supply, with a high proportion of adjustable renewable energy sources, can only be achieved in the short to medium term if all market participants (including new ones) have at their disposal enough options that afford flexibility, such as sufficient storage capacity, flexible, consumer-friendly demand options and flexible power generation technologies (e.g. cogeneration), as well as adequately upgraded and interconnected power distribution infrastructure. Other conditions are that consumers must receive adequate, timely and correct information, they must have the chance to develop their

own marketing opportunities and the necessary investments in technology and infrastructure should pay off. None of this is currently the case.

1.5 Price signals are important, since the transformation of the current system will require large investment. With exchange prices currently standing at 30 or 40 EUR/MWh, investments cannot be re-financed, whether they be in new electricity production capacity or in storage technologies. Such exchange prices are only attainable because, among other things, a lot of electricity from power plants whose costs have been paid off is coming onto the market and subsidies are being paid for electricity produced from coal, nuclear power and renewable energy. In other words, today's exchange prices do not even reflect the real cost structure. Prices on the electricity exchange provide a distorted picture of actual energy costs due to subsidies and over-regulation. The correct signals for the large investments necessary for transforming the existing system can only be achieved with realistic and transparent prices.

1.6 Completely new approaches to pricing are therefore needed in order to create an economic basis for the new network quality (including demand-side management and storage) that is desired. One approach would be to gear the regulatory elements more towards the desired innovations and to better assess the stability of the system.

1.7 In future, prices must reflect the true overall costs of electricity generation, supply and disposal, including the negative external effects (e.g. CO_2 emissions). Pricing must be realistic. This also means that the Commission should adapt its own subsidy system and that the ongoing practice of setting prices at national level should be abolished. The Commission has yet to produce a coherent plan for this.

1.8 The big technical challenge posed by the new energy system is that electrical energy will in future no longer be centrally managed and flow from large power stations to consumers ("top-down approach"). Instead, new "production and supply islands" will emerge which must be interconnected ("bottom-up approach") and will be based on a large number of decentralised renewable energy sources – some of which will be variable –, with demand-side management (including storage) and local/regional marketing playing a key role.

1.9 The EESC has on a number of occasions stressed that such new, decentralised energy systems provide opportunities – and not only in terms of public approval of the necessary structural changes and required investments[1]. In terms of the regional economy, too, new prospects and new opportunities for value added may emerge outside the familiar systems. New technologies are making it possible to re-establish a link between regional development and energy policy. What is more, interconnected supply islands provide greater safeguards against possible attacks on key infrastructure.

1 See EESC study Changing the future of energy: EESC on the role of civil society in the implementation of the EU Renewable Energy Directive (EESC-2014-04780-00-04-TCD-TRA).

1.10 The Commission therefore needs to think about the trading system in terms of the energy infrastructure required without attempting to make the necessary changes to energy infrastructure compatible with the current trading system. It also needs to consider together with market operators what changes to energy infrastructure and the trading system would create the conditions to bring about a more diverse, flexible, consumer-centred and cost-effective energy system.

1.11 The EESC welcomes not just the Commission's statements on the new range of stakeholders, but regards as even more important the active involvement of consumers (i.e. businesses, citizens, municipal utility companies, etc.) in production and direct local or regional marketing. If businesses, members of the public or any municipal utility companies were to decide today to use local and regional energy sources, in the form of jointly coordinated solar or wind installations, for example, then it should be much easier for them to use the generated energy directly without going through an exchange or traders, and/or to market this energy directly without difficulty. Here too, the Commission document leaves many questions unanswered.

1.12 The Commission has on several occasions underlined the fact that renewable energy still faces obstacles which must be removed and that renewable energy sources must be promoted in accordance with the market requirements and on a regional basis. The EESC agrees with this but notes that the extension of the market and reduced regulation will not of itself lead to an increase in renewable energy production. Unfortunately, however, the communication provides no indication of what exactly the Commission has in mind to address this.

2. Gist and context of the Commission communication

2.1 In its Political Guidelines, the Juncker Commission made the development of a resilient Energy Union with a forward-looking climate policy one of its strategic objectives.

2.2 This ambition was confirmed in the Commission Work Programme for 2015[2] and further detailed in the framework strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy[3]: alongside a reliable and affordable energy supply, the aim is to create a sustainable and environmentally friendly energy system with strong market competition and innovation. The framework strategy places special emphasis on the public taking an active role in the new design of the energy system. The reorganisation of the energy market, particularly the electricity market, is an important step towards achieving these objectives.

2 COM(2014) 910 final, 16.12.2014.

3 COM(2015) 80 final, 25.2.2015.

2.3 The public consultation launched together with the publication of the Commission communication should help overcome a number of significant challenges which stand in the way of building a sustainable energy system.

2.4 According to the European Commission, these challenges are linked to the fact that: "The existing market concept dates from an era in which large-scale, centralised power plants, largely fuelled by fossil fuels, had the key aim of supplying every home and business in a limited area – typically a Member State – with as much electricity as they wanted, and in which consumers – households, businesses and industry – were perceived as passive." The Commission's aim is a "fundamental transformation of Europe's energy system", with a more decentralised electricity generation system based firmly on variable energy sources, where there are many more market participants with changing roles and where demand-side management poses a new and important challenge.

2.5 The Commission singles out the following specific challenges:

- investment incentives and pricing in fragmented markets;
- continued regulation of price and market access at national level, as well as other market interventions in Member States;
- lack of flexibility on the supply and demand sides of the markets, against the backdrop of an expansion of renewable energies and the "energy efficiency first" principle;
- insufficient opportunities for active involvement of the public in the future of energy.

2.6 The Commission has come up with a series of measures in order to tackle these challenges:

- the setting-up of a flexible, cross-border short-term market for trade in electricity (intraday market);
- establishment of long-term price signals by means of the European CO_2 market;
- completion of infrastructure links;
- regional development of renewable energy sources in line with market requirements;
- connection of wholesale trade to the retail market in order to strengthen the price signal for end users;
- abolition of price regulation in the retail market and of barriers to market access for aggregators and other market participants;
- regional coordination of energy policy;
- European and regional coordination of energy market regulators and network operators;
- alignment of methods for assessing the adequacy of energy systems in terms of national **and** European security of supply;
- a framework for opening capacity mechanisms across borders.

3. General comments

3.1 Many fundamental changes are needed in order to achieve the aims of the European Energy Union. They include, as the Commission explains, a complete overhaul of the way in which the electricity market is designed.

3.2 These changes will only meet with sufficient public approval if a) there is a very active and well organised consultation process with stakeholders and civil society and b) they are accepted as active partners in this process, not just parties to be consulted.

3.3 The EESC has described how this process might look in a study[4] evaluating the European Commission's "stakeholder" consultation process. It would also draw attention to its European Energy Dialogue initiative.

3.4 The market improvements which the communication outlines, including intraday trade, getting rid of rules which distort and prevent competition, demand-side management and creating the right price signals, are appropriate and important measures for redesigning the energy market, which in future will be more strongly geared to the specific nature of variable renewable energies (VRE). It is only in this way that the objectives of the European Energy Union – which have been welcomed by the EESC – can be achieved and a cost-effective, environmentally friendly, secure and affordable supply be guaranteed for households and the economy.

3.5 The EESC underlines the particular importance of intraday trade as a way of ensuring meaningful trade involving VREs.

3.6 It welcomes the fact that the communication restates the main principles of the "new energy system" and sees these as the right signal to be sending to all market participants and to society as a whole. They include:

- the "energy efficiency first" principle;
- the vision of an energy supply without fossil fuels[5];
- recognition of the need for more decentralised electricity production in future, drawing on variable sources;
- the importance of demand-side management and storage in the energy system of the future;
- recognition of a changing consumer role, with a move towards active consumers and producers as well as system service providers[6].

4 OJ C 383, 17.11.2015, p. 57.

5 See COM(2011) 885 final.

6 See TEN/578 on Delivering a New Deal for Energy Consumers – See page XX of OJ.

3.7 The safe and affordable supply of businesses and households with cleaner energy provides a vital basis for the economy and people in today's society. In principle, therefore, the supply of energy is a matter for the whole of society and ensuring this supply requires a careful balance between the market and regulation. To date, this has not been properly discussed at the political level and nor does the communication do so. For example, the question of whether it would be better to place transmission and distribution networks under public control – in a similar way to motorways, the rail network or the water supply – may not be decided in Brussels, but it can be discussed here. Energy policy covers the establishment of a clear framework and regulatory oversight. It also includes consumer protection and the protection of particularly vulnerable social groups.

3.8 The EESC would like to refrain from commenting positively on the many good measures outlined by the Commission, including its critical stance on spare capacity. Instead, it would like to look at some of the issues which it believes may not have been sufficiently taken into account by the Commission or barely addressed at all.

4. Specific comments

4.1 The EESC fully agrees with the Commission that "a fundamental transformation of Europe's energy system" is crucial. From the Committee's perspective, however, the solutions set out in the communication represent less a "fundamental transformation" than an adaptation of the existing system or an addition to it.

4.2 The EESC would like to draw particular attention to the fact that a "fundamental transformation" may entail more than just linking up national systems to form a European network, reforming existing markets and trading systems and significantly increasing the share of renewable energies. A whole new energy system, with a much larger, more decentralised range of stakeholders, must be designed and developed. This means not only upgrading existing transmission and distribution networks, but also underpinning them with new, technically sophisticated infrastructure. To some extent, this new network should be based on entirely new and more diversified trade, networking and marketing systems. The current traditional energy sources will play a bridging role here.

4.3 The goal of a low-carbon energy supply, with a high proportion of adjustable energy sources, can only be achieved in the short to medium term if

a) all market participants (including new ones) have at their disposal enough options that afford flexibility, such as sufficient storage capacity, flexible, consumer-friendly demand options and flexible power generation technologies (e.g. high-efficiency cogeneration),

b) consumers receive adequate, timely and correct information,

c) they have the chance to develop their own marketing opportunities,

d) adequately upgraded and interconnected power distribution infrastructure is available and

e) if the necessary investments in technology and infrastructure pay off.

All of this is currently not the case.

4.4 Price signals and incentives for investment

4.4.1 The Commission stresses the importance of price signals, which should a) encourage consumers to play an active role in the energy market and b) create incentives for business to invest in new, low-carbon energy technologies. Such price signals are important, since the redesign of the current system will require large investment. With exchange prices currently at 30 or 40 EUR/MWh, which are of course advantageous for consumers insofar as they are actually passed on to them, investments cannot be re-financed, whether they be in new electricity production capacity or in storage technologies. Such exchange prices are currently only attainable because, among other things, a lot of electricity from power plants whose costs have been paid off is coming onto the market and high subsidies are being paid for electricity produced from coal, nuclear power and renewable energy. Today's exchange prices do not therefore reflect the real cost structure. Prices on the electricity exchange provide a distorted picture of actual energy costs due to subsidies and over-regulation. The correct signals for the large investments necessary for transforming the existing system can only be achieved with realistic and transparent prices.

4.4.2 The Commission communication pays too little attention to the implications of renewable energies' specific cost structure: in the case of zero marginal costs for renewable energy sources and electrical storage devices, wholesale markets no longer provide positive price signals. This has two implications. First, if wholesale prices provide no signals for the short-term allocation of electricity, these must be established through other arrangements, such as subsidies. Secondly, zero marginal costs require entirely new refinancing mechanisms for VRE and electrical storage devices.

4.4.3 Completely new approaches to pricing are needed in order to create an economic basis for the new network quality that is desired (including demand-side management and storage). One approach might be to redesign the regulatory elements of the final consumer price, particularly in relation to the electricity tax and transmission fees. Reorganising the financing of common costs in the energy system should be explored.

4.4.4 In order for prices to accurately reflect all costs of supplying electricity, the EESC also calls on the Commission to set about ensuring clear cost transparency as part of an EU-wide harmonised approach. The comparable costs identified should reflect the true overall costs of electricity generation, supply and disposal. These costs must also include negative external effects (e.g. CO_2 emissions) and subsidies. In this connection, the EESC draws attention to its

previous opinions[7] and statements and continues to strongly urge the Commission to make good on its promise to fully internalise in prices the overall costs (including externalities) of production up to and inclusive of disposal and to prohibit any direct or indirect competition over subsidies between different energy sources.

4.4.5 Aside from the actual costs, the framework should be designed in such a way that prices and service provision are given as much consideration as measures to avoid greenhouse gas emissions and the creation of the high-quality jobs that are needed. Prices must reflect the fact that there will be periods of high supply and low demand and, conversely, periods of high demand and more limited supply. Only if prices reflect the true reality of costs and if services and reductions are passed on to consumers in full will the Commission's plans for adjustment, demand-side management, more flexible power plants and storage come to fruition.

4.4.6 The EESC agrees with the Commission that regulated prices should be abolished. It is right to allow prices to be set freely – whether higher or lower. This enables the market to react as necessary and supports flexibility options such as demand-side management and storage devices. The EESC views the specifications included in the EU subsidy guidelines, according to which no subsidies should be paid when there are negative electricity prices, as a massive market intervention which unilaterally puts renewable energies at a disadvantage and benefits technologies which damage the environment and have high marginal costs. The current subsidies offset the poor performance of price signals, particularly as a result of the failure to internalise external costs. The European Commission could rectify this itself by reforming its guidelines on subsidies. The EESC expects the Commission to come up with a plan both to tackle the causes of negative prices and to make subsidies unnecessary in the future.

4.4.7 Among other things, the Commission document addresses the need to improve the emissions trading system. The EESC has issued an own-initiative opinion on the subject[8]. It stresses, however, that even with rigorous reform only some of the external costs of fossil fuels are factored into prices. The International Monetary Fund estimates fossil fuel subsidies in the EU at a total of USD 330 bn annually and describes these as inefficient, a brake on innovation, fiscally damaging, socially unjust and environmentally disastrous[9].

4.4.8 No new market set-up, however good it is, can compensate for the incorrect price signals and problems caused by this.

4.4.9 The Commission has on several occasions underlined the fact that renewable energy still faces obstacles which must be removed and that renewable energy sources must be promoted in accordance with market requirements and on a regional basis. The EESC agrees with this.

7 For example: OJ C 226, 16.7.2014, p. 1.

8 See OJ C 424, 26.11.2014, p. 46.

9 See IMF Working Paper "How Large are Global Energy Subsidies?" (WP/15/105), May 2015.

Unfortunately, however, the communication provides too few indications of what exactly the Commission has in mind to address this.

4.5 **Electricity trade**

4.5.1 The title of the communication is "a new energy market design". However, the paper focusses almost exclusively on the likely and – what it deems to be – necessary changes to electricity grids, markets and the trade in electricity. Chapter 5 even refers to a "consultative Communication on electricity market design".

4.5.2 This clear focus on the electricity grid and the electricity market does not properly address the main challenge actually facing European energy policy. Discussions need to take greater account of heating and transport, especially as there are likely to be substantially more links between these three areas in future, which will generate opportunities and reduce the number of problems (watchwords: Wind-Power to Heat, Power to Gas/Hydrogen, electro-mobility).

4.5.3 Convergence of electricity with heating and mobility is much easier in decentralised power systems than in a centralised system. Heat and mobility are by their very nature geared towards decentralised systems, meaning that they can be developed more easily as flexible options for electricity, provided that electricity can be marketed directly and in a decentralised way. The task of transforming the electricity market is therefore closely linked to the development of decentralised marketing options for electricity from VRE, which must also include the use of heat and mobility applications.

4.5.4 As regards the electricity market, the Commission puts forward numerous proposals on new structures in the existing trade system, primarily in the area of exchange-based trade. It goes without saying that greater diversity in the current energy trade at local, regional, national and European level is desirable and important. Under no circumstances, however, must everything be channelled through exchanges and traders. The Commission, however, has nothing to say about this.

4.5.5 If businesses, members of the public or any municipal utility companies were to decide today to use local and regional energy sources, in the form of jointly coordinated solar or wind installations, for example, then it should be much easier for them to use the generated energy directly without going through an exchange or traders and/or to market this energy directly without difficulty.

4.5.6 However, proposals on how emerging new forms of direct decentralised usage or local direct marketing (B to B) should be supported are few and far between. Equally, little attention is given to local forms of trade and changes to the type of energy (storage devices).

4.6 **Market systems and decentralised production**

4.6.1 The Commission communication makes reference to the integration of renewable energy into the electricity supply system, the need to "adapt market design to renewables" and to the creation of "a market fit for renewables". The EESC would like to make clear that, in its view, the main challenge is not the "integration" of renewable energies into the existing electricity supply system, even if renewable energies must play the key role over the long term.

4.6.2 The big technical challenge posed by the new energy system – which the Commission should get across more forcefully in the consultation process – is that in future electrical energy will no longer be centrally managed and flow from large power stations to consumers ("top-down approach"). Instead, new "production and supply islands" will emerge which must be interconnected ("bottom-up approach") and will be based on a large number of decentralised renewable energy sources – some of which will be variable –, with demand-side management (including storage) playing a key role.

4.6.3 In connection with the desire for a new range of stakeholders, this will mean that, alongside established (wholesale) trading structures, to some extent completely new decentralised forms of marketing and energy management systems will need to be established.

4.6.4 Waves of innovation in the IT sector, in production and storage technology, in the distribution system and in buildings technology have given rise to many such "production and supply islands", which even a few years ago seemed inconceivable. Individuals, businesses, associations (such as energy cooperatives) or municipalities (municipal utility companies) have created their own self-sufficient or partly self-sufficient solutions, which means they are much less dependent on traditional (and more flexible) supplies and trade flows. It is important to see the parallels between technical/technological and social/sociological developments. Both are pointing in the same direction, namely towards greater autonomy and self-regulating decentralised network units.

4.6.5 It begins at grassroots level: even now completely new structures are being developed, as the example of photovoltaic systems shows. Even five years ago, the use of PV electricity was not financially attractive for individuals. The electricity generated was simply fed into the grid. This situation has completely changed in the meantime. For financial reasons, rooftop solar panels are no longer used unless they are designed to ensure that the electricity they generate is fully utilised. This has led to increased demand for – and thus further development of – storage technologies. As a result, new PV installations help to relieve the burden on the grid and contribute to network balancing. In connection with, for example, the likely introduction of electro-mobility or the link-up with heat production, completely new, additional opportunities are opening up for decentralised energy generation and use.

4.6.6 However, consumers who produce and use their own electricity and wish to give any surplus to fellow residents or neighbours, for example, no longer "participate actively in the market"

in the traditional sense. Unfortunately, the Commission document does not describe how the framework should be specifically changed in order to promote such systems.

4.6.7 Nor does the communication adequately explain which specific obstacles renewable energies still face.

4.6.8 The EESC has on a number of occasions stressed that such new, decentralised energy systems provide opportunities – and not only in terms of public approval of the necessary structural changes and required investments. In terms of the regional economy, too, new prospects and new opportunities for value added may emerge outside the familiar systems. New technologies are making it possible to re-establish a link between regional development and energy policy and to comply more effectively with the enhanced safety standards for key infrastructure.

4.6.9 Increased local production and direct marketing should therefore be welcomed because they can reduce grid losses. On this point, the German Federal Network Agency explains that[10]: "It is obvious that the transformation of the energy system can best succeed by close cooperation among all those involved […] We should welcome approaches maximising energy consumption at the source. This has always been the principle of energy supply as it keeps grid losses to a minimum."

4.6.10 The Commission therefore needs to think about the trading system in terms of the desired energy infrastructure without attempting to make the necessary changes to energy infrastructure compatible with the current trading system.

4.6.11 Account should also be taken however of the experience of many countries where some market players, such as strategic investors, have cherry-picked sections of the energy production sector in order to just maximise their profits, whilst refusing to invest in security of supply, innovation and maintenance, passing these costs on to its customers.

4.7 Regional cooperation and development of European networks of regulators and network operators

4.7.1 It cannot be the objective of a new EU energy policy to have as many self-sufficient supply areas as possible, cut off from the interconnected system. The goal must be to create the highest possible number of effective, competitive "production and supply islands" which are in the proximity of consumers and to link these up to a European network. This should also be done bearing in mind that, while the EU's role is to ensure energy security, the actual task of supplying energy is the responsibility of local and regional authorities.

10 *Smart grids, smart markets – Eckpunktepapier der Bundesnetzagentur zu den Aspekten des sich verändernden Energieversorgungssystems* [Smart grids, smart markets: Key issues paper of the Federal Network Agency on the changing energy supply system], December 2011, p. 42.

4.7.2 These smaller grid units will emerge in large numbers if there are the right conditions and the right price signals. While they will produce an optimal economic balance between independent generation and consumption, these units must be linked up to neighbouring or overarching networks in order to make positive or negative control energy available.

4.7.3 Demand-side management will play a key role within these systems, but also more generally; the EESC sees storage technologies as part of this. Storage devices will assume an important role in the network, since from a technical point of view they will be both counter-cyclical consumers and producers.

4.7.4 National network operators, national regulators and the EU have an important role to play in creating and entrenching this broad range of stakeholders, ensuring a level playing field and coordinating systems. The energy supply systems of the future need a well-coordinated energy management system across Europe (comparable to the air traffic system, for example) which provides an overview of the state of all interconnected "production and supply islands" and, where necessary, any incidents which occur. This will enable an automatic or manual intervention to be carried to safeguard network stability and safety if exceptional circumstances arise.

4.7.5 This cooperation can only work through comprehensive and well-designed transmission and distribution networks. Particularly in view of the lack of price-based investment incentives mentioned above, this also entails making greater use of public funds, such as those of the Connecting Europe Facility, to create cross-border electricity networks, instead of focussing on gas and oil infrastructure, for example.

4.7.6 The EESC agrees with the Commission that system operators must "be neutral market facilitators to enable the development of market-based services to consumers". The Commission should spell out what it plans to change in order to achieve that objective and make clearer the role and responsibilities of distribution system operators as well as regulatory bodies.

Brussels, 20 January 2016.

The President
of the
European Economic and Social Committee

Georges Dassis