European Economic and Social Committee

TEN/598
The new electricity market design and potential impacts on vulnerable consumers (exploratory opinion)

OPINION

European Economic and Social Committee

The new electricity market design and potential impacts on vulnerable consumers
(exploratory opinion)

Rapporteur: **Vladimír NOVOTNÝ**

Consultation	Council of the European Union 14/03/2016
Legal basis	Article 304 of the Treaty of the Functioning of the European Union (TFEU)
Section responsible	Transport, Energy, Infrastructure and the Information Society
Adopted in section	06/10/2016
Adopted at plenary	19/10/2016
Plenary session No	520
Outcome of vote (for/against/abstentions)	146/66/43

1. Conclusions and recommendations

1.1 The EESC supports the basic idea of a new electricity market design. This is necessary in order to ensure a stable electricity supply system that contributes to the objectives of the European Energy Union. The medium to long-term transition of electricity production and marketing towards decentralised structures and the implementation of the targets set out in the EU Renewable Energy Directive require a completely new electricity market design. The EESC points in this connection to its opinions TEN/577, TEN/578 and TEN/583, in which it addresses this issue as well as the future role of consumers, prosumers and new market participants.

1.2 In the EESC's view, "smart" distribution grids together with "smart meters" and storage technologies will also form a significant part of the new electricity market design in the medium and long term. These "smart" grids and control and storage technologies can therefore produce positive effects both in terms of optimising electricity consumption and saving electricity.

1.3 The EESC draws attention to the potential of small producer/consumers ("prosumers"), but also of other new models such as energy cooperatives; the latter can help reduce energy poverty. In order to integrate these prosumers fully into the energy market, the Committee considers it essential, among other things, to remove administrative barriers and any other unnecessary obstacles that may hinder their activities, and to ensure they have access to distribution networks on the basis of the prevailing market conditions with regard to financing the operation of these networks.

1.4 The EESC feels that the use of smart controls in "smart" households is also an important element of the new electricity market design. Their use will lead to an increase in the active role of households as part of their full integration into the new electricity market design and to reduced risks of energy poverty. These notable changes will be facilitated by incentivising training programmes aimed at large sections of the population, as well as by supporting their implementation among vulnerable households and other vulnerable customers in the energy market, such as small and medium-sized enterprises.

1.5 The EESC is satisfied that all the anticipated changes in the new electricity market design are subject to the condition that the new market will provide the right short-term price incentives (price) and long-term price signals (cost) enabling and supporting extensive investment activity in the EU electricity sector. This also means that prices must reflect the full true cost, i.e. that "external" costs are also factored in.

1.6 Developments on electricity markets in recent years have led to a considerable fall in wholesale market prices; however, small consumers and SMEs have not seen the benefit of this yet, their prices having gone up rather than down.

1.7 Through a smart electricity market design, together with strategic investments in systems that also specifically include socially less advantaged citizens, e.g. in the form of energy cooperatives, it will in future be possible to combine energy policy, social policy and regional value creation.

1.8 Policy must also provide a clear answer to the question of who should, may and/or can produce electricity as part of future decentralised production. This is also crucial for solving the problem of energy poverty.

1.9 An example of this is the Polish Podlaskie Voivodeship, where a funding scheme for small PV systems is currently being launched. Thanks to an investment grant of 60% along with the plan to introduce a net metering system in Poland, energy costs for the country's consumers can be halved.

2. Introduction

2.1 In a letter dated 14 March 2016 the Slovak Presidency of the EU Council asked the European Economic and Social Committee to draw up an opinion on the social dimension of the new electricity market design as part of a process of social and economic development.

2.2 The Slovak Presidency notes in its request that the new electricity market design brings opportunities for consumers if it offers a more proactive way for them to interact with the market. Nevertheless, possible threats to socially vulnerable consumers must also be taken into account, alongside the anticipated impact of the possible increased electricity prices on the competitiveness of EU industry.

2.3 The EESC has examined the expected development of the energy market in detail in a number of its previous opinions[1] [2] and considers that the conclusions and recommendations that it has adopted are still relevant. The present opinion therefore focuses on the risks and opportunities for socially vulnerable groups associated with the new electricity market design and on the specific manifestations of energy poverty that are related to the availability of electricity.

3. The vision of the new energy market design

3.1 The main task of the new electricity market design, which is based on principles of sustainability, must be to ensure a secure supply of electricity for all consumers at affordable and competitive prices.

3.2 The EU Energy Union framework strategy is focused on the following key strategic objectives:

- energy security, solidarity, trust;
- a fully-integrated internal energy market;
- the contribution that energy efficiency can make to the moderation of energy consumption;
- decarbonising the economy; and
- an energy union for research, innovation and competitiveness;

3.3 The main features of the framework strategy for the electricity market are:

- transition towards a low-carbon energy system;
- cost-effective integration of intermittent renewable resources;

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1 OJ C82, 03.03.2016 p.13

2 OJ C 424, 26.11.2014 p.64

- abandoning traditional power plants in favour of decentralised production of electricity using renewable resources;
- changing role of consumers in the electricity market;
- increasing security and reliability of electricity supply.

3.4 The changing role of consumers in the energy market should play a significant role in the new electricity market design[3].

4. Energy poverty and how to prevent it

4.1 In the recent past the EESC has adopted a series of opinions on the issue of energy poverty, in particular opinion TEN/516 – For coordinated European measures to prevent and combat energy poverty (rapporteur: Mr Coulon, 2013)[4], which was examined closely at national level, for example by the Economic and Social Council of Bulgaria in its opinion "Measures to overcome energy poverty in Bulgaria" (ESC/3/030/2015). The EESC considers that the recommendations and conclusions of these documents are still relevant and does not intend to reiterate them here.

4.2 The issue of energy poverty is also addressed in opinions TEN/578 on Delivering a New Deal for Energy Consumers and TEN/583 on Prosumer Energy and Prosumer Power Cooperatives: opportunities and challenges in the EU countries.

4.3 Energy poverty is characterised by limited access to energy sources due to absent or badly functioning energy infrastructure or an inability to pay for the provision of energy commodities. In cases where there is a risk of non-functioning infrastructure, capacity needs to be increased or new capacity created in order to ensure the security and reliability of energy supply. Even network operators are realising that decentralised generating units, such as PV systems in private homes, can help to stabilise regional supply and often also weak regional networks.

4.4 Even if energy poverty is often looked at from the point of view of private end users, it is important to note that some small and medium-sized enterprises are also often exposed, with all the ensuing consequences for their competitiveness.

4.5 Energy poverty is most often related to the ability to heat homes; however, in southern EU countries it can also refer to the availability of air conditioning in hot summer months. Energy poverty is expressed specifically in the inability to pay electricity bills. In such cases, approaches are used that are based on direct or indirect support for consumers faced with energy poverty.

4.6 Direct support to consumers is provided primarily in the form of social benefit programmes, such as direct compensation of payment in monetary or non-monetary forms, and based on the national social security system at Member State level.

4.7 Vulnerable consumers are defined differently in individual Member States according to the specific situation and relevant social system in each Member State.

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3 OJ C82, 03.03.2016 p.22

4 OJ C 341 – 21.11.2013, pp. 21-27

4.8 Indirect support is provided via social or special tariffs. Social tariffs are currently provided in ten Member States; eight Member States have defined the status of vulnerable customers; and a total of sixteen apply regulated electricity prices to their own internal markets. The EESC has expressed its clear opposition to this kind of regulated prices (see TEN 578)

4.9 However, it will be possible to limit the risks of energy poverty by adopting a series of measures that are compatible with the new electricity market design. This will include the following elements in particular:

- greater availability of information on the electricity prices of individual suppliers;
- removal of obstacles to changing energy service providers;
- greater competition and transparent offers of comprehensive energy services;
- transparent contracts, prices and energy bills;
- training and educating customers with a high level of active participation in their municipalities;
- removal of unfair trading practices and coercive procedures for concluding energy supply contracts;
- savings in energy consumption and availability of information on own consumption, broad availability of smart metering and control devices in homes and for other small consumers.
- supporting thermal insulation of flats and houses, renovating and restoring old buildings in order to reduce energy loss;
- supporting incentive schemes and training programmes for vulnerable customers;
- supporting local initiatives in the fight against energy poverty;
- prohibiting excessively high costs for vulnerable customers;
- increasing efficiency and reliability of electricity supply.

4.10 Developments on electricity markets in recent years have led to a considerable fall in wholesale market prices; however, small consumers and SMEs have not seen the benefit of this yet, their prices having gone up rather than down.

4.11 The EESC points out that small producer/consumers ("prosumers") can also play a distinct role in reducing energy poverty. In order for them to be integrated successfully into energy markets, it is therefore essential to remove all administrative barriers as quickly as possible and enable them to access networks while at the same time safeguarding market conditions and complying with quality standards for electricity supplies.

4.12 The EESC believes that even if the above suggestions are implemented in accordance with market regulations, most of the burden of fighting energy poverty and its consequences will continue to be shouldered by social systems within individual Member States, since these constitute the only suitable alternative from the point of view of the market.

4.13 Through a smart electricity market design, together with strategic investments in systems that also specifically include socially less advantaged citizens, e.g. in the form of energy cooperatives, it will in future be possible to combine energy policy, social policy and regional value creation.

4.14 Policy must also provide a clear answer to the question of who should, may and/or can produce electricity as part of future decentralised production This is also crucial for solving the problem of energy poverty.

4.15 Renewable energies open up completely new possibilities for tackling energy poverty as a social problem. For example, a study of the European Commission's Joint Research Institute concluded as early as 2014 that 80% of Europe's population could potentially produce their electricity – using PV systems – more cheaply than the cost of drawing it from the grid. One problem is that a section of the population does not have a rooftop or land to accommodate this kind of installation. Expanding the definition of the term "prosumer" and supporting communal installations (energy cooperatives) could provide a remedy here.

4.16 In a study recently published by CE Delft it is estimated that by 2050 up to 83% of households will be able to produce enough electricity themselves to meet their needs.

4.17 However, a significant problem is the fact that socially less advantaged citizens in particular do not have the money to make the necessary investments. The "disadvantage" of renewable energies is that they require a relatively large initial investment, although the running costs are very low (it goes without saying that the sun and wind are free). Nevertheless, this problem can also be tackled through policy, including by making the relevant strategic investments.

4.18 An example of this is the Polish Podlaskie Voivodeship, where a funding scheme for small PV systems is currently being launched. Thanks to an investment grant of 60% along with the plan to introduce a net metering system in Poland, energy costs for the country's consumers can be halved.

4.19 In this connection, the Committee also urges the Commission, the Council and the EP to devote greater attention to medium and longer term developments that could be positive for consumers, such as the example of electro-mobility. The number of electric cars on the market is expected to increase over the next 20-30 years. An electric car needs approximately 14 kWh per 100 km, equal to EUR 3.50 at 0.25 cents/kWh. A 100km journey in a car with a combustion engine – with a consumption of 7l/100km and at EUR 1.20/litre – costs EUR 8.40. A PV system with approximately six modules is sufficient to produce the amount of electricity required for an electric car to travel 10 000 km; with an investment of around EUR 3000 it would be possible to power this kind of car (from own production) for 20 years. The financial aspects – both for the public and also potentially for the regions – of the transition to electro-mobility have not been sufficiently discussed to date.

Brussels, 19 October 2016

Georges DASSIS
The President of the European Economic and Social Committee

APPENDIX
to the opinion
of the
European Economic and Social Committee

The following Counter Opinion was rejected in favour of the Section Opinion adopted by the assembly but obtained at least one-quarter of the votes cast:

1. **Conclusions and recommendations**

1.1 The EESC expects that the new electricity market design proposed by the European Commission as part of the autumn/winter energy package will lead to the full integration of renewable sources in the common electrical energy market, which is an important tool for fulfilling the EU's commitments with regard to protecting the climate.

1.2 This proposal must aim to guarantee the long-term reliability and security of electricity supplies, leading to the removal of existing market distortions as well as introducing electricity prices that ensure the competitiveness of the European economy and will also be stable and accessible for low-income groups.

1.3 The EESC is convinced that the new electricity market design in its final form will reduce or eliminate the risks of a potentially negative impact on energy poverty.

1.4 The EESC considers that the process of transforming the electricity market from its current form into a new market design will potentially have an impact upon vulnerable groups of energy consumers, in particular the citizens.

1.5 From the EESC's point of view, the risks involved in transforming the energy market are linked in particular to the need to fundamentally strengthen the 220/440 kW national transmission networks and their reciprocal capacity links, broaden the role of distribution networks to incorporate the roles that are currently fulfilled by transmission networks alone (for example, safeguarding grid stability) and convert them to "smart" systems, address the issues regarding high-capacity electricity storage, decentralise electricity production, connect decentralised production to distribution networks and change the nature of the role and behaviour of electricity consumers in the market.

1.6 The above-mentioned transformation processes are long-term; it will take decades to put them in place, not to mention heavy investment that is expected to reach several hundred billion euros as well as other comparable costs linked to the development of new, often as yet unknown technical solutions.

1.7 With regard to the full implementation of market principles, a significant proportion of these costs will be recuperated via regulated elements of the electricity price, which in the course of transformation may lead to potentially negative impacts driving vulnerable groups into energy poverty.

2. Introduction

2.1 In a letter dated 14 March 2016 the Slovak Presidency of the EU Council asked the European Economic and Social Committee to draw up an opinion on the social dimension of the new electricity market design as part of a process of social and economic development.

2.2 It was requested that the factors that influence the electricity market be analysed more broadly and the influence that they have on energy price change in the EU should be assessed, in order to ensure that this change is long-lasting not only from an environmental point of view (protecting the climate), but also from an economic and social point of view, and particularly with regard to the security and availability of electricity supplies.

2.3 The Slovak Presidency notes in its request that the new electricity market design brings opportunities for consumers and offers a more proactive way for them to interact with the market. Nevertheless, possible threats to socially vulnerable consumers must also be taken into account, alongside the anticipated impact of the increased electricity prices on the competitiveness of EU industry.

2.4 The EESC has examined the expected development of the energy market in detail in a number of its previous opinions and considers that the conclusions and recommendations that it has adopted are still relevant. The present opinion therefore focuses exclusively on the risks posed to socially vulnerable groups by the new electricity market design and on the specific manifestations of energy poverty that are related to the availability of electricity.

3. The key problems in the current electricity market in the EU and the risks associated with its medium-term development

3.1 The key problems in the current electricity market in the EU can be summarised as follows:

- fundamental distortion of the electricity market;
- insufficient investment into construction of new controllable electricity sources;
- neglected development of transmission infrastructure compared with the development of renewable resources;
- reduction in and threats to the security and reliability of electricity supply;
- lack of effective coordination of national energy policies, even though these should be collaborative and coordinated at the level of transnational regions, based on the real conditions of existing markets;
- increased distortion of the electricity market as a result of inefficient market integration.

3.2 Another significant negative factor behind the non-functioning electricity markets in the EU is the fact that certain key renewable resources are geographically far away from areas of high electricity consumption. This is combined with insufficient transmission capacities at the national level. Unmanaged electricity generation, particularly in wind farms, creates surge situations which cause electricity overflows to neighbouring states, which in turn leads to

critical conditions on the transmissions systems and a high risk of the systems collapsing (blackout).

3.3 In many Member States, capacity mechanism systems have been introduced in response to the intermittent supplies from renewable resources, along with discriminatory elements, such as a focus on pre-selected technologies for electricity generation or the exclusion of cross-border supplies. The new electricity market model should take into account and address the existing shortcomings and it is therefore imperative that the quality of the EU's electricity infrastructure is improved.

3.4 Member States' transmission systems do not provide operative cover of local shortfalls in regions that lie between Member States; further integration of energy markets is therefore difficult in these circumstances. In Europe there are a number of regional electricity markets that do not cooperate with each other and whose activity is not sufficiently coordinated.

3.5 They are gradually being integrated in accordance with the legislation in force (network codes). There are currently considerable differences between these markets, both in terms of operational safety and prices for the supplies and services provided. This integration process is absolutely necessary, although it is becoming clear that it will be very difficult.

3.6 A number of Member States, in response to the problems of integrating intermittent renewable resources into energy systems, resort to capacity mechanisms, which ensure the reliability and availability of electricity delivery at times when renewable resources are out of operation as a result of their dependence on natural conditions. Capacity mechanisms are applied by means of capacity markets or strategic reserves. Capacity markets carry the risk of distorting the market, whereas strategic reserves are neutral to the energy market and should therefore be preferred as a solution from the point of view of the market.

3.7 The outlook for the energy situation over the next twenty years is an important factor that will influence the form that the new electricity market design will ultimately take, as well as, naturally, the impact upon vulnerable customers. With this in mind, the following factors need to be taken into account:

3.7.1 Given the developments of the past decade, the energy situation in the EU requires extremely urgent solutions founded on objective strategic thinking. The reliability of sustainable supplies of electricity at a reasonable/affordable price cannot remain mere rhetoric, but must be firmly based on all three basic pillars of sustainable development. Renovating the networks alone will require around USD 655 billion.

3.7.2 In the EU, thermal installed capacities of higher than 150 GW will reach the end of their lifespan between 2016 and 2025. These constitute one quarter of the current thermal capacity of the EU. To ensure that the electricity production system remains adequate and that the supply to consumers is maintained, 100 GW of new thermal capacity with stable output must be built. It is important to bear in mind that by 2035 fossil fuels will still account for 200 GW, even if the estimates regarding technological development in the fields of energy efficiency and electricity storage are proved correct.

3.7.3 As things stand with the electricity market, however, it is not possible to invest in this kind of production capacity, and securing energy security will require a fundamental systemic change in order for market mechanisms to be strictly applied, and for there to be a favourable impact on prices for end users.

The counter-opinion was rejected by 141 votes against, 91 for with 22 abstentions.