



## The EU Winter Package Briefing Paper

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# Clean energy for all Europeans

## Clean energy for all Europeans

On 30 November 2016 the Commission published its so-called ‘Winter Package’ of eight proposals to facilitate the transition to a ‘clean energy economy’ and to reform the design and operation of the European Union’s electricity market.<sup>1</sup> This bumper package of proposals can be grouped into three categories: proposals amending existing energy market legislation; proposals amending existing climate change legislation; and proposals for new measures. In EU jargon a full revision of an existing measure is known as a ‘recast’.

The first category of measures is aimed to bringing about a new market design – also known as the market design initiative (**MDI**) and includes a new directive amending and repealing Directive 2009/72 (**E-Directive**)<sup>2</sup>, a new regulation on the internal electricity market, amending and repealing Regulation 714/2009 (**E-Regulation**)<sup>3</sup>, as well as a new regulation repealing Regulation 713/2009 on the ACER (**ACER Regulation**)<sup>4</sup>, usually referred to as the third package of electricity market liberalisation measures. Certain measures are intended to enter into force and to apply as from 1 January 2020, while for others, such as the recast ED, no timetable for transposition has yet been indicated.

The second category of measures aims to better align and integrate climate change goals into this new market design. This category includes a fully revised Renewables Directive 2009/28 (**RED**)<sup>5</sup> and a fully revised Energy Efficiency Directive 2012/27 (**EED**)<sup>6</sup>, both to enter into force on 1 January 2021. Lastly, the proposal for a new regulation on risk-preparedness in

the electricity sector (the **Risk Regulation**)<sup>7</sup> and a proposed regulation on Governance of the Energy Union (the **Governance Regulation**)<sup>8</sup> (both to enter into force on 1 January 2021) are entirely new measures.

The publication of these drafts – which amount to more than 1000 pages of dense legal text – marks the beginning of a long and undoubtedly complex negotiating process. It is more than likely that the final versions to be eventually adopted by the Council and the European Parliament will look very different from these latest proposals. At the same time, the publication of the Winter Package marks an important step change in the organisation as well as the regulation of the EU electricity market and raises a number of novel legal issues and challenges. This Briefing Paper provides an initial overview of the interaction between the different proposals and highlights some of the major issues that arise in the different segments of the energy value chain.

<sup>1</sup> The Winter Package consists of a package of legislative measures to facilitate the transition to a clean energy economy. The overall objectives of each proposed measure are briefly outlined in the Commission Communication ‘Clean Energy for all Europeans’, COM (2016) 860 final.

<sup>2</sup> [http://ec.europa.eu/energy/sites/ener/files/documents/1\\_en\\_act\\_part1\\_v9.pdf](http://ec.europa.eu/energy/sites/ener/files/documents/1_en_act_part1_v9.pdf)

<sup>3</sup> [http://ec.europa.eu/energy/sites/ener/files/documents/1\\_en\\_act\\_part1\\_v7.pdf](http://ec.europa.eu/energy/sites/ener/files/documents/1_en_act_part1_v7.pdf)

<sup>4</sup> [http://ec.europa.eu/energy/sites/ener/files/documents/1\\_en\\_act\\_part1\\_v8\\_0.pdf](http://ec.europa.eu/energy/sites/ener/files/documents/1_en_act_part1_v8_0.pdf)

<sup>5</sup> [http://ec.europa.eu/energy/sites/ener/files/documents/1\\_en\\_act\\_part1\\_v7\\_1.pdf](http://ec.europa.eu/energy/sites/ener/files/documents/1_en_act_part1_v7_1.pdf)

<sup>6</sup> [http://ec.europa.eu/energy/sites/ener/files/documents/1\\_en\\_act\\_part1\\_v16.pdf](http://ec.europa.eu/energy/sites/ener/files/documents/1_en_act_part1_v16.pdf)

<sup>7</sup> [http://ec.europa.eu/energy/sites/ener/files/documents/1\\_en\\_act\\_part1\\_v7.pdf](http://ec.europa.eu/energy/sites/ener/files/documents/1_en_act_part1_v7.pdf)

<sup>8</sup> [http://ec.europa.eu/energy/sites/ener/files/documents/1\\_en\\_act\\_part1\\_v9\\_759.pdf](http://ec.europa.eu/energy/sites/ener/files/documents/1_en_act_part1_v9_759.pdf)

**BOX 1: LIST OF LEGISLATIVE PROPOSALS**

- Proposal for a recast of the Internal Electricity Market Directive
- Proposal for a recast of the Internal Electricity Market Regulation
- Proposal for a recast of the ACER Regulation
- Proposal for a Regulation on Risk-Preparedness in the Electricity Sector and Repealing the Security of Supply Directive
- Proposal for a recast of the Renewable Energy Directive
- Proposal for a revised Energy Efficiency Directive
- Proposal for a revised Energy Performance of Buildings Directive
- Proposal for a Regulation on the Governance of the Energy Union

# Why a new market design for the EU electricity sector?

The Commission, backed by the Council, has embraced an ambitious plan for the European Union's electricity market. It will be a major instrument in realising the transition to a low carbon economy by 2050. This means that EU citizens as well as industrial users should gradually switch to electricity not only as a source of light, heating and cooling but also transportation. That electricity should in turn be generated or produced from low carbon sources, including non-fossil fuels such as hydro, solar and wind energy but also biofuels, biomass and biogases. As before, nuclear energy is not included in the definition of 'energy from renewable sources' in Article 2 of the recast RED.

The rapidly increasing share of renewable energy sources (**RES**) in electricity generation (targeted to be at least 50% by 2030),<sup>9</sup> together with more decentralised production and self-consumption, has also called into question traditional electricity market models, on which the EU's current 'third package' of legislation is based. Increased reliance on renewable energy sources such as wind and solar poses major technical as well as economic and, in turn, legal challenges for the EU institutions and the Member States. A decentralised market has more players and creates new roles such as aggregators and 'prosumers'. At the same time Europe's electricity market is now

better interlinked through interconnecting networks. This has both advantages and disadvantages.

Greater intermittency in supplies – if the wind does not blow or the sun does not shine – has created a need for more flexibility and responsiveness both on the supply and the demand side. The market needs to price the costs involved in providing that flexibility and reflect them in the overall price of energy and/or energy services. Flexibility services can and should be provided across an interlinked market.<sup>10</sup> If the market does not function properly Member States will be tempted to take unilateral measures to ensure generation adequacy. These so-called capacity remuneration mechanisms, if not properly designed, can have major adverse consequences on the functioning of the internal electricity market, as the Commission has established in its final report on the Sector Inquiry on Capacity Mechanisms. These types of mechanisms can distort market prices, favour certain actors above others, and create new barriers to trade. This document was published on the same day as the Winter Package.<sup>11</sup>

Even where markets and systems function well, however, the risk of an electricity crisis cannot be excluded and the consequences of such crises are likely

<sup>9</sup> European Council (23 and 24 October 2014), Doc SN79/14.

<sup>10</sup> See also the Commission's memo: [http://ec.europa.eu/energy/sites/ener/files/documents/technical\\_memo\\_marketsconsumers.pdf](http://ec.europa.eu/energy/sites/ener/files/documents/technical_memo_marketsconsumers.pdf)

<sup>11</sup> Com (2016) 860 final

to be felt beyond national borders, especially in interlinked markets. Crisis prevention and management cannot be considered a purely national responsibility.

## Why new or recast instruments are needed

The combined challenges of stimulating competition on EU electricity markets in the short term but encouraging and coordinating investment in generation capacity, systems and network infrastructure in the longer term, calls for a new market design and with it an overhaul of the existing EU legislation. This also requires a review of the governance of the EU electricity market. State intervention in the electricity sector is unlikely to fade away even if energy markets can function more efficiently in the short term. Moreover it is a central assumption of the Winter Package that markets cannot (reformed or otherwise) be relied upon to deliver targets on RES production by a certain deadline, otherwise those very targets would not be necessary. The Clean Energy transition package is predicated on a considerable degree of public intervention but, in contrast to the measures it seeks to replace, it has high aspirations for the effective co-ordination of that intervention at Union level.

As the Commission's accompanying press statement announced, the Winter Package should deliver 'clean energy for all Europeans'. It points out that the Commission proposals touch on all energy-related sectors, including electricity generation, heating and cooling and transport, but also agriculture and land use, and clear the way for a more competitive, modern and cleaner energy system. The Commission considers that while its previous three legislative packages have broadly delivered on their aims, they are no longer fully fit for purpose in a changing electricity market nor can the old approach realise the 'clean energy transition' to a low carbon economy by 2050.

### Legal Basis

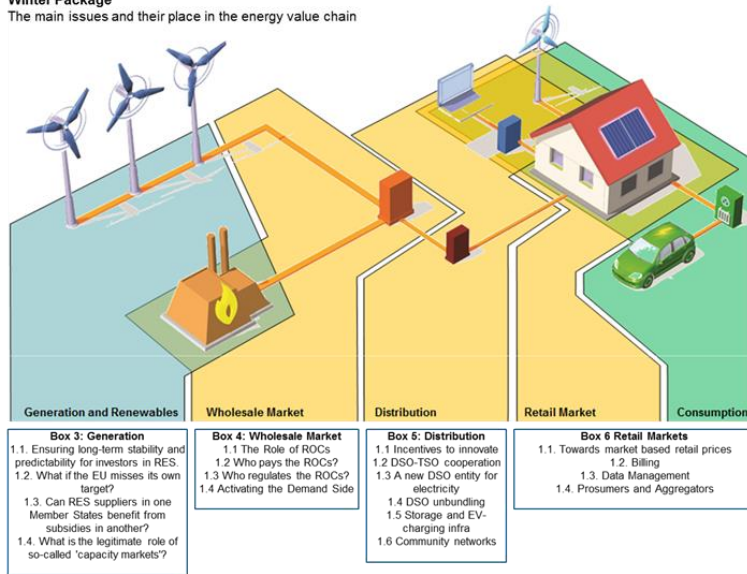
The introduction of a new market design across 28 national markets (27 if the UK does not participate) is an ambitious enterprise and is not without legal complexity. The new proposals are based on Article 194 of the TFEU – the energy title introduced by the Lisbon Treaty in 2009. That Article confirms that energy policy issues are a shared competence between the EU and the Member States. In addition the somewhat obscure text of Article 194(2) may be interpreted to allow Member States to unilaterally determine their own 'energy mix', irrespective of the proposed RES targets.

## The issues

Given the height of the EC's ambitions and the scope and complexity of the new proposals, it is impossible to analyse each of the proposed measures in full here. The aim of this Briefing Paper is to highlight some of the main challenges for specific actors in the energy value chain (see *Box 2*): given the density and complexity of the proposals, only key provisions will be singled out here for comment.

**BOX 2: ENERGY VALUE CHAIN****Winter Package**

The main issues and their place in the energy value chain



# Generation

## Promoting renewables and (maybe) keeping fossil fuelled plant on line (capacity markets)

On the basis of previously adopted binding national targets, Member States are required by the current RED to boost the share of RES by 2020 to 20% of final energy consumption. This now becomes the baseline for each Member State as of 2020. A new EU-wide target of 27% (as opposed to individual national targets) has been set for 2030. Although often criticised for its lack of ambition, it is generally recognised that continuing state financial support will still be required to meet this target. But non-coordinated state support is a threat to the very core of the internal market ideal. Unlike its predecessor of 2009, the recast RED takes Article 194(2) TFEU as its legal basis. Unlike its predecessor it contains very few mandatory requirements – one notable exception being the proposed Article 5 on the mandatory opening of support scheme to generators based in other Member States.

We have identified the following challenges for further comment:

**BOX 3: GENERATION**

- Ensuring long-term stability and predictability for investors in RES.
- What if the EU misses its own target?
- Can RES suppliers in one Member State benefit from subsidies in another?
- What is the legitimate role of so-called ‘capacity markets’?

### Long-term stability for investors

The draft RED<sup>12</sup> complements the MDI by introducing different measures aimed at attracting investments in the medium and long term and by reducing administrative burdens on RES producers, including so called “prosumers”. Investments needed in generation from renewable energy sources to meet the targets for 2030 (i.e. those between 2015-2030 are estimated at Euro 1 trillion). Strengthening investors’ certainty is

<sup>12</sup> [http://ec.europa.eu/energy/sites/ener/files/documents/1\\_en\\_act\\_part1\\_v7\\_1.pdf](http://ec.europa.eu/energy/sites/ener/files/documents/1_en_act_part1_v7_1.pdf)

crucial and is one of the specific objectives of the proposal. But investment levels in renewables have dropped by some 60% compared to 2011 – a drop not just caused by the reduction in technology costs. Retroactive changes to national support schemes in several Member States have also undermined investor confidence. The Commission has stated that this “*highlights the need to reflect on how investors’ legitimate interests can be better protected*”.<sup>13</sup> Two provisions are aimed at this objective.

#### Article 6:

“Without prejudice to adaptations necessary to comply with State aid rules, Member States shall ensure that the level of, and conditions attached to, the support granted to renewable energy projects are not revised in a way that negatively impacts the rights conferred thereunder and the economics of supported projects.”

#### Article 15(3):

“Member States shall ensure that investors have sufficient predictability of the planned support for energy from renewable sources. To this aim, Member States shall define and publish a long-term schedule in relation to expected allocation for support, covering at least the following 3 years and including for each scheme the indicative timing, the capacity, the budget expected to be allocated, as well as a consultation of stakeholders on the design of the support.”

Finally Article 15(9) requires Member States to remove administrative barriers to corporate long-term power purchase agreements (PPAs) to finance renewables and facilitate their uptake.

Certain privileges will disappear, however, including priority dispatch for new RES installations as well as exemptions from balancing charges..

### What happens if the EU targets are missed?

Article 5(2) of the revised RED states that Member States shall collectively ensure that the sum of their contributions must add up to the Union-wide target of at least 27% by 2030. Detailed reporting on national efforts is key here.

The proposed Governance Regulation brings together the scattered planning and reporting obligations from

the main pieces of EU legislation, across energy climate and other related policy areas. It streamlines the more than 50 existing individual planning, reporting and monitoring obligations in the energy and *climate acquis* (integrating 31 and deleting 23) into an integrated national plan, which in turn will cover the five dimensions of the Energy Union (energy security, energy market, energy efficiency, decarbonisation and R&D).

Article 3 of Chapter 2 sets out the obligations for Member States to produce a national integrated energy and climate plan for the period 2021 to 2030 by 1 January 2019, and for subsequent ten year periods.<sup>14</sup> Annex 1 provides a binding template for the plans. The integrated plan will cover binding national targets for GHG emissions, commitments for land use reductions, national contributions to the EU binding target for RES consumption, indicative national energy efficiency targets to meet the EU binding energy efficiency target of 30% as well as national objectives on the diversification of energy sources and the supply and reduction of energy import dependency.

Chapter five deals with Commission monitoring and assessment, including biennial progress reports and follow up (Articles 16 to 22). If, having assessed these complex plans, the Commission establishes that the Union trajectory is not met collectively or that national baselines are not respected, then Article 27(4) of the Governance Regulation shall apply. This provision sets out several options for Member States to increase their contributions to the RES target. One such option – which is likely to prove controversial – is a requirement to make a financial contribution to a financing platform to be set up at Union level to contribute to renewable energy projects, managed directly or indirectly by the Commission.

### Opening up national support schemes

Article 5 introduces the mandatory opening of national support schemes to RES installations located in other Member States even if this is only on a gradual basis. At least 10% of newly supported capacity must be opened up annually between 2021 and 2025, and at least 15% for the period 2026 to 2030. It is up to the individual Member State to decide on the mechanics of opening its schemes up to cross-border participation. The allocation of RES benefiting from different national contributions shall be the subject of a

<sup>13</sup> (at p57 SWD) - [http://ec.europa.eu/energy/sites/ener/files/documents/1\\_en\\_impact\\_assessment\\_part1\\_v4\\_418.pdf](http://ec.europa.eu/energy/sites/ener/files/documents/1_en_impact_assessment_part1_v4_418.pdf)

<sup>14</sup> Draft national plans should be submitted by 1 January 2018

co-operation agreement on the cross-border disbursement of funding.

Stimulating increased cross-border participation in national support schemes is controversial – taxpayers may be reluctant to fund projects in another Member State. It also requires further harmonisation measures. The new proposal contains complex and detailed rules to facilitate the mutual recognition of guarantees of origin, for example.

## Capacity market mechanisms

The final Report on the Sector Inquiry on Capacity Mechanisms was published to coincide with the publication of the Winter Package.<sup>15</sup> It presents the main findings of the Commission's first sector-wide inquiry under the new Procedural Regulation<sup>16</sup> for the application of the EU State Aid Regime.<sup>17</sup> The inquiry was launched in April 2015. In response to threatened shortages of electricity several Member States have, or plan to introduce, various types of capacity mechanisms to remunerate electricity generators (and in some cases, demand response providers). These mechanisms often fall to be assessed under Article 107(1) of the TFEU and the Energy and Environmental Aid Guidelines (EEAG) of 2014.<sup>18</sup> Although the EU as a whole is currently in a situation of overcapacity, some countries may well face genuine security of supply challenges. Large numbers of existing power plants will be phased out in the near future, as they cannot meet EU emission and environmental standards. Declining demand, lower prices and lower utilisation rates have also reduced the profitability of conventional, fossil-fuelled generation. Nevertheless flexible conventional technologies are still key to providing adequate reliability to compensate intermittent, RES-based generation. However, low levels of expected profitability may deter future investment and this in turn threatens security of supply in the longer run. The Sector Inquiry aimed to verify whether well functioning markets are able to trigger sufficient investment in capacity to meet future demand and to identify the market and regulatory failures that hinder investment.

The Sector Inquiry indeed identified a number of market failures some of which are expected to be dealt with by the MDI. In the meantime if markets do not

provide the right signals and do not deliver high prices at times of scarcity, investment will not take place. In the absence of adequate tools to stimulate price responsive demand by final consumers, national authorities often cap retail prices. National rules for managing balancing markets may in practice cap the price in forward markets. Other forms of price distortion caused from a failure to delineate bidding zones in an appropriate manner undermine cross-border trade and reduce incentives to invest in new interconnector capacity.

Finally even if these market failures are removed, and it is the goal of the MDI to address all the above issues, investors may still be reluctant to build new capacity owing to uncertainty about future market developments, including the impact of the increasing share of RES in the market, and potentially, extreme price volatility. If the introduction of capacity mechanisms is to be justified, and in accordance with the MDI, it must be based on a rigorous, objective and thorough assessment of the extent and nature of the potential threat to system adequacy. This is to be based on a coordinated European resource adequacy assessment and on a harmonised method as well as commonly defined reliability standards.

The Final Report also analyses how Member States should 'get the design right' if they choose to set up a capacity scheme. One element of this exercise is ensuring adequate cross-border participation. As the Final Report concludes "*capacity mechanisms must be open to explicit cross-border participation in order to minimise distortions to cross-border competition and trade, ensure incentives for continued investment in interconnection and reduce the long-term costs of European security of supply*".<sup>19</sup>

<sup>15</sup> Com (2016) 752 final

<sup>16</sup> Article 25 of Regulation 2015/1589 OJ L248/9.

<sup>17</sup> Articles 107 and 108 TFEU

<sup>18</sup> OJ 2014 L200/1

<sup>19</sup> See p. 18



## Cross-border participation in capacity mechanisms

Article 21 of the E-Regulation requires that capacity providers located in another Member State shall be able to participate in market-wide capacity mechanisms. In order to realise this objective complex technical rules must be developed in cooperation with the relevant TSOs. Common methodologies are necessary to calculate, *inter alia*: whether an interested capacity provider can provide the technical performance as required by the relevant capacity mechanism; the maximum available entry capacity for the participation of foreign capacity; a method to share revenues; and a system to determine when a so-called non-availability penalty is due and can be collected. It will fall to ENTSO-E – the body representing European Transmission System Operators – to devise and submit these various methodologies to ACER – the Agency for the Cooperation of European Regulators. Within three months from the date of the receipt of ENTSO-E’s proposal, ACER may either approve it or amend it.<sup>20</sup>

Convincing Member States to rely on surplus capacity availability in neighbouring Member States who may also in turn face shortages may prove difficult. Complex rules will be required to ensure that cross-border participation can be realised to its fullest extent.



<sup>20</sup> (see Article 22 E-Regulation)

# Wholesale markets – the ambitions for a new market design

The Commission maintains that an ambitious new energy market design is needed not only to reflect the changing technical features of electricity production and systems but also to “*meet consumers’ expectations, deliver real benefits from new technology, facilitate investments, notably in renewables and low carbon generation, and recognise the interdependence of European Member States when it comes to energy security*”.

Market design is the set of arrangements which govern how market actors generate, trade, supply and consume electricity and use the electricity infrastructure. It is important that these arrangements “*can transform the energy system, and enable network operators, generators and consumers – both households and industry – to take full advantage of new technology*”.<sup>21</sup>

We have identified the following features of the new Package, with a focus on the operation of transmission networks. Networks are often referred to as the ‘hardware’ of a well functioning wholesale market. The Commission aims to ensure a more co-ordinated regional approach to transmission system operations with the creation of new Regional Operational Centres (ROCs). To a certain extent the regulatory supervision of these new entities will be carried out at European level by ACER.

## BOX 4: WHOLESAL MARKET

- The Role of Regional Operational Centres – ROCs
- Who pays the ROCs?
- Who regulates the ROCs?
- Activating the demand side

<sup>21</sup> Launching the public consultation process on a new energy market design COM (2015) 340 final Sources: [http://europa.eu/rapid/press-release\\_IP-15-5358\\_en.htm](http://europa.eu/rapid/press-release_IP-15-5358_en.htm); [http://europa.eu/rapid/press-release\\_MEMO-15-5351\\_en.htm](http://europa.eu/rapid/press-release_MEMO-15-5351_en.htm)

## What is a Regional Operational Centre?

All TSOs within a region designated by ACER under its new tasks (see below) will have to set up a ROC (in the territory of one of the Member States within the region). According to Article 32(3) of the E-Regulation: “*Regional operational centres shall complement the role of transmission system operators by performing functions of regional relevance. They shall establish operational arrangements in order to ensure the efficient, secure and reliable operation of the interconnected transmission system*”. A list of the ROCs’ tasks is set out in Article 34. These tasks are to ensure a “*coordinated capacity calculation*”, “*facilitate the regional procurement of balancing capacity*”, draw up “*regional week ahead to intraday system adequacy forecasts and preparation of risk reducing actions*”, and a number of tasks relating to coordinated management of crisis situations. ROCs have the power to adopt decisions that are binding on the member TSOs (Article 38 of the E-Regulation). ROCs report to ACER as well as to the relevant national regulatory authorities (NRA)s.

## Who pays the costs of regionalisation?

The E-Regulation is silent on this matter yet the costs and benefits of regional cooperation may not always be shared equally among the members. The E-Regulation states that ROCs shall complement the role of TSOs by performing “*functions of regional relevance*”. ROCs are to be equipped with all the relevant resources, including financial resources for fulfilling their obligations and carrying out their functions (Article 42). The national TSOs must bear the burden. Importantly ROCs may incur liability to system users if they make the wrong decisions on operational security, for example. Article 44 of the E-Regulation states that ROCs should “*take necessary steps to cover liability related to the execution of their tasks*”.

In the longer term ROCs are likely to render national system operations increasingly redundant and may even take over decisions on grid investment. Parties

paying the costs for infrastructure upgrades, for example, are not necessarily those who enjoy the benefits. Strengthening or expanding the transmission grid or constructing a new interconnector may lead to the imposition of higher costs for certain system users, and NRAs will be expected to pass those costs on into national tariffs.

## How are regulatory decisions to be made: coordination not centralisation

The Winter Package foresees a reinforced role for the Agency albeit that it shies away from centralising regulatory powers in the hands of ACER, an option that was not received favourably during the consultation exercise. Stronger regulatory cooperation within ACER is seen as prerequisite to achieving the EU Energy and Climate goals. The principal role of ACER as a coordinator (or a platform for the co-ordination) of the actions of national regulatory authorities is preserved but limited new competencies are to be assigned to ACER when fragmented national decision making on issues of cross-border relevance could lead to problems or inconsistencies for the internal market.<sup>22</sup> For example, ACER is to be given new tasks, especially in respect of the supervision of the regional operation of the energy system, albeit that the NRAs remain at the centre of regulation.<sup>23</sup> The NRAs of the geographical areas in which a ROC is established will be expected to regulate that ROC and issue joint binding decisions. (See Article 62 of the E-Directive). Finally ACER is given new powers to approve the EU-wide methodology for assessing generation adequacy, which will govern Member States' ability to set up capacity remuneration mechanisms (Article 10 of the ACER Regulation).

## Integrating prosumers and demand response into the wholesale market

The Commission claims that there is a lot to be done on the demand side of electricity markets to ensure that they work for the full benefit of business and household consumers, as well as for "prosumers", who produce energy through self-generation or sell surplus electricity back to the grid.<sup>24</sup> Demand response<sup>25</sup> embraces more than just efficient use of energy. It is an important source of flexibility in the power system.

Active consumers should be able to shift their demand in real time, reducing peak load.

The third package of 2009 did not anticipate the importance of the demand side or contemplate the need to encourage flexible demand-side management or electricity storage (see below). In the Commission's view inadequate market signals as well as regulatory obstacles are frustrating progress: stimulating adequate levels of demand response and active prosumer participation in wholesale markets. In sum, a level playing field between conventional supply side sources and demand-side options is needed to ensure a cost efficient transformation to a more flexible electricity system. Will these regulatory obstacles be systematically removed across the Union?

The E-Directive, for example, proposes only a minimum level of harmonisation. Article 17(3) requires that Member States shall encourage the participation of aggregators in the market and that the aggregator can enter the market without consent from other market participants. Transparent rules clearly assigning roles and responsibilities to all market participants should be in place, including rules and procedures for data exchange between market participants, and there should be a conflict resolution mechanism.

Demand response and the role of prosumers are further discussed in greater detail below in the context of retail market reform.

<sup>22</sup> Article 7 and 9 of the ACER Regulation

<sup>23</sup> Article 8 of the ACER Regulation

<sup>24</sup> This concept is discussed below under 'Retail Markets'.

<sup>25</sup> Article 2(16) of the E-Directive defines this concept

# Distribution – the key to flexibility

As the energy system evolves and becomes more complex due to the use of distributed or decentralised renewable energy sources and flexibility of demand, the need for coordination between market parties becomes even more important. Thus, the European Commission proposes to strengthen the legislative framework for cooperation between Distribution System Operators (DSOs) and TSOs to ensure that all necessary information and data, e.g. regarding the daily operation and long-term planning of the networks, is shared, and that the use of distributed resources is coordinated. The aim is to ensure cost-efficiency and secure and reliable operation of the networks.

The traditional monopoly roles of DSOs are being increasingly contested with the emergence of private and micro-grids. At the same time the current role of DSOs in the energy value chain is very divergent across the 28 Member States. This is in part due to national variations in the degree of consolidation as well as the extent of unbundling (there are an estimated 2400 DSOs active in the 28 Member States). Although the traditional or so-called “passive network” duties of the DSOs are adequately defined in the current legal framework, the scope for DSOs to engage in what is termed “active network operation” is far from clear.

We have singled out the following issues.

## BOX 5: DISTRIBUTION

- Incentives to innovate
- DSO-TSO cooperation
- A new DSO entity for electricity
- DSO unbundling
- Storage and EV- charging infra
- Community networks

## Incentives to innovate

So-called incentive regulation for DSOs has been successful in mimicking competitive pressure, with incentives to improve cost-efficiency and incentives to improve quality. The level of network investment that is to be required of DSOs to facilitate the energy transition may span several regulatory periods, and this may pose a challenge to traditional forms of incentive regulation where network charging methodologies are

fixed for three to five-year intervals. Regulators need to make sure that the DSOs have adequate financial incentives to innovate and upgrade their networks, to procure and connect distributed generation and to contract with other service providers, as well as to deal with local congestion management.<sup>26</sup>

In the future the Commission may use its delegated powers to adopt guidelines on distribution tariff structures to address this issue. This could however prove controversial as tariff issues are usually considered the preserve of national regulators.

## DSO-TSO cooperation<sup>27</sup>

As smaller, distributed generation emerges alongside large scale conventional generation the traditional distinction between transmission and distribution becomes increasingly blurred. In a system where distribution networks are no longer passive but are expected to provide various services for the entire system, the exchange of information between TSOs and DSOs will increase considerably and this aspect has to be managed adequately. The choice of the coordination scheme not only determines the responsibilities of systems operators towards each other but also determines their responsibilities towards third parties (suppliers, aggregators, energy service companies). The European regulators’ informal council – the CEER – had earlier advised that general principles should be defined at a European level, while more detailed regulation for the implementation of common principles in the respective countries should be developed at a national level. The draft E-Regulation mandates cooperation on certain issues, but does not determine any model or form of cooperation between TSOs and DSOs. This may evolve via the adoption of new network codes as well as through the amendment of existing codes. The new ‘DSO entity’ may be involved in that process.<sup>28</sup>

<sup>26</sup> Article 32 E-Directive

<sup>27</sup> E-Regulation – Article 53

<sup>28</sup> Electricity Regulation – Articles 55 and 56

## A new DSO entity for electricity<sup>29</sup>

The Commission proposes that DSOs, which are not part of a vertically integrated undertaking or are unbundled according to the recast E-Directive,<sup>30</sup> shall cooperate through an EU DSO entity. The tasks of this entity are listed in Article 51 of the E-Regulation. All DSOs meeting these conditions will be able to apply for membership. Given the large number of DSOs in the EU and the heterogeneous nature of this sector, it is likely to be a major challenge for the new entity (in cooperation with ACER) to draw up a set of rules of procedure which can be both effective and representative of its potentially highly diverse membership.<sup>31</sup> Concerns as to the independence of this new DSO entity may remain, however, if its members are not perceived to be adequately unbundled from competing production and supply interests.

## From passive to active system management – more DSO unbundling?

The imposition of further unbundling requirements on DSOs has been rejected notwithstanding the acknowledged risk that, if DSOs are not unbundled, vertically integrated companies are favoured as a ‘flexibility’ provider by the DSO. Equally, however, the current rules on unbundling may limit the trading of flexibility services by DSOs. Chapter IV of the recast E-Directive clarifies the tasks of DSOs in relation to the procurement of network services to ensure flexibility,<sup>32</sup> the integration of electrical vehicles recharging points<sup>33</sup> and data management<sup>34</sup> and with respect to storage.<sup>35</sup>

## Storage<sup>36</sup> and EV recharging networks

Article 36 of the E-Directive provides that as a general rule DSOs shall not be allowed to own, develop, manage or operate energy storage facilities unless (a) following an open tender procedure no other party has expressed an interest in entering this market and (b) storage facilities are necessary for the DSOs to fulfil their regulated tasks for the reliable and secure

operation of the distribution system.<sup>37</sup> While Article 33 does not prohibit DSOs from rolling out EV charging frameworks, similar conditions are attached as for storage in that it must first be established via an open tender procedure that no other party has expressed its interest in rolling out a recharging network. This situation should be reviewed at five-year intervals.

Both EV and storage operations have to be operated by legally unbundled entities, as required under Article 35, and these entities must maintain separate accounts, as required by Article 56 of the E-Directive.

## Community networks – paying too much or too little for back-up?

Local energy communities (LECs)<sup>38</sup> can be an efficient way of managing energy at a local community level – with or without a connection to distribution systems. However, there is a risk that the principle of the socialisation of network costs is compromised if consumers in low cost areas (e.g. located near production centres) set up their own networks, leaving remaining consumers to finance networks in higher cost areas (e.g. rural areas).

Article 16 of the E-Directive requires that Member States adopt a legal framework that ensures the possibility for local energy communities to own, establish or lease community networks and to autonomously manage them,<sup>39</sup> and that these communities can access all organised markets either directly or through aggregators or suppliers. At the same time, if the local energy community consumes electricity from an external network it will be subject to ‘appropriate network charges’, which must account separately for the electricity fed into the external network and the electricity consumed from it. Given that these measures will be contained in a Directive which may leave further latitude to Member States as to how they regulate LECs, it is not clear whether a Member State could retain powers to enact a separate system of licensing for LECs. Nor is it clear whether the number of LECs in a region could be subject to a

<sup>29</sup> Electricity Regulation – Articles 49 to 51

<sup>30</sup> Article 35 E-Directive. The text is identical to the previous Article 26 of the E-Directive

<sup>31</sup> E-Regulation - Article 50 on the rules of procedure

<sup>32</sup> Article 32

<sup>33</sup> Article 33

<sup>34</sup> Article 34

<sup>35</sup> Article 36

<sup>36</sup> As defined in Article 2(48)

<sup>37</sup> Article 54 – E-Directive applies a similar approach to TSOs albeit that any derogation from the general prohibition must be notified to the Agency and the Commission

<sup>38</sup> This concept is defined in Article 2(6) to mean an association, a cooperative... or other legal entity which is effectively controlled by legal shareholders or members and is generally value rather than profit driven; although it performs its activities at local level this may extend across borders

<sup>39</sup> Note that Chapter IV of the E-Directive will apply to these LECs if they perform the activities of a DSO

cap in the wider interest of ensuring a sufficiently large

system user base for the socialisation of network costs .

# Retail markets – the promised new deal for consumers but will it come at a (market) price?

The Commission considers that retail electricity markets have lacked a competition dynamic that would allow consumers to share in the benefits from competition upstream. Switching rates has proved disappointing, resulting in strengthened switching rights in the recast E- Directive.<sup>40</sup> At the same time active customers – also referred to as prosumers – are to be encouraged to generate, store, consume and sell self-generated electricity on all organised markets – individually or through aggregators.<sup>41</sup> This means striking the right balance between protecting passive consumers, and especially vulnerable consumers, while encouraging those customers who wish to do so to enter the market and actively take on the associated risks.<sup>42</sup> It may also require a critical assessment of the need for detailed or overly prescriptive rules that could inhibit new participants from entering the energy market.

We have identified the following issues for further comment.

## BOX 6 RETAIL MARKETS

- Towards market-based retail prices
- Billing
- Data management
- Prosumers and aggregators

## Towards market-based retail prices

Article 5 of the E-Directive provides that, as a basic principle, electricity suppliers shall be free to determine the price at which they supply to customers. Member States may, however, ensure the protection of the energy poor<sup>43</sup> or vulnerable customers in a “*targeted manner by other means than public interventions in the price setting for the supply of electricity*”. A transitional period of five years is foreseen under certain conditions. Thereafter price caps for vulnerable household customers could only be justified in cases of extreme urgency. The Commission will actively supervise such measures and may request their amendment or withdrawal. Article 9 limits the powers of national authorities to introduce public service obligations concerning price setting . If regulated prices are to be introduced to protect vulnerable customers, the procedures under Article 5 must be complied with. The measures must be notified to and may be amended or vetoed by the Commission.

## Billing<sup>44</sup>

The current provisions from the EED and the third electricity package on billing and billing information are maintained and merged in Article 18 of the draft E-Directive. The merged provisions include a list of minimum requirements for billing and billing information.<sup>45</sup> Further, where appropriate, the following information should be prominently displayed in or with bills and periodical settlement bills: (a) current actual prices and actual consumption of energy;

<sup>43</sup> See also Article 29 E-Directive on reporting requirements

<sup>44</sup> Electricity Directive - Article 17 and Annex II

<sup>45</sup> For example, (a) price to pay, (b) energy consumption for billing period, (c) name of supplier, (d) contact details of supplier, including a consumer support hotline, (e) tariff name, (f) duration of the contract and date of end of contract and deadline for sending an advance notice of cancellation if fixed contract, and length of advance notice period for contracts of indeterminate duration

<sup>40</sup> Article 12 E-Directive

<sup>41</sup> Article 16 E-Directive

<sup>42</sup> For example by taking up the entitlement to a 'dynamic price contract', see Article 11 E-Directive

(b) comparisons of customers' current energy consumption with consumption for the same period in the previous year in graphic form; (c) contact information for consumer organisations, energy agencies or similar bodies.

Where a breakdown of price is presented in bills, Member States shall ensure that the European Commission's definitions for the main components (energy and supply; network charges; taxes, fees, and levies) are used.

## Data management

Delivery on a fair deal for energy consumers requires innovative companies to combine new energy technologies with digital technology to offer new products that support active consumers who wish to participate in electricity markets and optimise energy consumption (reducing and shifting) and save money. At the same time issues such as access to data, privacy and data protection, as well as cyber-security and issues of open standards and technology remain high on the Commission's agenda. Some of these issues are now addressed in separate measures recently announced under the banner of the EU's Digital Single Market strategy.<sup>46</sup> Several are also addressed in the new energy MDI.<sup>47</sup>

The Commission proposes to establish common rules for data management. Member States are obliged to specify who may have access to the data of the final customer with the customer's explicit consent. Data in this context includes metering and consumption data and data required for switching and the 'eligible' parties potentially gaining access to these data are customers, suppliers, TSOs, DSOs, aggregators and other parties providing energy or other services to customers. The parties granted access to this data shall gain access to them simultaneously in a non-discriminatory manner and on clear and equal terms.

Member States (or their designated competent authorities) shall authorise/certify the parties managing data, but there is no specific data model recommended as yet. According to Article 24(3) of the E-Directive 'regulated entities' which provide data services shall not profit from that activity, and no additional costs can be charged to final customers.

<sup>46</sup> <https://ec.europa.eu/digital-single-market/en/digital-single-market>. These include the General Data Protection Regulation, which enters into force in 2018, and the recently published proposal for an E-Privacy Regulation, of 10 January 2017

<sup>47</sup> Articles 23 and 33 E-Directive

Member States are required to ensure that market participants apply a common European data format and non-discriminatory and transparent procedures for accessing the data. A common European data format shall be established by the Commission by means of an implementing act.

## Prosumers and aggregators

Article 17 of the E-directive requires NRAs to encourage final consumers, including those offering demand response<sup>48</sup> through aggregators<sup>49</sup> and 'active customers'<sup>50</sup> to participate alongside generators in a non-discriminatory manner in all 'organised markets'.<sup>51</sup> Article 13 of the E-Directive gives final customers the right to contract with an aggregator directly, and without the prior consent of the energy supplier. Conditions for termination are also to be regulated (Article 13(2)-(5)). Article 17 sets out the minimum conditions which Member States must adopt into national regulatory frameworks to encourage the participation of aggregators in retail markets. They should not be required to pay compensation to suppliers or generators but may exceptionally be required to pay compensation to balance responsible parties.<sup>52</sup>

It remains to be seen whether the proponents of demand side response will consider these provisions as sufficiently robust to ensure a genuine role for the demand side of the energy market going forward. Conventional suppliers of electricity are equally keen to ensure that these new market entrants do not benefit from hidden privileges or cross-subsidies.

<sup>48</sup> As defined in Article 2(16) E-Directive

<sup>49</sup> As defined in Article 2(14) E-Directive

<sup>50</sup> As defined in Article 2(6) and further elaborated on in Article 15 E-Directive

<sup>51</sup> This concept is borrowed from the REMIT implementing regulations 1348/2014, OJ 2014 L363/121

<sup>52</sup> As defined in Article 2(49) E-Directive

# Conclusion

This Briefing Paper has offered an overview of some of the most salient and controversial issues that are covered in the bumper Winter Package. Stakeholders are confronted with the formidable task of digesting and commenting on these ambitious proposals. If and when they are adopted, these legislative measures are likely to have a far-reaching impact on every actor in

the energy value chain. The arrival of the Winter Package marks an important step change in the organisation as well as the regulation of the EU electricity market and, as explained in this Briefing Paper, such a step change inevitably raises novel legal issues and challenges.

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