**E.ON response to Ofgem’s consultation on license conditions and guidance for network operators to support an efficient, coordinated and economical whole system**

**About E.ON**

1. E.ON is one of the largest energy companies in the world focussed on clean growth. As of 2016, we took the major strategic decision that our company would no longer own or operate large-scale, conventional fossil-fuelled power stations. Today, our business is focussed on supporting Governments across the world deliver the technology required for clean growth. We believe the future of energy is decentralised, decarbonised, digitalised and local, with customers in control.
2. In the UK, we are a major employer with over 9,000 employees. In 2017, over 90% of the 4 billion KWh of energy we produced in the UK was from renewable sources. We have over 6 million customers in the UK, and over 31 million Europe-wide. Across Europe, we operate over 1 million km of energy networks.
3. Over the last decade, we have invested more than £2.5 billion in to new renewable energy in the UK. In 2018, we commissioned our latest offshore wind farm in the UK, Rampion, off the coast of Sussex. The project generates enough clean energy to power half the homes in both East and West Sussex.
4. E.ON is active in supporting homes and businesses become smarter and more energy efficient, enabling flexible demand response with technologies such as solar panels coupled with battery storage, virtual power plants and energy management systems. In the UK, we have installed more than one million energy efficiency measures in homes nationwide, saving more than 15 million tonnes of CO2 over the lifetime of those installations, and work with major brands and business across the UK and Europe to cut emissions and costs.
5. E.ON is also a market leader in delivering good quality, efficient heat networks to major housing and industrial developments, such as the Elephant Park project in London which will deliver 2,500 carbon neutral new homes and the Blackburn Meadows energy hub in Sheffield which uses locally-sourced waste wood to run a heat network and also hosts one of the first grid-scale battery storage sites that supports the day to day efficient operation of the National Grid.
6. Our response to questions raised in the document can be found below.

**Executive Summary**

1. E.ON supports a whole systems approach to the management and operation of our networks. This should be incorporated within the relevant license conditions. However, we strongly believe that a single party responsible for the optimisation of the entire electricity network at all voltage levels is a more cost effective solution than the current direction of travel towards Distribution Network Operators (DNOs) transitioning to Distribution System Operators (DSOs) and being responsible for the operation of their own networks. It is far from clear whether the regulatory and contractual frameworks can deliver an optimal system in the same way that this can be realised under a single Electricity System Operator (ESO) covering all voltage levels.
2. E.ON believes that the party (or parties) responsible for balancing the network should be required to engage fully with stakeholders, using market based platforms to ensure that full transparency is achieved.
3. Data around current and potential future network constraints must be made accessible to all stakeholders to help guide investment decisions. However, this obviously needs to be at a level where customers cannot be individually identified.

**Question 1: Do you agree with the proposal to clarify Whole System responsibilities through license and supporting Guidance? Where possible, please provide evidence and examples to support your views. In particular, please describe:**

1. **The potential benefits you might expect to result from these proposals?**
2. **If there are any material costs or issues for you in relation to these proposals?**

E.ON is strongly supportive of Ofgem’s high level aspirations to optimize the whole system. This will keep the costs of running the system as low as possible for current and future customers. However, creating several regional DSOs in parallel to a national ESO to deliver this would appear to create numerous barriers, delaying, and in some instances, working against the two main objectives – of safely and cost effectively balancing the electricity system across all voltages. As highlighted in an Accenture report looking at cross-industry ecosystems:

*“A successful ecosystem requires strong governance.* ***Significant project resources*** *must be allocated to forging links among partners, which means much more than simply ensuring that everyone is aligned with common objectives or when resolving conflicts.[[1]](#footnote-1)”*

This report suggests that a lot of effort needs to go into projects of this type where objectives, timelines and especially access to data need to be agreed and shared. Complications such as remuneration between parties (as highlighted in section 3.7 – 3.9 of the draft guidance) and communication between multiple systems will all add cost to a multiple party governance of electricity balancing.

We would strongly argue that a simpler and cheaper alternative to deliver whole system optimisation would be to extend the remit of National Grid ESO to operate balancing services across all voltage levels of the grid. With one body responsible for operating and balancing the entire system there will be less cost, closer alignment of objectives and greater accountability.

**Question 2: Do you agree with the proposed scope and content of these license conditions and guidance? Please provide any specific comments you have on the attached draft, including illustrative examples, and where possible, please provide reasons and evidence to support your responses, in particular:**

1. **Are there other examples or areas of activity which you consider should be highlighted, or do you see the need for further clarity in any area?**
2. **Do you consider these would be beneficial and proportionate? Are there any aspects which should not be included?**

Further to our answer to question 1, E.ON believes that having multiple parties involved in the optimisation of the electricity network would be suboptimal compared to the alternative of having a single SO across all voltage levels of the network. Each party is likely to have differing interpretations of the license conditions and guidance. Any level of guidance will not be able to cover every eventuality and as new issues arise there will be disagreements as to how to deal with them. Each party will have differing views of key phrases such as “appropriate steps”, “coordinated decision-making processes”, “as it considers useful” etc. Even though the draft guidance makes suggestions as to how to deal with whole system actions that are counter to individual licensees’ best action (3.7-3.9), these benefits and costs will be open to different interpretations, especially with the existing degree of information asymmetry that exists between parties. Data sharing may to some extent mitigate some, but not all, of these risks. In contrast, if there was one entity overseeing (and accountable for) the whole system, it would be easier to hold the party accountable for delivery and performance.

For example, there is the potential for the ESO to call an English distribution connected battery to charge (to increase grid supply point demand thereby avoiding Scottish renewable curtailment) whilst the DNO/DSO may call upon the same battery to discharge in order to alleviate a local network constraint. Whilst it may be possible for all parties to share the real-time data that might prevent this conflict, it would be easier and cheaper if one party had an overview of the entire system and could therefore discount this solution immediately.

If Ofgem continues with its ‘minded to’ position of allowing multiple parties to operate/optimise the electricity network, it is vital that strong governance is in place and that all parties are continually in discussion with each other to ensure the issues highlighted above are kept to a minimum. However, this is liable to create a not insignificant cost for all parties which will have to be passed through to customers.

**Question 3: These proposals require licensees to engage and coordinate with stakeholders. This recognises that a range of parties may have an interest in different aspects of the system, and that licensees should seek to engage with those with an interest in a given situation. Do you agree with this approach?**

E.ON is supportive of engagement and coordination with stakeholders being a part of the network operators license conditions. In particular, we welcome Section 2b of the draft license conditions that states *“the licensee* ***must*** *undertake such engagement, consultation and co-ordination as may be appropriate in the circumstances with stakeholders”.* We are concerned however thatthe consultation question suggests “*licensees* ***should seek to*** *engage with those with an interest*”. As more customers become engaged with the electricity market through offering balancing services to the system operators, it is vital they are given the assurance that their opinions will be given due consideration.

**Question 4: Do you consider any changes or clarifications are needed in relation to industry code objectives, notably the Distribution Code and the Grid Code, to support the delivery of Whole System outcomes? Specifically:**

1. **Do you see the need for further change or clarification to the code objectives themselves, or their interpretation e.g. through introduction of a specific relevant objective in relation to whole system actions?**
2. **Have you identified any interactions of these provisions with wider aspects of industry arrangements which should be considered in developing them?**

It should be sufficient to refine the wording of the current DCUSA and Grid Code objectives to ensure that whole system considerations are covered e.g. the development, maintenance and operation [by the DNO Parties and IDNO Parties] of an efficient, coordinated and economical [Distributed Network/system for the transmission of electricity] *including consideration of the whole system level*. As the Energy Codes are currently under review, Ofgem should ensure that any changes made to the objectives maintain the focus on efficiency and co-ordination at the whole system level.

**Question 5: Do you believe further, specific guidance in any area, and in particular in relation to efficient connections and constraint management (e.g. in preparedness for electric vehicles or increased distributed generation) would be beneficial? Please provide reasons and, where possible, evidence to support your answer.**

Stakeholders should be given as much information about the network capability/limitations as possible to enable them to advise customers early on as to the viability/additional costs of installing new energy solutions such as electric vehicles and onsite generation. This information will need to be location specific and timely, as any delay has the potential to change the commercial aspects of the solution e.g. capital cost estimates. We encourage the requirement for system operators to maintain up to date network models at the lowest granular level possible without identifying customers such that this data can be provided in as short a timescale as is feasible.

**Question 6: For which relevant datasets or information do you consider the need for availability and accessibility is greatest, in order to deliver Whole System benefits? Do you consider there to be any significant barriers to sharing these? Please provide specific suggestions for what you consider to be effective sharing arrangements, including required enablers and governance, such as the development of any industry standards?**

To make national and regional markets as transparent as possible, it is key that system operators make historical ‘hot spots’ on their network transparent to all interested parties. The data should include actions taken to avert system issues as well as problems on the network itself e.g. lines/substations working at or close to maximum capacity. This will inform stakeholders as to areas where alternative solutions to traditional reinforcement can support the network, and help reduce overall costs to the system which customers will ultimately benefit from. Network data on forecasted line/substation demand will enable stakeholders to make informed decisions on investing in non-build reinforcement. E.ON agrees that any findings of the Energy Data Taskforce and the Open Networks Project should be incorporated into the expectations placed upon system operators with regard to data access and availability.

**Question 7: Do you agree with the proposal to apply these provisions to all electricity distribution license holders, including IDNOs and onshore TOs, and to exclude the ESO, offshore TOs and interconnectors? Where possible please provide reasons and evidence to support your response.**

E.ON agrees in principle that the ESO already has whole system requirements in its license and therefore can be excluded from these provisions. Due to their highly limited capability to influence whole system benefits, E.ON also agrees that offshore TOs and interconnectors should also be excluded.

1. https://www.accenture.com/gb-en/insight-outlook-cross-industry-ecosystems-growth-outside-the-box [↑](#footnote-ref-1)