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Dear Stathis,

Future arrangements for the electricity system operator: its role and structure

SSE plc welcomes the opportunity to respond to Ofgem's consultation on future arrangements for the electricity system operator: its role and structure. We note the consultation has been published following work with the Department for Business, Energy & Industrial Strategy (BEIS) and National Grid Electricity Transmission plc (NGET) and welcome the engagement of all parties in this important process.

This response covers the views of SSE plc, which comprises three principal business segments: Wholesale - producing, generating and trading electricity and gas; Networks - transmitting and distributing electricity, and Retail - supplying electricity and gas and related services to homes and businesses. We are the only company listed on the London Stock Exchange with such a balance of energy businesses.

Our core purpose is to provide the energy people need in a reliable and sustainable way. Our commitment to our customers is underpinned by our planned infrastructure investment that will total over £5bn during the next 5 year period.

We are broadly supportive of the proposals for enhancing role of the System Operator (SO) to ensure that it is well placed to facilitate the transformation of the electricity system. We welcome Ofgem's identification of the developing relationship between NGET and the Distribution Network Owners (DNOs) as they transition to Distribution System Operators (DSOs). Formalising this relationship is crucial in delivering coordinated consumer and system benefits and the existing Energy Networks Association (ENA) led SO/DSO transition programme is best placed to ensure this happens.

We are also supportive of the proposal for legal and regulatory separation of National Grid's SO and Transmission Owner (TO) functions; and support the proposal for a separate transmission licence for the new 'NGSO' entity within the wider National Grid group. We note that this separation will not preclude the option to move to a fully independent SO at some point in the future if it becomes clear this, including the associated costs, would be in consumers' interests.

We believe the enhanced role of the SO discussed in the paper can be implemented through amending NGET's existing licence. However, whilst we are generally supportive of a principles based approach to regulation, in this instance we believe that the key obligations of the SO need to be embedded within its licence.

The consultation has two distinct elements: the role of the SO and the independence of the SO. We have responded to the consultation questions on both these areas in the attached Appendix. The key points for each are detailed below.

The role of the SO

Ofgem has identified four key areas to be undertaken by the SO to enhance its role in system operation.

Acting as a residual balancer

We are generally supportive of this objective and the principle of striving for a more efficient approach to balancing to minimise wholesale costs in the long term. The SO is already obliged to focus on and deliver overall efficiency of system balancing, produce accurate system forecasts, release the transparency information required by market participants and continuously enhance the IT systems and modelling tools required to deliver on the aforementioned obligations.

The procurement of balancing services should be an opportunity for the SO to ensure the costs of balancing the system are reflective of the benefits to the system and minimised where possible. Ofgem has indicated it expects the SO to consider the short term gains and long term impacts of balancing actions for all consumers. We welcome this and support any measure that minimises consumer cost while underpinning the long term sustainability of the electricity network.

We also welcome Ofgem's acknowledgment of the important role of the DNOs in balancing the system. The nature of the electricity system evolution over the past few years has produced a more distributed, dynamic network albeit at different voltage levels – Transmission and Distribution. This presents a real challenge for the SO in optimising network operation while minimising costs to the consumer.

In light of this and in the context of the existing DNO structures, we believe that the DNO will be central to integration of the networks. In addition, this coordination will underpin the transition of DNOs to DSOs in the future.

Facilitating competitive markets

The SO currently has significant influence on the design of the electricity market, balancing markets and the capacity market. It also runs the balancing market, and procures and develops services in line with system needs. In addition, the SO has responsibility for industry codes and delivery of the Government's Electricity Market Reform (EMR). These roles, viewed holistically, illustrate the extensive reach of the SO in the GB electricity industry and demonstrate the level of impact and influence it could exercise.

Ofgem has proposed the SO takes a more active role in system balancing and operation as it best understands the interactions between the market and the governance surrounding the same. We are supportive of the proposals Ofgem has made around increased transparency and accessibility to the balancing market. The changes being proposed should remove barriers for service providers who are currently restricted due to exclusivity requirements. Initiating this work now is welcome.

As technology develops so too should industry codes to ensure the system is benefiting from the best available technology. Clarification on Ofgem's expectations of the SO in engaging with stakeholders to ensure they can participate in the market, thereby encouraging competition, is a positive step. We support the CMA's proposals which will facilitate a more proactive role for Ofgem in the code regime and the allocation of responsibility for delivery.

While Ofgem is not proposing any significant change to the EMR project, it has clearly indicated that it expects the SO to work proactively with stakeholders to make improvements to the Capacity Market (CM) rules and to remove barriers in the CM where possible. This should support increased competition. In addition, the focus Ofgem is placing on SO information accuracy is welcome. The information the SO provides to the market forms the basis of critical investment decisions and future strategy for a range of stakeholders – therefore certainty in this area is to be welcomed. We believe incentives in this area should drive wider system benefits. Our views on this area are detailed in our response to the regulatory incentives and framework consultation.

Facilitating efficient whole system outcomes

We agree that there is potential value in having greater coordination across distribution and transmission networks in the Network Options Assessment (NOA). Taking a holistic view of the electricity system should identify areas where improvements can be made to drive more efficient outcomes for customers. The role of the DNOs is important in this regard.

Understanding the dynamic and operational characteristics of the distribution network will be paramount in developing options for improvements to the benefit of the whole system. This is knowledge that is unique to each DNO therefore greater coordination will be required between them and the SO. The definition of role and establishment of clear expectations is required. We expect details of this to be further discussed in the ENA work streams.

Supporting competition in networks

We are supportive of the introduction of competition in networks and have been actively engaged in Ofgem's process to date. The Network Options Assessment (NOA) is still in its infancy and whilst the process for NOA2 was a clear improvement on NOA1, there are still improvements to be made, particularly in relation to the involvement of relevant industry parties in the annual development process. Having confidence in the current approach underpinning the NOA methodology in this way will provide more tangible information for industry as well as the SO. We are keen to be involved in this process and will provide input and feedback on any revisions to the methodology as they are being developed and published for consultation.

We welcome Ofgem's reference to further consultation on the role of the SO in preliminary works. Our view remains the same that the TOs are best placed to carry out design within their licensed areas, with the SO taking an overarching view of system need. We believe this model of a 'thin' SO better facilitates the efficient and economic development of the network.

Independence of the SO

We have canvassed for greater independence of the SO during both the Integrated Transmission Planning and Regulation reforms and, more latterly, during the Extending Competition in Transmission programme. We therefore welcome Ofgem's proposals for clear legal and regulatory separation of the SO within the National Grid group. In particular we welcome the proposal for a separate SO licence which we believe will clearly delineate the SO and TO roles within National Grid.

We also welcome Ofgem's position that any changes implemented at this stage should not hinder a move to a fully independent SO in future if that is shown to be in the best interest of consumers.

As the role of the SO is developed, its interactions and relationship with DNOs will also need to develop. In particular from a distribution network perspective, the complexity of the network in terms of assets and operation needs to be fully considered and the relationship between the SO and DNOs more clearly defined within industry codes, processes and procedures. In our view it is the DNO/DSO that is best placed to understand and address the complex interaction between local development plans, refurbishment requirements, asset



condition data, new connections activity and local economic trends. Encoding the SO/DSO responsibilities and interactions will support all licensees in ensuring the most efficient use of the network and will allow for appropriate system wide actions to be taken.

Our view is that industry wide engagement is required to ensure the correct model is delivered. We believe that the work being carried out by the ENA SO/DSO transition programme is the most appropriate forum for engaging with industry and ensuring that flexibility is addressed at all levels. Crucially TOs, as well as the SO, need to be involved in this discussion with the DSOs.

We look forward to continued engagement with Ofgem, Government and the rest of the industry as the proposals are developed and put into practice. In the meantime, if you have any queries on any part of this response, then please do not hesitate to contact me.

Yours sincerely,

Malcolm J. Burns
Acting Head of Regulation, Transmission

Appendix: SSE response to consultation questions

Chapter 2: The role of the SO

Question 1: What are your views on our proposed objectives for the SO (set out in paragraph 2.1)?

We believe in an approach that focuses on system requirements, customer interests and promoting competition, rather than emphasising the role of particular business models and technology types. However, in our view, the future SO objectives do need to be embedded in its new licence as part of its obligations and it is difficult to see how this could be achieved through principles-based regulation, particularly when planning and connection codes place specific obligations on licensed parties.

Objective 1: overseeing a safe, resilient and cost-effective electricity system

We are broadly supportive of the proposed objectives for the SO and acknowledge that overseeing a safe, resilient and cost effective electricity system should be the top priority.

In the response to the Call for Evidence on a Smart and Flexible Energy System (Call for Evidence) we mentioned that, as part of their transition to DSOs, DNOs will be central to integrating distributed assets with the wider system. DNOs should be empowered to manage resources on the distribution network and work collaboratively with the SO. Otherwise, a risk of conflicts or duplication between the SO and DNOs is likely to occur.

It remains unclear for the time being how TOs and flexible, smarter assets on the transmission network will play a role in the transition to a low carbon system. Whilst local small-scale generation, demand and storage solutions could be the most economical in some locations or for solving particular issues, the same can be true for large scale assets on the transmission system which benefit from economies of scale. Thus, if arrangements are looked at in isolation, there is a risk of stranding existing assets and creating longer term price increases to consumers.

As the exact nature of the SO role with respect to the distribution system is still being considered by Ofgem, we suggest any decision on the structure, role and powers of the SO in this regard is preceded by wide industry engagement. The work stream of the ENA programme on the TSO/DSO transition could serve as a good starting point.

Objective 2: competition and efficiency across all aspects of the system

Regarding the introduction of competition for the delivery of certain onshore transmission assets, as mentioned in our responses to previous consultations on Extending Competition in Electricity Transmission, the process whereby both the SO and TOs (and CATOs in the future) would identify options, carry out early developments works and the initial solution design blurs the statutory obligations of the SO and TOs and renders system inefficiencies. As this is

not a desired outcome in light of Objective 1 whereby the SO would oversee a cost-effective electricity system, it remains our view that the SO role should be 'thin', that is, it identifies system need, whilst the existing TOs maintain responsibility for system design in their geographic areas. In this regard, we welcome Ofgem's decision to consult further on the role of the SO in preliminary works for RIIO-T2 onwards.

This concept of a thin SO is also important for developing the SO/DSO interface, where the evolving DSOs will be best placed to manage flexibility on their networks. We are supportive of the objective to minimise the SO role as a residual balancer and we agree the SO has a role in simplifying and redefining the market in relation to balancing services.

With an ever increasing level of embedded generation on the system, DNOs are starting to transition to a new DSO role as they more actively manage their networks. These entities are best positioned to support the efficient connection and utilisation of new flexible and dispatchable resource below the Grid Supply Point (GSP) and can also take charge of local planning decision making. By coordinating resource use with the SO, they can help increase access for new entrants to participate in the national provision of ancillary services and the Balancing Mechanism. They may also be required to make balancing payments and compensate users for loss of network access. As discussed above, the work of the ENA TSO/DSO transition programme is integral to ensuring the correct interfaces are developed.

As demonstrated by our work on Constraint Managed Zones (CMZ), we are supportive of a market based approach and believe that competition should be facilitated through price signals set via market platforms that responsible parties can participate in.

From a wholesale perspective, a target-based approach under the current Balancing Services Incentive Scheme (BSIS) has delivered relative short-term improvements in balancing efficiency. However, whether the BSIS is fit to deliver stable, longer term incentives on the SO going forward should be further considered. In our view, transparency and accessibility of balancing and ancillary services procurement are the prerequisites for effective delivery of SO obligations and must be promoted and enhanced by the SO as the basis for its baseline behaviour.

Objective 3: promoting innovation, flexibility and demand side solutions

SSE's core objective is to continue to work on realising new flexible resources that avoid disruption and maximise customer benefits. To achieve this, we recommend an incremental approach would be the most appropriate to ensure that standards are maintained, whilst the industry is afforded time to work together to develop best practice and the operating costs and risks associated with these solutions are verified in a non innovation funded environment.

We believe that innovation is of vital importance to the development of the efficient, flexible networks that will be required in the future. The portfolio of innovation projects we have undertaken as a DNO has been fundamental in improving our understanding of the opportunities, risks and practicalities of utilising and coping with this increased flexibility. This understanding has provided us with the data and confidence to pioneer on business as usual deployments of CMZ and Active Network Management, amongst other examples.

We also believe that decisions to implement industry changes for facilitating the deployment of new technologies should be made on a level-playing field but not to the disadvantage of current users.

In terms of the market models that are currently being debated, we do not have a particular preference. Our current position leans towards an incrementally deployed 'locational balancing' DSO model, as we believe this intuitively provides the best balance of costs and benefits for the consumer in the short to medium term.

Question 2: What are your views on our expectations for how the SO should seek to achieve these objectives?

The current power system has been historically dominated by large thermal plants and flexibility on the supply side has been relatively cheap and accessible. However, due to changes in the generation mix and the growth of distributed energy resources, these arrangements are no longer fit for purpose.

In our view, two key issues need to be addressed. First, residual balancing services need to be reformed to be technology neutral and harmonised. Secondly balancing should be considered more holistically, with a focus on maximising existing assets.

Although the principle of allowing resources to compete for services across the national electricity transmission system is correct, the different treatment of assets on the distribution and transmission network must be reviewed to achieve this. Notably, this includes network charging arrangements, connection costs and capacity allocation. In order to deliver new arrangements that are future proof and equitable, we believe significant engagement between network operators, the regulator, government and service providers is the best way going forward.

Care must be taken to ensure that the enhanced role of the SO does not undermine the work DNOs are currently involved in to incentivise the use of distributed energy resources. Conflicts already arise between the use of assets for new SO services, such as Enhanced Frequency response and Demand Turn Up; and DNO arrangements, such as flexible connections and constraint management.

In order to optimise the use of distributed energy resources and act in the interest of customers as a whole, we believe DNOs must take a central role in identifying the need for services, as well as their dispatch and availability. By affording DNOs this responsibility, they will be able to facilitate the wider use of distributed energy resources at a national level, while supporting the SO to achieve its objectives.

We believe the SO has an important role to play in unlocking the value in the electricity market as it transitions to a more flexible future. To this end, a holistic review of balancing services must be undertaken by the SO to assess whether the scope and structure of these services is in line with the overall balancing efficiency objective and European network codes.

Question 3: Do you agree with our proposals for what licence changes are needed to support these objectives?

We note that Ofgem does not intend to re-open the RIIO-T1 settlement and we are supportive of this. However, it is clear that licence changes will be required to ensure these new obligations are embedded within the industry framework. We acknowledge the fact that the SO is already engaging with industry to develop improved understanding of whole system operability challenges in the System Operability Framework. In our view, industry wide engagement is essential ahead of any SO licence changes.

Chapter 3: A more independent SO

Question 1: Do you agree that greater separation between NG's SO functions and the rest of the group is needed?

We are strongly supportive of the proposal for legal and regulatory separation of National Grid's SO and Transmission Owner (TO) functions, having canvassed for it during both the Integrated Transmission Planning and Regulation reforms and, more latterly, during the Extending Competition in Transmission programme. We are also supportive of the proposal for a separate transmission licence for the new 'NGSO' entity within the wider National Grid group. In our view this will clearly delineate the SO and TO roles within National Grid. We note that this separation will not preclude the option to move to a fully independent SO at some point in the future if it becomes clear this, including the associated costs, would be in consumers' interests.

As the role of the SO is developed, its interactions and relationship with DNOs will also need to develop. In particular from a distribution network perspective, the complexity of the network in terms of assets and operation needs to be fully considered and the relationship between the SO and DNOs more clearly defined within industry codes, processes and procedures. In our view it is the DNO/DSO that is best placed to understand and address the

complex interaction between local development plans, refurbishment requirements, asset condition data, new connections activity and local economic trends.

Encoding the SO/DSO responsibilities and interactions will support all licensees in ensuring the most efficient use of the network and will allow for appropriate system wide actions to be taken.

Drawing on our experience during the implementation of the British Electricity Trading & Transmission Arrangements in 2005 when the Scottish SO and TO functions were separated, we believe that costs can be kept to a minimum. We are not convinced that entirely new IT systems are required for the SO. In our experience it should be possible to set up practical separation of SO and TO activities within existing systems, along with clear access restrictions.

Question 2: What are your views on the additional separation measures we are proposing?

We are generally supportive of the proposals. Regarding the appointment of sufficiently independent directors (SIDs), we would expect that Condition B22 (Requirement for sufficiently independent directors) will be copied across to the new SO transmission licence and that, as a minimum, two SIDs will be appointed.

Information ring-fencing

As noted above, we do not believe that full separation of the operational systems are required and welcome Ofgem's proposals to limit the information access of NGTO to its own assets and not get access to information on the wider national electricity transmission system.

Question 3: What are your views on our proposed approach for implementing these changes?

We note the target date of April 2019 for implementing these proposals and believe that is a realistic target. We strongly support the proposal for NGET to take steps to increase separation ahead of this date and believe that industry should be involved in this process via an Ofgem/ NGET led steering group and a series of working groups for specific work areas (for example, the SO's role in Industry Codes; in the EMR; and its interface with TOs and DSOs).

We agree that the residual NGET TO licence should be similar to that of the Scottish TOs.

Chapter 4: Next Steps

Question 1: What are your thoughts on our proposed approach for implementing the proposed changes set out in this consultation?

Please see our response to Question 3, Chapter 3 above.

Question 2: What further evidence should we consider in finalising our impact assessment of these proposals on the SO's roles and level of independence?

We note that Ofgem has not assessed the cost estimate provided by NGET and would welcome the conclusions of any formal assessment in this regard. We would expect Ofgem to engage with interested parties as it seeks to finalise this work.