

Summary of responses to the future arrangements for the electricity system operator consultations

Summary of responses

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Overview:

The future arrangements for the electricity System Operator consultations looked at the role and structure of the SO and the regulatory and incentives framework. The former was published in January 2017, seeking views on our proposals for increased independence of the electricity SO. The latter was published in February 2017, seeking views on a new regulatory framework for the electricity SO in line with the proposed future role and structure. These consultations closed on the 10 March 2017, and we received 40 responses from network operators, generation companies, suppliers, trade associations and other interested industry parties.

Some of the key themes contained in the responses we received are outlined in this document. **Please note that these are the views of stakeholders and do not necessarily represent the views of Ofgem.**

Context

Our consultations on the future of the electricity system operator set out our ambition to reform the structure of the SO to mitigate conflicts of interest and clarify our expectations of the SO's roles to ensure it is well placed to both respond to and facilitate the transformation of the electricity system. We also intend to review the SO regulatory framework to ensure the SO delivers the best possible outcomes for consumers under its proposed future role and structure.

Building on the feedback to our consultations and our own analysis, we have published a working paper that updates stakeholders on our latest thinking on the roles and regulatory framework for the electricity SO.

This document accompanies the working paper and summarises the responses we received to both consultations. For consistency, we have focussed this document on summarising the responses relating to the working paper (the roles of the SO and the future regulatory framework). Responses regarding the separation of the SO will be summarised in our decision on the separation of the SO.

We will continue to use the stakeholder feedback we received to our consultations to develop our thinking on the regulatory framework, in particular to develop options for the design of SO performance metrics and financial incentives. We intend to share this work with stakeholders and hold workshops in Autumn.

Associated documents

Future of the SO

- [Future arrangements for the electricity system operator: its role and structure consultation](#) (January 2017)
- [Future arrangements for the electricity System Operator: the regulatory and incentives framework consultation](#) (February 2017)

Current SO incentives schemes

- [Final Proposals for electricity System Operator incentives from April 2017](#) (March 2017)
- [Decision for electricity System Operator incentives from April 2017 - Modification of Standard and Special licence conditions of the transmission licence](#) (April 2017)

Links to other work areas

- [A Smart, Flexible Energy System - call for evidence](#)




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Consultation respondents

We received a total of 40 responses to both consultations: 20 respondents replied to both consultations, 19 respondents replied to the role and structure consultation only and 1 respondent replied to the regulatory and incentives framework consultation only. We received two confidential responses. The stakeholders who provided non-confidential responses were:

Organisation	Type	Consultation
British Gas	Big Six	Regulatory and incentives
Centrica	Generation	Role and structure
Citizens Advice	Consumer group	Role and structure
Dong Energy	Supplier	Both
Drax Group	Generation	Both
E.ON	Big Six	Role and structure
EDF	Big Six	Both
EDF Trading	Generation	Role and structure
Electricity North West	DNO	Both
Electricity Storage Network	Trade association	Both
Electricity Supply Board (ESB)	Generation	Role and structure
Elxon	Industry body	Both
Energy Networks Association	Trade association	Role and structure
Energy Policy Group, University of Exeter	Research	Both
Energy Systems Catapult	Research	Both
Engie	Supplier	Both
Enzen	Consultant	Both
National Grid (NG)	System Operator / Transmission Owner	Both
Northern Powergrid	DNO	Role and structure
Origami Energy	Flexibility provider	Role and structure
Renewable UK	Trade association	Both
RWE	Generation	Both
ScottishPower	Big Six	Both
Smarter Grid Solutions	Consultant	Role and structure
Smartest Energy	Supplier	Role and structure
Solar Trade Association	Trade association	Role and structure
SP Transmission	Transmission Owner	Both
SSE	Transmission Owner / Generation / Big Six	Both
The Institution of Engineering and Technology (IET)	Professional society	Role and structure
Transmission Investment	Transmission business	Both
UK Power Networks	DNO	Both
UKPR	Flexibility provider	Role and structure



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Uniper	Generation	Role and structure
Viv Endecott	Consultant	Role and structure
VPI Immingham	Generation	Role and structure
Western Power Distribution	DNO	Both
EnergyUK	Trade association	Role and structure
NWCC PPA Group	Local authorities	Role and structure

Responses that were not marked as confidential have been published on our [website](#).

Responses to questions - Future arrangements for the electricity system operator: its role and structure

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)?

28 respondents replied to question 1 (including NG).

In general, all of the respondents that replied to question 1 were broadly supportive of the high-level proposed objectives for the SO.¹ To summarise, these were overseeing a safe, resilient, and cost-effective electricity system, driving competition and efficiency across all aspects of the system and promoting innovation and promoting flexibility and smart/demand-side solutions. In particular, a few stakeholders commented that the use of “oversee”, “drive” and “promote”, was ambiguous. More detail and clarity was requested for instance on the governance of these objectives and the enforcement approach.

Regarding the first objective to oversee a safe, resilient, and cost-effective electricity system, one DNO thought that “oversee” was not the correct term to use and suggested changing to “coordinate” to reflect that more interactions with DNOs will be required in the future. Another stakeholder suggested that we add “secure” to the objective so it would read, “overseeing a safe, resilient, secure and cost-effective electricity system”.

Regarding the second objective to drive competition and efficiency across all aspects of the system, one DNO felt that the SO role in this space should be “thin” and limited to identifying system need and the transmission owners (TOs) should be responsible for system design in their geographic area. Hence, it should read as “facilitating” competition instead of “driving”.

Regarding the third objective to promote flexibility and smart/demand-side solutions, a few stakeholders expressed that the products and services that the SO procures should be technology neutral. One large supplier emphasised that the SO should not have an explicit objective to promote any particular technology solution, instead the SO should focus on creating a level playing field for all providers to compete.

NG’s view

National Grid agrees with the proposed objectives and mentioned its Future Role of the SO (FRSO) programme, which supports the delivery of the transformative changes needed to deliver these objectives.

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

27 respondents replied to this question (including NG).

Stakeholders were broadly supportive of the roles we identified to achieve the objectives mentioned above. To summarise, these were acting as a residual balancer, facilitating

¹ Paragraph 2.1 sets out our objectives for the SO:
https://www.ofgem.gov.uk/system/files/docs/2017/01/future_arrangements_for_the_electricity_system_operator.pdf

competitive markets, facilitating efficient whole system outcomes and supporting competition in networks. We have organised stakeholder views (including views from NG) relating to each specific role in further detail below.

In general, stakeholders wanted us to be clear and explicit in our expectations of the SO, but they welcomed a longer-term approach by the SO and said it was crucial that the SO works closely with industry participants in order to meet its objectives.

NG agrees with the expectations of how the SO can achieve these objectives and views a legally separate SO as an enabling factor to delivering these roles and objectives. NG highlighted that they have already created the FRISO programme to deliver "enhanced roles" and argue that the FRISO programme is additional to the RIIIO-T1 price control and therefore needs additional ex ante cost allowances.

Acting as a residual balancer:

- Stakeholders agreed with the SO minimising its role as residual balancer. One stakeholder said the SO's role should aim to be "thin", as it should facilitate the market to balance their own positions as much as possible.
- In order to help the market balance its own position, stakeholders agreed that greater transparency and information provision on actions taken inside and outside the balancing mechanism (BM) is needed. One stakeholder suggested overhauling the SO website as its current structure is not intuitive; others were calling for more information to be released and for it to be made simpler. One stakeholder said that the SO needs to ensure services are "transparent, accessible and work together effectively". Another stakeholder went further and called for a holistic review of balancing services.
- A few stakeholders argued the SO needs to ensure it undertakes the co-ordinated development and design of services and ensures its procurement process is transparent, accessible and standardised wherever possible.
- Stakeholders also agreed that the SO should be ensuring it maintains robust systems and seeks continuous improvement to ensure its modelling and forecasts remain as accurate as possible. They also identified that longer-term forecasting is important too in order to understand the future needs of the system.
- One supplier felt that the SO should avoid being locked into high prices by not contracting more than 2 years ahead, whilst other stakeholders argued that longer-term contracts provide revenue certainty for investors looking to deploy new technologies. Most stakeholders agreed that an indication of the services that the SO will need in the longer term would be helpful.
- One stakeholder questioned whether the SO, as a market participant in its own right, was the right body to drive changes and whether this could be, better driven by another group that isn't driven by the SO. It argued the SO may have a clear preference for certain aspects of market design that do not align with those of other stakeholders and this could give rise to conflicts of interest.
- **NG's view:** it recognises that there are an increasing number of one-off incidents when the SO is managing a greater proportion of market actions. NG wants to address this and minimise its role again as it agrees that encouraging market participants to further self-balance would increase efficiency and reduce overall costs to consumers. NG is aiming to improve the way information is provided to market participants; it is producing a structural market change paper and reviewing BSUoS charges. The SO is also proposing to lead aspects of the broader review such as trialling auctions as well as more real time procurement and alternative market structures (e.g. regional market trial).

Facilitating competitive markets:

- Stakeholders agreed that the SO needs to take a longer term and holistic approach to contracting and work towards increasing market-based approaches to procurement of its ancillary and balancing services. Stakeholders agreed that greater transparency of actions taken outside the Balancing Mechanism (BM) is needed. Most stakeholders recognised that in some cases, bilateral procurement of services is optimal, but they called for more transparency on bilaterals wherever possible.
- Most stakeholders agreed that new products and services should be technology neutral. Most stakeholders agreed that the SO should be seeking to recognise the rise of new technology and the associated value that it may be able to provide to the system. However, the SO should implement unbiased ancillary services that allow new and existing technology to participate in order to create a level playing field. Consequently, stakeholders argued that effective competition should determine the balance of procurement from different service providers instead of SO targets.
- One stakeholder raised the point that a level playing field is also needed between BM and non-BM (currently BM parties can access different information compared to non-BM parties).
- Some stakeholders stressed that flexibility providers need to be able to stack and combine revenue streams, offering flexibility to parties other than just the SO in order to fully realise the benefits of a truly flexible marketplace. Another stakeholder argued that any stacking of revenues enabled in the ancillary services market should not threaten the level playing field by unfairly giving existing plant an advantage or risk crowding out of new entrants.
- One stakeholder suggested regular auditing of SO procurement and charging processes relating to ancillary and balancing services.
- A few stakeholders highlighted that the SO role needs to be consistent across the transmission-distribution boundary if balancing services are expanded to distribution level in the future. We expand further under the facilitating efficient whole system outcomes section on the following page.
- Regarding industry codes, a few stakeholders raised the point that code management needs to become more representative of industry. In particular, emerging technologies need representation at stakeholder forums and during modification processes. A few stakeholders said that regular review of industry codes and network charging arrangements is needed. One stakeholder argued for an alternative approach in which code governance would be relocated in a dedicated body in the public sphere.
- **NG's view:** it recognises the need to improve the simplicity of its services and improve the information provided to market participants. NG emphasised that it has made progress in this area by creating the FRSO programme and it has committed to an improved website with changes to how information and data is provided to market participants. NG also highlighted that it is engaging with new market entrants to understand how to bring them to market (and has interacted with nearly 200 parties in the last 8 months). Generally, NG is reforming products and services to be fit for purpose in the decarbonised and decentralised future. NG agrees that the SO should take on a more active role with regard to code governance and argues that it has made progress in this area already with the Level Playing Field workstream within the FRSO programme. NG are also working to improve its demand forecasting capabilities (eg through collaborating with DNOs).

Facilitating efficient whole system outcomes:

- Generally, stakeholders were supportive of the SO adopting a more holistic, whole system view as well as taking on a more long-term strategic perspective. Stakeholders recognised that culture change would be required in order for the SO to deliver its balancing role from a whole system perspective. For instance, one stakeholder suggested that the SO would need to interact more with distributed connected generators in order to make balancing more competitive and inclusive.

- Most stakeholders agreed that the SO needs to better coordinate and share more information between DNOs and TOs to facilitate a whole system view. Stakeholders requested further clarity on the DNO and SO role and emphasised that we should, wherever possible, try to maintain synergies and avoid duplication of roles. Some stakeholders also emphasised that we should ensure that obligations and incentives for the SO and DNOs are appropriately aligned. One stakeholder suggested defining the roles of the SO and DNO in industry codes.
- One stakeholder argued that in order for the SO to facilitate a whole system view, it needs to be given the control to do so (otherwise conflicts of interest will arise with DNOs). Whereas DNOs argued that the SO should be working with them to contribute to whole system thinking instead of overseeing it.
- One stakeholder thought the SO should have clear objectives to work with DNOs when identifying and procuring balancing services in order to make effective system wide decisions on solutions.
- Many stakeholders mentioned the Energy Networks Association (ENA) as a pathway to explore solutions to drive whole system efficiency. Furthermore, stakeholders also said that the Network Options Assessment (NOA) could evolve to facilitate this role. In particular, some stakeholders expressed that it needs to become more transparent around DNO / SO interactions (eg the pipeline of potential projects to be competed).
- Another stakeholder agreed that the SO should build on the System Operability Framework (SOF) document to better inform industry of medium term issues and opportunities.
- One stakeholder said the RIIO regulatory framework was designed to encourage each network licensee to undertake the most efficient actions in its licence area and Ofgem now need to consider how to develop a regulatory framework to deliver whole system outcomes.
- In particular, TOs emphasised that they need to continue working together (and stressed that they must be able to control their own infrastructure in emergencies). They argue that the SO should have a coordination role on joint TO projects instead of a leading one.
- One stakeholder felt that either the Government or Ofgem should take on the role for the whole systems approach (they argued this would allow the CM, CfDs, and carbon taxes to be considered as part of the whole system).
- **NG's view:** it agrees that there is a need for greater co-ordination across transmission and distribution networks to ensure that outcomes are efficient from a whole system perspective (this involves information exchange, clarifying roles and responsibilities across TD boundary and enhancing the visibility and controllability of distributed generation resources). NG are seeking to achieve this through bilateral engagement with DNOs.

Supporting competition in networks:

- Generally, stakeholders were supportive and agreed that there needs to be greater Ofgem/SO/industry coordination in order to achieve this role. In particular, the involvement of relevant industry parties in the annual NOA development process.
- Stakeholders stressed that SO separation is key in order to mitigate conflicting interests and realise the benefits from this role.
- Stakeholders wanted further clarity on the interactions between SO and DNOs when it comes to long-term planning (for instance does the SO have overall ruling of network reinforcement decisions?)
- Other stakeholders felt that the SO should have a role planning all works necessary to connect new generation and/or demand.
- One stakeholder said the SO should be embracing distributed energy resources (DER) and harnessing their value as a non-wires alternative to network development as they can provide a competitive solution to some network development requirements (but arguably not all).

- One research organisation (that also argued for an ISO) suggested moving toward distribution system operation (moving wholesale market activity down from wholesale markets to more local distributed markets) and referenced the distribution service provider (DSP) concept being developed in New York. It also suggested additional roles on decarbonising the electricity (and wider energy) system and on handling interfaces between electricity, gas, transport and heat energy systems (as the degree of interaction between the electricity, gas, district heating and transport energy systems will become much closer in the future).
- **NG's view:** it supports competition in the delivery of transmission network infrastructure where this is shown to add value and is in the interests of consumers. NG are proposing to extend their existing NOA capability to include a methodology and set of principles to facilitate the projects that are provided to the SO as options into the NOA process and assess those that should be subject to a competitive process.

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

27 respondents directly replied to this question (including NG).

Most stakeholders are supportive of proposals to change the SO's existing licence obligations to support the delivery of the objectives above. One stakeholder called for more detail on the licence changes proposed. One stakeholder argued EMR and the facilitating whole system outcomes role need licence obligation changes. One stakeholder argued that the roles need to be embedded into the licence regime as part of the SO's obligations. A few stakeholders argued that the SO needs its own separate licence.

One stakeholder argued that as DNO cooperation is required for the SO to meet its objectives, DNOs need to be incentivised to ensure this happens. Another stakeholder argued that we should reform all types of electricity licences, not just the transmission licence for this to be effective.

More generally, most stakeholders said we needed to strike the right balance between licence obligations and SO incentives in order to be effective.

NG's view

NG welcomes further clarification as to which licence obligations will support the delivery of the roles specified. NG agrees that clarification is needed for role 3. NG also expressed that the delivery of objectives will require either supporting licence modifications or clarification of existing licence conditions.

Question 4: What are your views on the extent to which we should set specific or general obligations for the SO?²

18 respondents directly responded to the question (including NG).

There were a mixture of views from stakeholders – some stakeholders felt general obligations may be appropriate in some cases and in other cases, specific obligations may be necessary. Most stakeholders generally agreed that a hybrid approach using both specific and general rules would be required. Further clarity within the regulatory framework in respect of SO/TO split will also be required for effective implementation.

² Many stakeholders referred to principles-based regulation (PBR) in their responses to this question. We have summarised these in more detail in question 4 of the regulatory framework section.

Some stakeholders argued that anything specific should be established in the SO licence. Others reasoned that specificity in the licence makes it too rigid and proposed that anything more general / principle-based may be more practical for licence conditions (anything specific should be based around a target and contained in standalone documents).

One DNO felt general obligations should be set for all aspects of the role with specific obligations being used to drive any desired outcomes. One supplier felt specific obligations should be set for the SO and DNOs and that these should include clear roles and responsibilities to enable delivery of objectives.

One research organisation called for more principles-based regulation (PBR) than prescription to allow SO to be proactive in dealing with future challenges. Similarly, one stakeholder felt the roles were best governed through PBR and supported by clear guidelines on expectations.

NG's view

NG believes general obligations provide less regulatory certainty and more scope for interpretation. However, NG contends that the appropriate balance between principles-based requirements (delivered through financial incentives) and obligations (delivered through KPIs) is the best approach to maximise the value delivery to consumer. Having a balance allows some flexibility for different approaches. Specifically, it mentioned that guidance documents and open letters should be considered to deliver clarifications, as licence conditions are not sufficiently agile to incorporate changes in expectations of the SO.

Chapter 3: A more independent SO

As noted previously, questions in chapter three of the consultation relating to the separation of the SO will be summarised in our decision on separation.

Chapter 4: Next steps

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

24 respondents directly replied to this question (including NG).

Generally, stakeholders were happy about the implementation timings and were happy for progress to be made in areas that do not require licence changes, encouraging the SO to be proactive in making changes in these areas and being transparent on timing for any next steps.

Many stakeholders recognised that there was significant overlap with the work Ofgem is also doing regarding the roles of DNOs. In particular, stakeholders raised the risk that there may be conflicts of interest or duplication of roles if DNOs are empowered to manage resources on the distribution network. Stakeholders agreed that in order to manage this risk, the SO and the DNOs would need to work collaboratively. Either they or Ofgem should map out clear roles and responsibilities so that parties are clear as to what is expected of them going forward. A few stakeholders argued this could be drawn out further under the roles of the SO (for instance under facilitating efficient whole system outcomes).

One stakeholder said that the future model for the SO needs to align well with the future model for the DNOs. A few stakeholders (mainly DNOs) felt that the DNO should have responsibility for identifying the need for distributed services as well as their dispatch and availability. In particular, one DNO emphasised that the scope of our work should not extend to the distribution network (they argue that separating distribution network ownership and system operation would be difficult to achieve and would make the network longer and more intricate).

A few stakeholders pointed out that sufficient stakeholder engagement would be needed throughout this process. Some stakeholders requested further clarity on how we intend to recover costs if we're not reopening RIIO-T1, highlighting that they needed predictability of charges.

NG's view

NG agreed that work can commence now to facilitate transformation. NG argued that the regulatory framework for the SO will need to incentivise the "new ways of working that are being created". NG also argued that further separation and the FRSO programme needed to be adequately funded and referred to their separate submission regarding costs that they expect to face.

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

23 respondents replied to this question (including NG).

We have summarised the responses that specifically related to roles. A general comment from many stakeholders was that more impact assessment analysis needs to be conducted to ensure we understand the net benefit of the proposals and to provide assurance that Ofgem is taking a proportionate approach. Some stakeholders mentioned conducting a cost-benefit analysis in the following areas to understand:

- The potential impact on DNOs.
- The potential impact on industry codes.
- The potential impact of the introduction of more physical ownership boundaries to overall system resilience.

Most respondents recognised that the benefits are difficult to quantify. One research organisation referenced the Future Power System Architecture (FPSA) project, which studied system level challenges facing the electrical power sectors of Germany, Ireland, the United States and South Korea as potentially having useful evidence for our impact assessment.

NG's view

NG suggested that we undertake a full impact assessment and try to quantify as many of the benefits as possible. NG sees the creation of a legally separate SO within National Grid as an enabler to the SO taking on its enhanced role. It suggests an interim review of FRSO outputs in September 2019, with a full review of the model at the end of the RIIO-T1 period in 2021.

NG commented with a few other risks and uncertainties for us to consider in our impact assessment:

- Potential loss of synergies coming from the current model where gas and electricity system operators work together as one SO.
- Unforeseen costs which have not been accounted for.
- Funding must be timely and regulatory framework needs to be in place in order for transformation to be effective and to realise benefits. There is a risk of delay, which would escalate costs and defer benefits from being realised.
- Consideration of the impact of uncertainties in the current political landscape (UK withdrawal from European Union and changes in government policy).

Responses to questions - Future arrangements for the electricity system operator: the regulatory and incentives framework

CHAPTER ONE: Background and objectives

Question 1: Do you agree with our objectives for the future SO regulatory framework? Are there any missing?

17 stakeholders responded directly to this question (including NG).

There was general stakeholder support for the objectives³ for the future SO regulatory framework. Most stakeholders agreed that the future framework design needs to reflect the balance between short-term and future benefits. In particular, one independent supplier argued that the electricity system is driven by changes that have benefits that take many years to be realised, whilst the SO is incentivised over short timescales. In order to address this mismatch and balance long-term and short-term SO incentives, appropriate governance of the SO is required.

One stakeholder said the objectives have some ambiguity and were open to interpretation. Similarly, another stakeholder said that the objectives need to be aligned with the wider governance regime (eg Applicable Objectives and European codes) and should not give rise to any misinterpretation.

One stakeholder argue that these objectives should be set out in the relevant GBSO licence rather than a separate incentive scheme, as the licence would be the best way to hold the SO to account.

A few stakeholders highlighted that they were particularly supportive of the objective for the SO to work closely with other network operators, in particular DNOs. Some stakeholders requested a more explicit role between the SO and its stakeholders / customers. For instance, one DNO said the SO regulatory framework should also incentivise the SO to provide a good service to its stakeholders. Another stakeholder argued that we should include an objective to ensure that code and market arrangements remain fit for purpose.

Furthermore, a few stakeholders mentioned that there is an important role for greater stakeholder engagement in helping to shape and evolve SO targets (particularly in an evolving system) and assessing whether the expectations are achieved.

NG's view

NG explained in its response that the future returns of the SO should be commensurate with the risk managed on behalf of consumers, and linked to SO performance. NG argued that system balancing has become more complex since the RIIO-T1 settlement, and it needs consistency in the overall regulatory approach to help it to continue to manage these risks effectively. NG agreed with the first objective of 'maximising efficiency of the whole electricity

³ Objectives for our future SO regulatory framework (page 9):
https://www.ofgem.gov.uk/system/files/docs/2017/02/future_arrangements_for_the_so_-_the_regulatory_and_incentives_framework_0.pdf

system' and in order to achieve this, it said incentives and associated obligations for other parties such as DNOs should be aligned with those of the SO.

Question 2: How can we best transition to a SO regulatory framework which meets these objectives? When should changes be made?

17 stakeholders responded directly to this question (including NG).

Generally, stakeholders were supportive of Ofgem's ambition to simplify the SO regulatory framework by bringing all the different elements together under one consistent package. Some stakeholders were broadly supportive of aligning a fundamental review of SO regulatory framework with RIIO-T1, but were also aware this would lead to significant workload for Ofgem. For instance, one research organisation said this might be challenging and suggested focussing on the key tasks of the SO (as defined under the roles). One stakeholder said creating a more coherent and less fragmented regulatory framework for the GBSO with enhanced roles will require a number of interim steps over the next few years (and Ofgem should carefully consider the time for consulting on these incremental changes).

Most stakeholders recognised that implementation is dependent on the RIIO price controls and arrangements need to be in place before the next price control begins. Most stakeholders were supportive of transitioning via step-changes in 2018, 2019 and 2021, as this seemed more realistic. Furthermore, phasing-in the relevant incentives to coincide with the next round of price controls for TOs and DNOs (as the transmission and distribution price controls expire in 2021 and 2023 respectively) was seen as a pragmatic way of avoiding any distortions. For instance one stakeholder said that they would like to see, in 2018, mind-set and cultural changes taking place within the SO business before the licence changes. For 2018-2019, they would like to see a one-year incentive scheme to allow refinements to be incorporated potentially into a two-year scheme for 2019-2021. Beyond 2021, Ofgem would have the opportunity to align changes to BSIS with incentives. A few stakeholders suggested aligning obligations and incentives between the SO and DNOs (eg one stakeholder suggested starting the TSO's RIIO-T2 price control from 2023 instead of 2021). More importantly, stakeholders were keen to see a plan in place before any review is started.

Stakeholders encouraged Ofgem to act now and take the necessary steps through 2017 to implement reform from April 2018. They expect that robust governance arrangements will be put in place prior to April 2019. One research organisation suggested introducing a new incentive scheme on NGET's external balancing costs from April 2018, before the legal separation in April 2019.

NG's view

NG believes any changes in 2018 will need to be consistent with the longer-term direction of travel and sufficiently flexible to make the most of the opportunities presented by legal separation of the SO. NG sees 2018-21 period as a stepping-stone to a new price control under the RIIO mechanism (where more fundamental changes may be needed).

CHAPTER THREE: Review of the current framework

Question 3: What lessons can be learned from our previous approaches to regulating the SO? What are the key areas where changes might be needed in future?

17 stakeholders directly responded to this question (including NG).

Current framework

Regarding the current framework, most stakeholders commented that the current Balancing Services Incentive Scheme (BSIS) relies heavily on setting a forecast target that is representative of outturn balancing costs. Stakeholders recognised setting the target is a

difficult task to achieve, as there are many factors that can lead to these outturn costs being much higher or lower than expected. A few stakeholders also questioned why the SO's own models are used to provide the key information used to set the target. They commented that there is too much emphasis on NGET to identify errors without a strong incentive for them to do so. Generally, stakeholders felt that forecasted targets for incentivised balancing costs had been relied upon too much in the past whilst their credibility hadn't been subjected to external review.

One large supplier noted that the SO incentive scheme fared well at minimising short term costs for industry but less well at investment to reduce medium and long term costs (as there is less of an incentive on the SO to factor in the implications these actions have on overall system efficiency, or wider network costs).

A few suppliers commented on the lack of transparency on incentive scheme parameters. One large supplier said there was a significant information asymmetry and so it was difficult for stakeholders to comment on forecasts for the provision of specific services.

One stakeholder commented that the SO's licence obligations could leave for interpretation whilst incentive regimes are more detailed but are open to gaming.

On a positive note, some stakeholders said that the incentives placed on the SO to innovate and engage with stakeholders have worked well and should be continued.

Future framework

Going forward and relating back to the points raised above, the lessons that stakeholders feel can be taken on board when designing the future regulatory framework for the SO are described below. Firstly, stakeholders felt that it might not be appropriate to set a hard target for incentivised balancing costs. One research organisation suggested one option is to base the target on a desired range of outturn costs with an ex post evaluation of how successful the SO was in acting to reduce balancing costs. Two other stakeholders suggested using rolling targets as have been implemented for the planned interruptions element of the RIIO-ED1 Interruptions Incentive Scheme (IIS).

Stakeholders were supportive of a greater focus on long run outcomes (and the SO having a broader assessment of wider costs in making decisions on balancing services) in order to strike the appropriate balance between efficient short term operational activities and facilitating longer term developments. One stakeholder argued that it might be appropriate to focus the remainder of the RIIO-T1 period on developing a longer-term approach to incentivising balancing activities instead of using short-term schemes. Similarly, another stakeholder pointed out that a longer incentive scheme would require a different approach because using the current model-based approach to set targets over the longer term would be challenging. They argued that how well an investment drives long-term efficiency isn't felt immediately and so rewarding the SO would be difficult to do using facts available at the time. Most stakeholders agreed that the future framework needs greater transparency from the SO and the engagement of more stakeholders, enabling further oversight from external parties. Many stakeholders also said there should be a greater role for industry in the development, monitoring and governance of incentives. Stakeholders were supportive of an independent body to assess the SO's performance against the target. One research organisation suggested a better solution would be for an independent party, such as Elexon, to hold the key information and run the models used to produce the forecast. Stakeholders were also supportive of benchmarking/ using similar KPIs to other ISOs internationally and were broadly supportive of using KPIs generally.

A few stakeholders recognised the trade-off of introducing a variety of separate, meaningful and measurable incentives and trying to reduce complexity by reducing the number of incentive arrangements. One DNO argued having a number of separate frameworks for the SO

is complex and makes it difficult to assess the SO's performance in the round. They also stated that as DNOs transition to increasingly become DSOs, there will be an increased need for the incentives and obligations for the SO and DNOs to be aligned and to interact effectively together. They argue this can be done through RIIO framework (by bringing together the current TSO regulatory structure into a single price control under RIIO framework). A few others also suggested the RIIO framework approach, where the SO should be encouraged to consult with stakeholders in defining and setting its incentives and targets as part of a business planning approach.

One stakeholder said that the industry needs a transparent process to raise issues or secure responses to queries as well as a more robust system to flag and challenge the SO's balancing actions.

NG's view

NG agreed that modelling future outcomes and setting targets has become increasingly complex as the future becomes increasingly uncertain. NG argued that the use of short-term incentives, where the results must be realised within-year, mean that it focuses on efficiencies that will reap benefits in this timescale (it argues this makes longer-term investment more difficult to justify and shows how shareholder and consumer benefits can become misaligned). NG supports incentivising and rewarding longer-term thinking as it recognises that it can do more to drive innovation and actions that will deliver benefits over the longer-term.

NG argued that it is beneficial to maintain a modelled approach in some way, as target setting is an important way of driving efficient behaviours. NG is also keen to find new ways of working to support a shared understanding of the methodology across the SO's and Ofgem's teams. It supports the continued use of strong financial incentives that is commensurate with the SO's increasing role and the risk.

NG argue the RIIO-T1 framework for NGET does not place a strong enough focus on the SO's activities nor on outcomes that can be driven by the SO's behaviour. Consequently, the incentives for NGET under RIIO-T1 have not been as sharp on the SO as they have for the TO. NG clarified that the SO does not currently benefit from customer, stakeholder, environmental incentives as well as innovation funding that is in place for NGET through the RIIO-T1 period (any resulting revenue only accrues to the TO part of NGET).

Going forward NG agrees that it needs to address issues in trust and transparency and has committed to working together with Ofgem to improve the governance of the BSIS scheme, improving communication with stakeholders and fostering transparent and open dialogue with Ofgem.

CHAPTER FOUR: Future framework design

Question 4: Do you believe we need to introduce more clarity about what we expect from the SO under its obligations? How should this clarity be provided? To what extent should we set prescriptive or principles-based requirements?

16 stakeholders directly replied to this question (including NG).

Clarity on SO obligations

Generally, most stakeholders stated that they needed more clarity and transparency on the SO's obligations. There was broad support for Ofgem to set out clearer expectations for what the SO needs to achieve under its obligations. There was also support to develop a shared understanding amongst Ofgem, NG and industry of what SO should be delivering (eg what ambiguous terms like "facilitate" mean) especially as we potentially move toward wider industry governance.

Principles-based regulation

Regarding principles-based regulation (PBR), opinion was somewhat mixed amongst the stakeholders that responded. Some were supportive of PBR for the SO; others argued that as the SO is a monopoly service provider, prescription is more appropriate to mandate competitive processes, transparency and open dialogue with market participants.

Stakeholders argued that if the output required is very specific in nature and the obligation to be placed on the SO can be tightly defined, then prescriptive regulation may be suitable. For instance when setting transparency and reporting requirements, or data handling and sharing obligations with other market participants.

However, stakeholders also accepted that PBR provides greater flexibility for the SO to innovate and places greater responsibility on the SO to ensure the appropriate consumer outcomes are delivered. It also aligns with Ofgem's wider approach to regulation. However, a few stakeholders recognised that PBR only works where the regulator is prepared for open dialogue (with the SO but a few stakeholders called for an open dialogue with other market participants as well).

Furthermore, some stakeholders thought it was difficult to see how the SO's objectives could be achieved through PBR, particularly when planning and connection codes place specific obligations on licenced parties. Furthermore, European Network Codes are fairly prescriptive on the minimum requirements required from regional SOs; therefore, the new framework must be mindful of those requirements.

To summarise, most stakeholders agreed that a hybrid approach comprising of principles-based rules and prescriptive obligations should be considered. Stakeholders said it was important that the right balance between principles and prescription is struck to avoid unnecessary ambiguity and provide market with confidence. One research organisation called for a number of different approaches to regulate and incentivise the SO given the complexity and breadth of the SO's role.

One consultant said the set of principles will need to be sufficiently focussed (eg not too broad) so that their scope and purpose is clear. They should also provide coverage of the decision domain and there may also be a need to define hierarchical relationships between principles that may find themselves in conflict in certain complex situations. They said that design of the principles framework will require significant testing against a range of scenarios to ensure it is complete and effective.

Some stakeholders that supported principles were calling for them to be embedded in the licence whilst others say Ofgem could provide guidance materials including open letters and licence condition guidance documents.

In terms of operationalising PBR, one stakeholder highlighted the interpretive risk with using principles (eg in certain complex situations, "two independent and competent people" would apply the framework of principles and arrive at different conclusions). Another stakeholder questioned what would happen if Ofgem and the SO differ in their interpretations of principles. In order for PBR to be effective, the SO would need to have the confidence that, so long as it applies the principles competently, it won't find itself penalised in some way later. The test should be whether the SO made an objective and rational decision within its degrees of freedom as opposed to whether the SO's decision / actions were what the regulator or expert panel would have done. The stakeholder argued that to the extent that the regulator believes an even better decision could have been made, this should be treated as a learning point for the SO.

One research organisation called for performance-based regulation for the SO, where desired outcomes are clear and well-defined, and where outcomes can be linked to wider policy or

societal objectives. They argued that PBR is very subjective and leads to the regulated party second guessing what the regulator wants.

NG's view

NG welcomed the increased clarification and a more collaborative approach with Ofgem in order to align expectations. It argued that any clarification of the SO's obligations must be sufficiently broad to avoid stifling innovation and falling out of date with the progress of the market. Tools such as guidance documents and open letters should be considered to deliver these clarifications, as licence conditions are not necessarily sufficiently agile to incorporate changes in expectations of the SO.

Similar to stakeholders, NG supports a balance between principles and prescription – it argues too much prescription won't move with the fast changing energy system and too many high level principles can be stifling if oversight leads to penalising mistakes. NG supports an appropriate balance between principles-based requirements (delivered through financial incentives) and obligations (delivered through KPIs) and argue this is the best approach to maximise the value delivery to consumers. This balance between incentives and obligations is important to ensure flexibility for the different approaches and opportunities to innovate. NG recognises that in order to deliver this, there will need a change in culture from the SO and Ofgem to build trust.

Question 5: Should we place financial incentives on the SO? If so, in which areas? And what form should they take?

Financial incentives

Generally, stakeholders were fairly supportive of financial incentives – a few stakeholders argued that these give the strongest incentive to deliver value to consumers. Some stakeholders suggested that financial incentives should be used for activities that are relatively stable and can be modelled robustly. Furthermore, stakeholders said they need to have clear targets that are properly calibrated, can be appropriately defined in advance and effectively measured. One large supplier stated further that financial incentives should have rewards and penalties that are proportionate, with upside and downside risks that are genuinely symmetric where appropriate, and the schemes must promote long-term efficiency and drive continuous improvement.

Stakeholders suggested a few areas where financial incentives might be effective. These were balancing services, capacity market size, forecasting incentives (demand and wind generation), stakeholder incentives (though these may be discretionary) and requirements for ancillary services.

Some respondents argue that both financial and non-financial incentives are needed. Others called for a mixture of long and short-term incentives depending on the action being incentivised. There were a few calls for Ofgem to review how financial services interact with the wider incentive scheme. In particular, one stakeholder suggested that Ofgem needs to find the right balance between the use of financial incentives and the enforcement of licence obligations.

Approach to financial incentives

There was general support for a discretionary based approach. Some stakeholders said it better lends itself to a holistic, long-term approach (coupled with clear up-front criteria and a transparent decision-making process). Another stakeholder said discretionary incentives would complement a panel of experts since both would be appropriate to challenge the SO's measured performance. One stakeholder suggested using a discretionary based approach until we can design meaningful target based incentives. A few stakeholders (including a research

organisation and a DNO) said it was inappropriate for the SO to be incentivised on managing costs over which it may not have much control as it leads to windfall gains and losses. In particular, in the future, the SO may become more reliant on actions taken by DNOs to balance their networks hence setting a meaningful incentivised balancing target will be very difficult.

On the other side, one stakeholder argued that target based incentives that act over time may be better for driving the efficient development of the system (eg forecasting, balancing and cost reduction incentives) as they allow companies to implement change and invest to deliver improved performance.

One option suggested by a research organisation is to use a mix of both approaches where a target is set based on a desired range of outturn costs (any incentive payment would be based on how successful the SO was in keeping outturn costs within the desired range plus an additional payment (or penalty) based on an ex post evaluation of how successful the SO was in acting to reduce outturn balancing costs). Similarly, another stakeholder called for the SO to provide a specific schedule of proposed interventions that it thinks should be subject to potential incentive benefits (not including BAU activities). The SO would then consult with industry on this schedule, demonstrating where it can deliver benefit to GB consumers and seeking regulatory approval. It should then be rewarded through specific benefits if it delivers the relevant schedule.

Wherever possible, stakeholders broadly felt that incentive measures should be based on outcomes for customers rather than inputs delivered.

One stakeholder said behaviours such as transparency should be an expected way of working that consumers shouldn't have to pay extra for. They argued that for these issues, it is more appropriate for there to be no reward, instead only a penalty mechanism should apply.

NG's view

NG is supportive of target-based incentives and it argues they have a stronger impact in driving behavioural change than discretionary incentives. In particular, NG stated that if the criteria for achieving a discretionary reward is less than certain, this can lead to excessive focus on regulatory reporting and justification of activities to the regulator, rather than delivering outcomes for the benefit of consumers.

NG is also supportive of financial incentives. It argues that strong financial incentives ensure that consumer and shareholder values are aligned and they apply competitive pressure on the SO to innovate. Furthermore, continuing to use sharp financial incentives will be important to maintain a consistent regulatory stance across the remaining RIIO-T1 period. The value of any financial incentives should correspond to the value of the relevant outcomes for the consumer and they should apply to any activity where the cost under management is significant.

NG also expressed in its response that the incentive period should be long enough to support whole system and long-term thinking and incentives should align with other parties such as DNOs in order to deliver optimal whole system outcomes.

Question 6: Should we introduce more non-financial incentives on the SO? What approaches should be taken? Do you support the introduction of a set of KPIs, and if so, what should these KPIs be?

16 respondents directly replied to this question (including NG).

Non-financial incentives

Generally, stakeholders agreed that both non-financial and financial incentives should be used together. Stakeholders were open to using more non-financial incentives where appropriate, but recognised the limited evidence and experience of using them. One stakeholder argued that financial incentives were more appropriate for specific *tasks* (eg forecasting) and non-financial incentives for specific *behaviours* (eg transparency). Another stakeholder suggested using non-financial incentives when financial incentives are not appropriate. On the other hand, a few stakeholders said that non-financial incentives (eg reputational incentives) tend to be less effective and introduce a greater risk of regulatory uncertainty. One large supplier said the FERC's reputational incentives have the potential to be applied to the SO if they could be enhanced with a discretionary financial incentive behind them.

One stakeholder said that as an interpretation of the SO objectives develops over time (as both the SO and Ofgem ease into the new regime), then non-financial incentives may be more suitable to developing a collaborative regime and effecting change.

One stakeholder suggested non-financial incentives should include monthly public reporting on commercial and physical operations, measurements on the equality of support provided to industry code processes, development of a separate SO culture that differs from the wider National Grid group of companies and KPIs on the transparency of network requirements.

Key Performance Indicators (KPIs)

Stakeholders supported the introduction of KPIs as long as they were developed with industry. One stakeholder said they must be meaningful, reflect an objective and realistic level of performance and, ideally, allow others to understand what minimum, good and exceptional performance looks like so parties can objectively assess how well the SO is delivering. Stakeholders supported KPIs involving a set of formal metrics to cover all the SO's roles in the system or benchmarking against other international SOs. One stakeholder said where clear and quantifiable KPIs can be set, they may sit more appropriately within a financial incentive. Another stakeholder suggested using the KPIs to introduce a scorecard for the SO's performance.

Examples of potential KPIs given by stakeholders include metrics on the accuracy of BSUoS forecasts provided to industry, the achievement of milestones in support of migration from bilateral contracting to market-based approaches in the procurement of balancing services, administrative costs of delivering the SO function and customer satisfaction associated with stakeholder engagement seminars.

Some stakeholders also asked for more clarity over how KPIs would work alongside principle-based regulation of the SO.

NG's view

NG supported the appropriate use of KPIs and it welcomes them as an opportunity to promote transparency and streamline its reporting to customers and stakeholders thereby improving value for money. NG intends to consult customers and stakeholders on what information they would value, and incorporate these requirements into the design. NG also stated that it would be beneficial to consider whether reputational incentives could be sharpened by incorporating a financial impact - it argues this could further drive positive behaviours and outcomes by leveraging the for profit structure of the SO.

CHAPTER FIVE: Incentive scheme governance

Question 7: How should SO incentives be governed in the future? Would you support a greater role for stakeholders in this process? How can we introduce more transparency around incentives?

17 stakeholders directly replied to this question (including NG).

Stakeholders strongly supported greater industry involvement in the governance of the future regulatory framework for the SO (including designing incentives and the scrutiny of SO performance). This includes all stakeholders and not just direct customers of SO. There was strong support for third party audits and quality assurance of the models used to set incentive targets and of the analysis of the SO's performance. However, one stakeholder questioned whether an independent/industry panel would have the resources to own the models used in the incentives process. Moreover, there was also support for panels, which could be elected annually, serving for finite period and agreed by Ofgem and SO. In particular, stakeholders felt they should have the opportunity to sit on a panel of experts. One stakeholder argued that if a more discretionary approach to the incentive framework is adopted, the use of industry panels and independent experts will be valuable. Stakeholders were also supportive of regular reporting. One stakeholder suggested that more joined-up reporting with a greater narrative will be required in the future to explain the SO's plans and actions on a regular basis. One stakeholder suggested explicit SO responsibility to disseminate information (through the licence or KPIs) would help to increase transparency.

On the other hand, one stakeholder said that governance should be as light as possible, consistent with giving Ofgem and the rest of the industry the confidence it needs. An overly burdensome regime, apart from being costly, could lead to the SO becoming more risk-averse rather than innovative, to the detriment of consumer benefits.

Ultimately, stakeholders must have confidence in any reporting, decision-making and performance assessment.

NG's view

NG welcomed an increased role for stakeholders in the governance of SO incentives. It agrees that greater transparency of what the incentives are and how the SO is performing could be achieved through clear reporting, streamlining of reports, and stakeholder panel sessions. NG also stated that it would be beneficial to consider how the new SO Board and governance arrangements can be leveraged in order to deliver the additional transparency and confidence that is sought.