

# Executive Summary: ESO response to the BP2 Draft Determinations

## Introduction

In August 2022 we published our second Business Plan (BP2), for years three and four of our RII0-2 price control (1 April 2023 to March 2025). Our BP2 submission, which was co-created with customers and stakeholders, will drive over £2.8bn of benefits for consumers, support a reduction in consumer bills and accelerate Great Britain's journey to net zero.

In our BP2 submission we have set clear priorities to deliver the outcomes our stakeholders need from us over the next two years – delivering excellence in system operation, building efficient and effective markets, driving clarity in our path to net zero and enabling our organisation to perform.

A big part of this will be our evolution into the Future System Operator (FSO) for GB. We will transition out of National Grid plc into an expert, independent organisation in the public sector. We will have responsibilities across both the electricity and gas systems and the ability to expand our remit to additional energy vectors when needed. Through this new organisation, we will be able to drive even greater progress towards net zero, deliver value for consumers, improve whole energy system decision-making and support energy security.

Ofgem assessed our BP2 submission and published their Draft Determinations on 30 November 2022 for consultation. Below we set out the main headlines of our response to the Draft Determinations. This is accompanied by a more comprehensive response to the individual questions posed.

## Overall message

**We broadly support Ofgem's Draft Determinations conclusions, namely that our plans for BP2 remain ambitious, are necessary for an effective ESO and have the potential to unlock significant consumer benefit.** In particular, we welcome:

- Recognition that our BP2 plans continue to demonstrate strong ambition and have a strengthened focus on driving the transformation to a fully decarbonised electricity system, in line with the UK Government's 2035 target.
- Ofgem's draft decision to allow recovery of the full amount of expenditure requested to fund our activities, which equates to £671m of total expenditure ("totex") over the two-year BP2 period. This gives us the certainty needed to continue to invest in the systems, processes, and people capabilities necessary to enable the energy transition and deliver substantial benefits for consumers.
- Agreement that all the activities we outlined in our BP2 submission are necessary for us to carry out our roles and functions effectively and to support the wider energy transition.

## Cost regulation

We support Ofgem's proposed changes to cost regulation. We recognise that, due to the bespoke nature and level of maturity of some of our technology investments, it is challenging for Ofgem to provide an appropriate cost-efficient benchmark for programme delivery. We therefore welcome the pragmatic decisions taken by Ofgem for the BP2 period. Specifically, we support the proposal to move away from setting an ex-ante cost benchmark and to replace it with clear approval for BP2 totex recovery combined with an upfront value for money score. This strikes the right balance between the need for investment certainty whilst providing a clear signal on delivery expectations.

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We also support the introduction of a cost monitoring framework which, in combination with the ex-ante insight provided by Ofgem in its Draft Determinations, will help drive cost-effective delivery. We look forward to collaborating with Ofgem to fully define how this framework will work in practice. To aid this, we have included a proposal for how the cost monitoring framework could operate in our detailed response.

## Flexibility within RIIO-2

We recognise that the flexibility inherent within our RIIO-2 regulatory framework has been invaluable during the BP1 period, allowing us to be responsive to changes in the external environment. It has enabled us to make new investments and take on new or expanded responsibilities, such as our work on Offshore Coordination and Early Competition, even between formal business planning cycles. With the pace and scale of change ever increasing within our sector, we expect the flexibility within our framework will continue to be utilised during the BP2 period.

## Technology investment plans

We agree that technology and data are fundamental to our role and will have greater importance as the energy system becomes increasingly complex. In particular, we believe that successful digitalisation of products, services and processes will further unlock innovation, flexibility, and transparency and deliver cost savings for the benefit of consumers. Given that our technology investments play a central role in enabling substantial consumer benefits, Ofgem applied a higher level of scrutiny to this area of our plans. Accordingly, through the BP2 submission process, we have provided a large quantity of information in support of our technology investment plans. This included a cost data model describing our enterprise IT and a Digital, Data and Technology annex containing full details of each of our investment programmes. We have also engaged extensively with Ofgem and their independent consultant via meetings and through detailed responses to Supplementary Questions. We will, of course, continue to collaborate with Ofgem as we deliver our technology investments throughout the remainder of the RIIO-2 period and, within our detailed response, we set out a roadmap to engage with Ofgem to address residual areas of concern.

Against this backdrop of substantial information provision and review, our high-level response to Ofgem's findings in the technology area can be summarised as follows:

- We have confidence in our technology plans – We reaffirm our confidence in the robustness of our technology plans. All our investments are strongly cost beneficial, delivering substantial consumer benefits. We believe our chosen technology solutions best meet the challenges of a complex and changing external environment. We will continue to use the agility offered in our regulatory framework to ensure our plans, and associated costs, evolve with industry needs. We are pleased that our technology investments are recognised as being vital to the delivery of priority activities across our three Roles and are essential to delivering the majority of benefits in our business plan. At the same time, we acknowledge that there are some areas where we need to provide additional information to justify our strategic decisions and respond to the questions that have been raised. In this regard, we agree that the proposed cost monitoring framework can be suitable for this purpose.
- In our more detailed response, we challenge some of the Draft Determinations' technology assessment conclusions. We feel that the assessment of our technology investments was subjective and incorrect in some areas and not aligned to either energy industry best practice or how technology of this type is typically delivered. Our more detailed response highlights where we feel an incorrect assessment of our investments has taken place.

## Additional revenue

Regarding the ex-ante fixing of BSUoS tariffs, we see merit in extending the methodology (a return on capital employed approach aligned to the CMA's energy market investigation approach) used by Ofgem in its Final Determinations for BP1. We request Ofgem to continue to use this approach for the remainder of the RIIO-2 period. This would provide consistency and certainty of how capital employed will be remunerated. It also

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scales with the level of capital committed to the revenue management role and can flex if the level of capital to support BSUoS fixed tariffs increases or decreases. Furthermore, it would be independent of the scale of revenues invoiced which has increased significantly since we have published our RIIO-2 plan.

## Future System Operator

Regarding the creation of the FSO, we welcome the proposal that efficient FSO transition costs, which include one-off costs to achieve the FSO and enduring costs for building capability for new FSO roles, will be funded through the ESO licence, with ex-ante comfort provided by Ofgem on what activities it considers to be efficient. In assessing expenditure, we believe that any cost protection measures (i.e., those relating to demonstrably inefficient and wasteful expenditure or DIWE) should be the same as the established principles set out for RIIO-2.

We also welcome the proposal that the FSO monitoring framework is to be entirely separate and decoupled from the BP2 determination and incentive process. It is correct to apply this approach to the one-off costs to achieve the FSO, which are discrete from our BP2 commitments and will unlock significant value across the energy industry and for consumers. We broadly agree with the principles set out on the scheme's design and value. In our detailed response we set out why the scheme should remain in place until "Day 2" of the FSO and the importance of proportionate reporting, recognising the current level of governance oversight already in place for FSO delivery.

We note that Ofgem has signaled that it may consult, in early 2023, on the plans to deliver the FSO, based in part on our December 2022 FSO submission to BEIS and Ofgem. We welcome further engagement on our indicative plan. Given the nature of the programme, along with several factors which are outside of our control, such as the progression of legislation and deliverables owned by other parties, we believe the consultation should focus on the plan and which activities Ofgem will consider funding, rather than specific costs (which, per the above, will in any event be subject to separate regulatory scrutiny).

In terms of funding, we believe that the proposed pass-through mechanism is only appropriate for the one-off costs to achieve the creation of the FSO - as it does not provide the ESO with any return. Enduring costs for running the business, such as additional employees to fulfil the new advisory role, should be subject to recovery and incentivization in line with the current ESO regulatory model.

## Conclusion

Overall, we welcome Ofgem's Draft Determinations on our BP2 submission. We are pleased that Ofgem's proposals contain a strong endorsement of our level of ambition and allow us to implement all the elements of our BP2 plan, delivering around £2.8 billion in benefits for consumers over the five-year RIIO-2 period. We will continue to work collaboratively with Ofgem to provide any additional information needed and to understand how the cost-monitoring framework and changes to some of our performance metrics will work in practice. We also look forward to working closely with our customers and stakeholders to deliver our BP2 commitments and accelerate the UK towards a fully decarbonised electricity system which is reliable, affordable, and fair for all.

We set our detailed responses to the consultation questions below.

# ESO response to the BP2 Draft Determinations: Question responses

17 January 2023

In August 2022 we published our second Business Plan (BP2), for years three and four of our RII0-2 price control (1 April 2023 to March 2025). Our BP2 submission, which was co-created with customers and stakeholders, will drive over £2.8bn of benefits for consumers, support a reduction in consumer bills and accelerate Great Britain's journey to net zero.

In our BP2 submission we have set clear priorities to deliver the outcomes our stakeholders need from us over the next two years – delivering excellence in system operation, building efficient and effective markets, driving clarity in our path to net zero and enabling our organisation to perform.

A big part of this will be our evolution into the Future System Operator (FSO) for GB. We will transition out of National Grid plc into an expert, independent organisation in the public sector. We will have responsibilities across both the electricity and gas systems and the ability to expand our remit to additional energy vectors when needed. Through this new organisation, we will be able to drive progress towards net zero, deliver value for consumers, improve whole energy system decision-making, and support energy security.

Ofgem assessed our BP2 submission and published their Draft Determinations on 30 November 2022 for consultation. We are pleased that Ofgem's proposals are a strong endorsement of our level of ambition, allowing us to implement all the elements contained in BP2. We will continue to work with Ofgem to provide any additional information they need about our activities and understand how the cost-monitoring framework and changes to some of our performance metrics will work in practice.

In this document we have provided detailed responses to the 19 questions set out in the Draft Determinations consultation. Our answers contain:

- Agreement with Ofgem's proposals where appropriate
- Additional information for some of our activities where Ofgem have requested it. We have also provided a Supporting Information Annex which contains further detail
- Request for engagement with Ofgem to provide additional clarity in certain areas of the Draft Determinations proposals

## Incentives framework

### **ESOQ1. Do you agree with our proposed approach to within-scheme feedback, including the timings and approach to performance panel sessions?**

Ofgem's proposed approach is for the Performance Panel and Ofgem to provide targeted feedback on our performance at the six and eighteen-month stage. This process would mean a full assessment would not take place at these stages, and Ofgem and the Performance Panel would not provide projected incentives scores or financial rewards/penalties.

We support proposals that minimise reporting burden and improve the performance assessment process between ourselves, the Performance Panel and Ofgem. As part of the BP1 eighteen-month review stage, we trialled an approach which aligns to the BP2 proposal. It involved reduced reporting and in-depth discussions with the Performance Panel and Ofgem on key performance areas. We found the Performance Panel's targeted feedback useful, however, we would welcome more regular, in-depth feedback from Ofgem going forwards.

Whilst supportive of the proposal, past performance evaluations have shown that, at times, there will be a difference in evaluation between Ofgem and the Performance Panel. We also recognise that the incentives process is an evaluative regime. We welcome changes in Ofgem's Electricity System Operator Reporting and Incentives Arrangements (ESORI) guidance such that Ofgem will provide a broad trajectory of performance at

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the six and eighteen-month stage. Alongside this, regular in-depth feedback from Ofgem will reduce surprises and further strengthen our ability to quickly action and respond to feedback received.

We note that in section 2.17 of the revised ESORI Guidance Document it states that 'The Panel and Ofgem's views will be published on Ofgem's website'. We understand that this is incorrect and there will be no formal reports published on Ofgem's website at the six and eighteen-month stage. We ask that this be removed.

## **ESOQ2. Do you agree with our proposed changes to the evaluation criteria for BP2?**

Ofgem have proposed two changes to the evaluation criteria for BP2:

### **1) 'Demonstration of plan benefits' changed to 'Quality of outputs'**

Ofgem's proposed changes to this criterion still aim to measure the benefits we have achieved from our Business Plan. However, it will also explicitly measure how we have delivered our Delivery Schedule in line with the expectations set out in the Roles Guidance document.

We support this proposal in principle as it provides better clarity on how we can evidence the quality of our Business Plan and the benefits our activities deliver. However, we seek further clarity from Ofgem on how the 'Quality of Outputs' assessment will take place in practice. Specifically, we would like further information on how Ofgem and the Performance Panel will weigh performance between the two elements, CBA and Role Guidance, of this criterion.

As we have seen in BP1, we will use the agility afforded by the regulatory framework to carry out activities that are not in the Delivery Schedule due to external factors and re-prioritisation (for example Early Competition and Offshore Coordination). We therefore welcome guidance on how those activities will be assessed as part of this evaluation criteria if they are not referenced in the Roles Guidance.

### **2) Change to 'Value for money'**

Ofgem propose to move away from an ex-ante cost benchmark to an ex-ante scoring of Value for Money for each role against their cost expectations, based on our requested funding. Ofgem will consider the additional information provided, as part of the proposed cost monitoring framework, when reassessing costs and our Value for Money scoring. They will do this on an annual basis, as part of our assessment against the Value for Money evaluation criterion.

As part of the proposed changes to within scheme reporting, we will be required to provide an update report on cost and delivery progress on a quarterly basis. However, as part of the proposed changes to the feedback process, we will only be reassessed on our Value for Money scoring on an annual basis. We therefore request targeted feedback in relation to Value for Money on a more frequent basis to ensure we have a view of our performance trend.

We also have some concerns on the use of the criteria to review our costs. We would like to understand further how the four Value for Money criteria will be applied and used in practice. There is also a lack of detail of what each criteria means in practice so more information on this would be beneficial.

For our full position on the changes to this criteria and wider cost regulation framework, please refer to our responses to ESOQ3, ESOQ12 and ESOQ13.

## **ESOQ3. Do you agree with our overall approach to cost regulation for the ESO?**

We support Ofgem's proposed changes to cost regulation. We recognise that, due to the bespoke nature and level of maturity of some of our technology investments, it is challenging for Ofgem to provide an appropriate cost-efficient benchmark for programme delivery. We therefore welcome the pragmatic decisions taken by Ofgem for the BP2 period. Specifically, we support the proposal to move away from setting an ex-ante cost benchmark and to replace it with clear approval for BP2 totex recovery combined with an upfront value for money score. This strikes the right balance between the need for investment certainty whilst providing a clear signal on delivery expectations. We also support the introduction of a cost monitoring framework which, in combination with the ex-ante insight provided by Ofgem in its Draft Determinations, will help drive cost-effective delivery. We look forward to collaborating with Ofgem to fully define how this framework will work in practice. To aid this, we have included a proposal for how the cost monitoring framework could operate in our detailed response to ESOQ13 and our Supporting Information Annex.

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## Outputs

### ESOQ4. Do you agree with our proposed changes to the ESO Roles Guidance? Are there any areas we have not captured in our expectations?

There are some areas of Ofgem's changes to our Roles Guidance where more information is needed to fully understand how expectations on our Roles have changed. Until we have more clarity on these areas (which are detailed in each of our Role responses below), we do not support the proposed changes and seek further discussion with Ofgem.

Overall, we understand that the Roles Guidance document will now feed into the new performance evaluation criterion "Quality of Outputs". As per our response on the Quality of Output criterion in ESOQ2, we feel we need to know more about how this assessment will be carried out, for example, whether there will be a weighting applied between benefits delivered and meeting the expectations within the Roles Guidance.

Below we provide detailed feedback on the proposed Roles Guidance changes<sup>1</sup> and highlight where more information would be beneficial.

#### Role 1

- **1a: System operation (Oversight of balancing services markets)** – We agree that the wording under 'meets expectations' reflects the activities we undertake in relation to our REMIT and licence obligations. However, we would like to understand more about what is meant by the exceeding expectation "best in class proactive market surveillance". We are unclear on how we would demonstrate this or what the comparator would be.
- **1b: System restoration (Restoration policy)** – We are supportive of the additional wording here, which reflects the progress made in Restoration.
- **1c: Transparency, data and forecasting (Provision of market information)** - We support the inclusion of wording demonstrating that we engage market data participants. However, we do not agree with the new wording for meeting Ofgem's expectations "Develop mechanism to share real-time system state data in accordance with stakeholder needs". We believe this demonstrates exceeding expectations because of the significant volume of data this could entail and the very likely different expectations and requirements of individual stakeholders. We therefore propose reverting to the original wording for meeting expectations in this area ("Provide transparency on the real-time system state"). We will continue to provide increasing transparency on the real-time system state, following liaison and engagement with our stakeholders.
- **1c: Transparency, data and forecasting (Driving the energy sector digitalisation)** – In principle, we are supportive of the additions to this output. There is a new expectation regarding the creation of a digital dashboard, which we would like to explore further with Ofgem to make sure that we understand and are aligned on expectations in this area. We would also like to clarify that the expectation of "Identify and progress code modifications to enable digitisation" means that we will identify and raise any code modifications needed to achieve our Digitalisation Strategy (which is contained within our Digitalisation Strategy and Action Plan (DSAP)). To be clear, we won't look at all code modifications in the industry and assess them from a digitalisation perspective. If this interpretation is incorrect, we would welcome further discussion with Ofgem.
- **1c: Transparency, data and forecasting (Using and exchanging data)** – Under meeting expectations, we welcome the wording around a data portal user group as this is something we do today. However, exceeding expectations mentions "Treating energy system data, processing methods and algorithms as open to all by default". Our concern with this wording is that most of our data is provided by third parties, therefore some of the data cannot be shared due to contractual reasons and/or is confidential data from stakeholders. There may also be circumstances where sharing of data is not in consumers' best interests. Therefore, we would ask that caveat of "where possible and appropriate" be added to this expectation. Lastly, there is a new expectation which mentions "reference renders". We are unclear of what reference renders are and would like additional clarity so we can determine if we support this inclusion.

#### Role 2

- **2a: Market Design (Competitive, market-based procurement)** – Overall, we are happy with the intention of the proposed changes and additions. However, there is a reference to performance metric 2A

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<sup>1</sup> As per the consultation on ESO Roles Guidance 2023-25: [Consultation on ESO Roles Guidance 2023-25 | Ofgem](#)

(Competitive procurement), which is now being removed and replaced with a new metric on the phase-out of non-competitively procured balancing services, so this should be updated to reflect this change. We also believe more clarity/information would be beneficial on what is meant by ‘appropriate design’ and ‘efficient design’ and how this would be measured. This will help us understand how we can meet or exceed Ofgem’s expectations.

- **2a: Market Design (Close to real time procurement)** – We support the changes made for this output, however the reference to performance metric 2X needs to be updated in line with the new metric proposals.
- **2a: Market Design (Delivering accessible markets)** – We are largely supportive of the additional wording around a ‘compliant first approach’. However, the current wording assumes that all EU legislation adopted is necessary and fit for purpose. We would like to discuss this further with Ofgem to understand the intent more clearly.

This output also references the Single Market Platform (SMP) investment in a couple of different ways, which should be updated for consistency. Regarding the additional wording (in exceeding expectations) “The single markets platform should integrate with all necessary up/downstream processes, ensuring a ‘one-stop shop’ for service providers to the ESO”. We believe wording should be added to reference that this should be done where it delivers value for the consumer, as the aim of the SMP is to target where the most value is delivered. More clarity on what is meant by ‘routine process’ and ‘market introduction’ would also be beneficial to ensure we understand Ofgem’s expectations in this area.

- **2a: Market Design (Signalling procurement needs)** – We are supportive of the additional wording for this output.
- **2a: Market Design (Developing technical procedures specified in the GB-EU Trade and Cooperation Agreement (TCA))** – We are largely supportive of this additional output and the expectations drafted. However, we would like more clarity on what is being referred to regarding “GB rules for ICs” (interconnectors).
- **2a: Market Design (Develop cross-border markets)** – We are supportive of the wording for this new output.
- **2a: Market Design (Coordinated procurement across the whole system)** – We acknowledge that there have been no changes to this output. However, regarding the exceeding expectation “Providers have a single interface point (or consistent standardised interface points) for providing services to the ESO and DNOs”, we would like to highlight that the provision of a single interface is not completely within our control and is linked to obligations that are being set for DNOs by Ofgem.
- **2b: Electricity Market Reform (Implementation of policy and rule changes)** – Under exceeding expectations for this output, new wording has been added around the ESO “developing a proactive process to capture and assess policy, rule and process improvements”. We would like more clarification on Ofgem’s expectations here, as there are currently established processes that are captured by Ofgem’s Capacity Market Advisory Group (CMAG) and BEIS’ Capacity Market Policy Board (CMPB), which we actively participate in. Currently, we proactively consider process improvements if no policy or rule changes are required, otherwise we raise any areas through the CMAG and CMPB. Therefore, more clarity would help us understand the difference between existing processes and what we are expected to deliver under this output.
- **2b: Electricity Market Reform (Capacity adequacy modelling)** – We agree with the changes to this output.
- **2b: Electricity Market Reform (User experience with the EMR portal)** – We agree with the changes made under meeting expectations for this output. As per our response to ESOQ5 (Role 2), we are still going to be integrating the EMR portal with the Digital Engagement Platform (DEP). However, we do not agree with the exceeding expectations narrative. As described in more detail in our response to ESOQ5, we are not planning to integrate the EMR portal with the Single Markets Platform (SMP) due to the Capacity Market and Contract for Difference processes and data being substantially different from our other markets (Annual vs Daily Auctions). We would like to review this wording with Ofgem to agree what exceeding expectations could look like.
- **2c: Industry codes and charging (Improving GB rules and standards)** – We welcome the inclusion of providing assessment of areas of GB legislation that might be improved following GB’s exit from the European Union. More context would be beneficial in understanding the exceeding expectation “ESO

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takes a leading role in explaining the virtue of the rules in place, and how they provide a framework which benefits markets and consumers of today and the future". We are unsure whether this is about general rules or about retained law (GB legislation following GB's exit from the EU).

## Role 3

- **3a: Connections and network access** – We are supportive of the proposed changes to this output. We have provided more detailed feedback on the new 3X metric referenced in our response to ESOQ6.
- **3b: Operational strategy and insights (Providing energy insights)** – We agree with the changes here and believe there could be an opportunity to consider whole energy as part of this output.
- **3b: Operational strategy and insights (Ensuring coordinated scenario development)** – We have reviewed this output and agree with most of the proposed changes. However, we have some concerns with the wording under 'exceeding expectations'. We believe a caveat should be added in reference to 'sharing all data'. We purchase some proprietary data which cannot be shared due to contractual reasons and also receive confidential data from stakeholders. Therefore, we propose adding wording such as 'where appropriate' to this expectation. Secondly, there is an expectation that 'any party can reliably reproduce the FES' which we believe greatly undersells the complexities and expertise required. The FES is not just built on an algorithm; we use experience and expert knowledge which is hard to share tangibly. We do not see an issue with aspects of the FES being included, but a more targeted and specific expectation could be drafted; for example, one which includes sharing more of our models. Lastly, to exceed expectations for this output there is wording that refers to presenting a 'clear, coherent and coordinated view of all future network needs across the whole electricity system (evidenced through stakeholder feedback)'. We would like to discuss this further with Ofgem to understand their interpretation of this expectation and whether this can be made clearer. We look forward to working with Ofgem on this.
- **3c: Optimal network investment** - There have been no changes proposed to this activity, but we have reviewed the existing content. We believe there will be benefit in reviewing the expectations once we know the impact of the Network Planning Review on the NOA and the impact of the development of Network Services Procurement. Therefore, we would welcome a future discussion on this activity to ensure that we are meeting or exceeding Ofgem's expectations based on the most up to date set of activities and circumstances.

## ESOQ5. Do you agree with our grading of the ESO's Delivery Schedule for 2023-25?

Ofgem has provided a Delivery Schedule grading for each of our Roles. We acknowledge the specific areas of feedback provided by Ofgem in Appendix 2 of the Draft Determinations document and we provide detailed responses, broken down by Role, below.

### Role 1

For 2023-25 (BP2), Ofgem has graded the ESO's Delivery Schedule as 4 out of 5 for Role 1. Overall, we support this ambition grading and believe it is a fair assessment of our ambitious plans for Role 1 during BP2. We acknowledge that the grading has decreased from a 5, during BP1, to a 4, for BP2, due to some notable delays to programmes, such as delivery of our enhanced balancing capability and competitive procurement of restoration services. We respond to Ofgem's specific concerns below.

We are also aware that there are some areas of the plan where further discussions are still due to take place with Ofgem. However, we have taken on board and acknowledged the more specific feedback Ofgem has provided within Appendix 2 of the Draft Determinations. In response, we provide the following clarifications across the activities in Role 1 and have provided an updated Delivery Schedule where we are able to readily respond to Ofgem's feedback.

#### 1(a) System Operation

**[Ofgem feedback]** Co-operation with European bodies (D1.1.4), continued update of legacy IT systems (D1.1.5) as well as the continued production of the Operability Report (D1.1.6) meet Ofgem's expectations for this Role. They note that success measures for D1.1.4 appear to be deliverables but there are no indicative milestones or deadlines associated with these outcomes.

**[ESO response]** We are pleased that our ambitions within D1.1.4 meet Ofgem's expectations and note the reference to the high-level approach taken in the Delivery Schedule. Since our final August submission, we have discussed this area further and have updated it to reflect more accurately the work required in BP2, the continuous nature of the deliverable, and its heavy reliance on progress under D21.2.2 to achieve the success



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measures (which will not be known in detail until D21.2.2 progresses). As such, it is not possible to set quarterly deadlines, but annual indicative milestones based on what we know now. As progress is made, the deliverable commentary can be updated to ensure it remains accurate. We are happy to discuss this further with Ofgem should additional clarity be required.

**[Ofgem feedback]:** Ofgem noted concern over delays in the delivery of enhanced balancing capability. The deliverables associated with the Future of Balancing activity, previously named Enhanced Balancing Capability (A1.2), still exceed Ofgem's expectations if the ESO remains on track to deliver the success measures associated with these deliverables. They note that several milestones in this area were delayed in the BP1 period, but still consider that the final deliverable of being able to dispatch a greater number of market participants would exceed their expectations.

**[ESO Response]:** We recognise Ofgem's highlighting of the delays to the delivery of enhanced balancing capability. Our understanding of the requirements to deliver enhanced balancing capability have significantly improved throughout BP1, resulting in a revised co-created roadmap with the industry. We are delivering the Open Balancing Platform (A1.2) to enhance our capabilities; the platform enables highly flexible, modular design with faster adaptation to change.

We have established enduring engagement with industry following our Balancing Strategy Capability Review in Spring/Summer 2022. We engage regularly with the Technology Advisory Council and engage industry at the end of each 14-week programme increment, explaining what we've done and what we plan to do next.

This transparent engagement helps us prioritise delivery of functionality that is of value to the end consumer and focuses on the priority outcomes for our stakeholders, including the ability to dispatch a greater number of market participants.

The milestones for BP2 are more clearly defined and aligned to releases of the Open Balancing Platform. Our forward-looking product backlog is reviewed continually against the needs of our stakeholders and the end consumer.

In terms of BP1 milestones, we have re-aligned them to our new delivery roadmap, which in terms of delivery of Sandbox and Application component milestones has resulted in a reprioritisation. However, we feel that this alignment, complements the BP2 release milestones and accurately reflects the positive progress made. We plan to deliver Release 1 of the Open Balancing Platform in Q3 2023/24, which will be a bulk dispatch capability for small BM units. By Q1 2024/25 we will have configured other BM units to be included in this bulk dispatch capability.

**[Ofgem feedback]:** Increasing the robustness of trading solutions (D1.1.8) meets Ofgem's expectations, however, could be improved with clear milestones where possible.

**[ESO response]:** We have been working with a supplier to improve the robustness and enhance the functionality of 'Hermes', the main trading solution in ESO. For example, we are replacing the communication of trades via email communication with an encrypted web-based platform which will offer greater automation, more guaranteed service availability and greater data security. This solution has been designed, developed and built in 2022 and is currently being tested with a selection of users. Implementation is planned for March 2023.

Further internal discussions around development of additional functionality began in December 2022, which may result either in the decision to develop Hermes further or to replace it with a different solution. We are also currently reviewing expected future trading requirements, the robustness of our wider solutions and our ability to integrate additional interconnectors. We expect to conclude this additional exploration by the end of FY24 – and have updated the Delivery Schedule to reflect this ambition. However it is too early for us to commit to timebound milestones. We look forward to working with Ofgem during BP2 to provide further information as these projects progress.

**[Ofgem feedback]:** The new activity for Operational Coordination with DSO and DER (A1.5) could exceed Ofgem's expectations to deliver whole system benefits in liaison with DNOs. However, Ofgem noted that the key milestones for these deliverables are generally intangible and difficult to track so they cannot say with confidence that the ESO will exceed their expectations in this area.

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**[ESO Response]:** The Operational Coordination with DSO and DER (A1.5) activities in Role 1 are needed to ensure that all whole electricity system activities in BP2 (some of which are described in our Role 3 milestones) can be successfully delivered into the real time control room environment. These deliverables describe the need to provide operational input from control centre SMEs into critical activities around DER visibility. They also describe the development of processes (for example primacy rules) and systems to ensure operational co-ordination of DERs in real time to provide services including our Regional Development Programmes (RDPs) and Local Constraint Markets (LCM). This is over and above the resources needed to deliver the projects in Roles 2 and 3. The outputs we are aiming for are as follows:

- New flexibility markets for DER (e.g. LCM, RDPs, demand flex etc) that meet system requirements ensuring that operational risks are managed in the associated new systems and processes. Flexibility markets are any markets where we procure services from DER.
- New data exchanges with DSOs (potentially includes real time distributed generation metering, distribution equipment operational status and service provider locations for both ESO and DSO needs) will be co-ordinated with critical system changes including OBP and IEMS replacement. This will ensure systems are future proofed for much greater volumes of information relating to DER.

The deliverables also include the need to build on our well-established operational liaison with DNOs to ensure all operational issues associated with DSO transition are discussed. Detailed activities will be determined throughout the BP2 period as these areas evolve and the details associated with future process and operational issues become clearer. We expect to provide commentary to Ofgem on these areas during the BP2 period.

## **1(b) Restoration**

**[Ofgem feedback]:** Ofgem noted at the start of RIIO-2 that the deliverable for producing a Restoration decision making support tool (D3.2.4) could exceed expectations if the ESO could successfully develop and implement a tool capable of providing dynamic restoration routes in BP2 timelines. However, the ESO's milestones and updated timelines in this area (Q4 2024/25 – 'Tool testing in progress') imply that this will not be the case following delays during BP1.

**[ESO response]:** We are still planning to deliver the Restoration Decision Support Tool by the end of 2024. Throughout 2025 we will then test and continuously improve the tool. We have updated the Delivery Schedule for D3.2.4 to reflect this more clearly.

It should be noted that the Restoration Decision Support Tool has dependencies with the Network Control Management System (NCMS) project (A1.3).

**[Ofgem feedback]:** Ofgem observed that the deliverable for Distributed ReStart trials (D3.3.1) has been removed following successful completion of the initial two trials of the project. However, they understand that the ESO intends to complete a third trial and extend the project and note that the delivery schedule should be updated to reflect this. They note that Distributed ReStart is still an innovative and important activity and implementation of the learning from these trials would exceed expectations.

**[ESO Response]:** We are pleased that the significance of this project and its success so far is recognised. Ofgem are correct that we are extending the delivery of the Distributed ReStart project out to October 2023 to complete a third trial (including an expanded scope). The Delivery Schedule has been updated to reflect this, and we welcome any further feedback Ofgem may have in relation to this update.

## **1(c) Transparency Data and Forecasting**

**[Ofgem feedback]:** The deliverable for Producing and publishing detailed forecasts (D1.1.7) meets Ofgem's expectations and could exceed their expectations with the addition of solar and wind product implementation. However, they considered that the success measure of implementation "as far as possible" wasn't a solid commitment to be held to. This deliverable could be improved by specifying what improvements the ESO is aiming for, and the level of integration expected.

**[ESO response]:**

We aim to implement a new forecasting platform on the ESO strategic cloud solution, utilising new data, technologies and modelling techniques (Machine Learning & Advanced Analytics). The product will be

integrated with other ESO strategic initiatives, specifically the Data Analytics Platform (DAP) and Open Balancing Platform (OBP).

The goal of this implementation is to build upon the improved forecasting accuracy achieved in previous phases of forecasting enhancements. The forecasting improvements have led to a decrease of approximately 100MW in mean absolute error<sup>2</sup> (MAE) in RIIO-1 and a further 2% reduction in mean absolute percentage error<sup>3</sup> (MAPE) during the RIIO-2 period. This further improvement results in an additional £22m in benefits for consumers, assuming we maintain the current level of improved accuracy and forecasting performance compared to legacy EFS and models. We view this as a huge success as we have seen large changes over the past five years in the GB energy landscape. The capacity of embedded solar, wind and other generation (generation that has connected to the distribution network) has grown rapidly over this period. This has challenged our forecasting performance because embedded generation does not need to provide us with metering data or generation plans. However, we have been able to maintain and improve our forecasts in spite of this.

Over the coming financial year, incremental improvements to existing models will be realised by the inclusion of additional weather forecast data procured since December 2022. This is currently being integrated into our existing models for wind, solar and demand.

Significant improvements in wind forecasting accuracy will be achieved by an upcoming program of work to redevelop the wind forecasting system. This will enable more advanced multi-variate statistical approaches to be implemented. It is our intention to implement the redevelopment over the coming months, enabling more accurate models to be in production by the end of FY23/24.

It is anticipated that these wind forecasting improvements will act to decrease errors from around 4.8 % of installed capacity to below 4.6 %. This is equivalent to around a 30-40 MW reduction in the average transmission connected wind error. It should be noted that this is an order of magnitude smaller than the growth rate of new wind farms and so there remains an urgent need for ESO to adapt downstream processes to cope with rapidly increasing weather-driven uncertainty in generation and demand.

In parallel, initial exploratory work will be conducted to enable the move towards fully probabilistic forecasting approaches. These will make use of scenarios-based weather forecasts (ensembles) and, with additional development, enable system-specific risk modelling in areas such as constraint and reserve management.

## **A note on probabilistic forecasting**

Currently, we acquire weather data that represents a smoothed average of many possible future weather scenarios. We receive this data at 259 locations around GB (recently increased from 111 locations). Weather forecasts contain vastly more information than this, but the current method was adopted to greatly reduce the amount of weather data inputted to our IT system (Energy Forecasting System (EFS) which is run in parallel with Platform for Energy Forecasting (PEF)).

The energy forecasting team is proposing to move to acquiring weather data via more modern 'Data as a service' (DaaS) methods such as APIs. This will give us access to all scenarios (the full weather 'ensemble'), as well as the full spatial grid of data for each weather scenario (around 500,000 locations around the UK).

By constructing models using much more detailed input data, we can produce more accurate forecasts of energy system variables such as national demand and transmission connected wind generation. The additional spatial detail in the data will also allow us to more accurately predict GSP level demand and generation, and therefore transmission flows on the network.

By analysing all weather scenarios rather than just the average weather scenario, we will also be able to assess the probability of system-specific phenomena such as a particular constraint limit being reached, the amount of reserve required, or in capacity margin assessments, to name a few.

Fetching our weather data from APIs using a modern, cloud-based and scalable IT system will also give us more direct control over the data we receive. This will enable us to update our models much more quickly than

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<sup>2</sup> Mean Absolute Error (MAE) is a measure of prediction accuracy for a continuous variable. It is calculated as the average absolute difference between the predicted and actual values. The smaller the MAE, the better the model is at predicting the actual values

<sup>3</sup> Mean Absolute Percentage Error (MAPE) is a measure of prediction accuracy for a continuous variable. It is calculated as the average absolute percentage difference between the predicted and actual values. It expresses accuracy as a percentage, and is commonly used to measure forecast error in financial and economic forecasts, where absolute values of the difference tend to be more meaningful than relative differences

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is currently the case. For example, when a new wind farm becomes operational, we can process weather data for that location and make it available for our models to use in a matter of days. Currently this process takes several months to onboard weather data for new locations and make the required changes to our energy forecasting models.

**[Ofgem Feedback]:** Ofgem noted that while the new A19 deliverable for the Data & Analytics Model meets expectations, limited supporting information on specific activities and milestones means they are unable to confirm if it exceeds expectations in its current form.

**[ESO Response]:** We recognise that there are limited firm milestones for A19, as the majority of the specific activities are based on expected expansion and development of ongoing tasks (such as the migration of existing systems). While it would be possible to create potential milestones, successful and timely Data Analytics Platform (DAP). We are in constant engagement with the teams, but problem statements and timelines are defined when they are known and may change, for example due to dependencies on other areas of work. Also, we are using an agile methodology to deliver DAP and so our backlog and priorities will constantly be reviewed and changed. As such, A19's deliverable is intentionally high-level, and we look forward sharing our progress with Ofgem throughout the BP2 period.

## Role 2

For 2023-25 (BP2), Ofgem graded the ESO's Delivery Schedule as 4 out of 5 for Role 2. Overall, we welcome this ambition grading and believe it reflects our ambitious plans for Role 2 during BP2. We are aware that there are some areas of the plan where further discussions are still due to take place with Ofgem – such as EMR. However, we have taken on board and acknowledged the more specific feedback Ofgem have provided within Appendix 2 of the Draft Determinations. In response, we can provide the following clarifications across the activities in Role 2 and have provided an updated Delivery Schedule where we are able to readily respond to Ofgem's feedback.

**[Ofgem Feedback]:** Ofgem recommended that we develop a coherent plan to move to full compliance with 'grandfathered' EU legislation, and to improve communication of why these features of product design are beneficial to industry.

**[ESO Response]:** We recognise the importance of compliance with retained legislation where appropriate for the GB market and we will make this clear and ensure our communications reflect this, highlighting the benefits to consumers and the market. However, it is important to note that we may not agree in all circumstances with some aspects of retained legislation with regard to the design of and use of certain products. For example, services should be bought at the most appropriate time, considering risk, uncertainty, consumer benefit and competition. Mandating an arbitrary time threshold of day ahead may not be the optimum timescale to buy a service; for instance if there is a fixed requirement that is not dependent on forecasted output. The design of our products will always focus on benefits to consumers, the wider market, security of supply and the transition to a carbon free electricity system, whilst recognising the importance of working with interconnected TSOs. Therefore, it is crucially important that we continue to seek exemption from, derogation to and amendments of this 'grandfathered' legislation as appropriate to meet the above goals. We would not want this approach to be viewed negatively when it is in the interest of consumers. Therefore, we do not agree with linking the development of a plan to move to full compliance with 'grandfathered' EU legislation to an "exceeding expectation" Role 2 delivery schedule.

**[Ofgem Feedback]:** Ofgem explained that the ESO should express to industry why the product/market design principles work for the betterment of markets themselves, their participants and for the operation of the system as a whole, and ultimately result in best outcomes for end consumers.

**[ESO Response]:** In response to Ofgem's feedback, we are beginning to communicate these messages more actively to industry. Last year, in our Markets Roadmap<sup>4</sup>, we set out our revised Market Design Framework, which allows us to make market design decisions that are robust, well-evidenced and justifiable.

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<sup>4</sup> <https://www.nationalgrideso.com/research-publications/markets-roadmap>

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We will be transparent in how we use this framework, giving our stakeholders confidence in how and why we are making reform decisions. This framework will also enable us to assess the effectiveness of our current market designs and identify where they can be improved.

The framework comprised a set of Market Design Objectives that reflect the desired outcomes of:

- **Efficient investment** – giving investors sufficient certainty over revenues to obtain financing, ensuring future system requirements are met by the right technology mix in the right locations, at lowest cost to society
- **Efficient dispatch** – ensuring balancing service needs are met in real-time using the optimal combination of supply and/or demand-side resources
- **Value for money** – selecting outcomes that are in the best interest of current and future consumers

These objectives are underpinned by a set of Market Design Principles that provide testable concepts. Having rolled out this new Framework, we will be applying it to all future market reform decisions.

## **2 (a) Market design:**

**[Ofgem Feedback]:** Ofgem explained that, during BP1 to date, the ESO has not managed to convince them that it has been on top of introducing its new balancing products and markets. There have been issues with quality throughout the product development cycle, from ideation through to operation. To meet expectations for BP2, the ESO would need to improve significantly in this area, both in the roll-out of new products scheduled for delivery and for the ongoing improvements to existing products.

**[ESO Response]:** We have engaged with Ofgem on this feedback previously, to understand concerns further around the introduction of new balancing products and markets in terms of quality. We have also proactively engaged Ofgem on our commitment to introducing an annual service development cycle for frequency response, which if effective, will be implemented across ancillary service development. The aim of introducing an annual cycle gives all stakeholders a repeatable, reliable plan which takes into account the fixed timelines for the formal Article 18 EBR consultation, and provides sufficient timelines for engagement, onboarding and systems development.

We acknowledge the impact the product development cycle has on Ofgem, and we are committed to working closely with Ofgem to ensure we continue to work at pace with product development, whilst ensuring that appropriate attention and time is given to a thorough process.

Furthermore, we are planning to make a step change via thorough engagement activities with stakeholders, to ensure we are working together to develop new ideas (as well as testing our own). These sessions will be held ahead of the consultation, ensuring all voices are heard, and importantly, that most changes are developed by us ahead of the consultation launch. This mitigates the challenge of making significant changes in the review period, post-consultation, and should improve how stakeholders feel about the service development process.

Consultation feedback will be fed into our new product backlog, to be shared with industry, which will include suggestions for new features and changes to parameters of the product(s), IT systems and service design proposal. These changes will be impact-assessed and the list of developments, and the order in which they will be delivered, will be shared with our stakeholders.

**[Ofgem Feedback]:** Ofgem noted that the ESO did not convince them that they understood their compliance requirements for balancing products and markets under BP1. To meet their expectations for BP2, they explained that they need to see a marked improvement in the design of products from a ‘compliant first’ approach, with greater clarity where this is not possible. Delivery of products, compliant with relevant legislative criteria, and evidence that these products are providing benefits, would meet expectations.

**[ESO Response]:** We have been developing a new annual service development cycle to provide greater certainty around reform of our balancing products and markets. We have received positive feedback about the pace at which we have developed some ideas over the BP1 period from stakeholders. Ofgem have also acknowledged the fast-paced environment that we are working in. However, we do recognise the line between pace and quality.

The annual service development cycle will provide more structure around when we’ll engage with industry, how we’ll consider proposed changes to services/markets and a timetable for development/delivery of the

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change. Part of this process will include evaluating changes to prioritise those with the most value. We consider that providing additional analysis/clarity around our decision-making process to be a key part of this. A similar process would apply when new services are being introduced. Furthermore, we can confirm that the annual cycle will also be used to take forward items from the ESO's own backlog (which could include items that are for compliance reasons - such as compliance with the Clean Energy Package (CEP), for example)

As mentioned in response to Ofgem's feedback above regarding implementation of new balancing products and markets, while we recognise the importance of compliance with retained legislation, some elements of service design may not be beneficial for GB consumers. In these circumstances, we'd look to provide further analysis/clarity to support our decision to deviate from retained legislation.

**[Ofgem Feedback]:** Ofgem stated that during BP2, they will also be looking for evidence that the products introduced are adding value above and beyond existing services, in order for the ESO to exceed expectations.

**[ESO Response]:** In line with this feedback, we can confirm that we are looking to introduce a review of products, post-implementation. This review will involve assessing value against an agreed set of criteria (e.g., consumer benefit and system security), with an appropriate timeline to ensure that new products are adding value above and beyond existing services.

**[Ofgem Feedback]:** Ofgem explained how a standardised roadmap of delivery and post-delivery development of products would meet expectations, including the ESO being able to evidence that products are well thought through, and no unreasonable, foreseeable inefficiencies were introduced with 'day 1' products.

**[ESO Response]:** Please see our response on page 9 regarding implementation of new balancing products and markets, where we have described that we are introducing an annual service development cycle for frequency response which, if effective, will be implemented across all ancillary service development where appropriate, to give a standardised delivery approach. We have also been carrying out analysis of market conditions and market liquidity prior to market go live to better anticipate market dynamics. This has been in the form of mock auctions and market simulation activities. Prior to the launch of Dynamic Moderation (DM) / Dynamic Regulation (DR), we used Herfindahl-Hirschman Index (HHI) analysis of the market to help decide whether to use Pay-As-Bid or Pay-As-Clear for Demand Flexibility Service auction design. We will continue to build on this as we launch new services to ensure we're building effective markets.

Furthermore, we can confirm that our Markets Roadmap details delivery and post-delivery development of products. Specifically, it details our vision for response, reserve, thermal, reactive, stability, and restoration markets as well as the Balancing Mechanism. Key interactions between markets are also explored.

**[Ofgem Feedback]:** In Ofgem's assessment of BP1, they indicated that the integrated market platform alone, if delivered well and on time, would be enough to exceed expectations. While this remains a key area of focus in their expectations, they explained that this platform must support high-quality balancing markets that provide consumer value and provider experience.

Ofgem also expressed that the ESO should still focus on ensuring that the SMP is a one-stop shop for all of its markets.

**[ESO Response]:** We agree with the feedback with regard to the SMP being a platform that supports high-quality balancing markets that provide consumer value and provider experience.

As per our response to ESOQ4 – 2a: Market Design (Delivering accessible markets), we have advised that wording should be added to the Roles Guidance criteria, to ensure that integration should be done where it delivers value for the consumer, as the aim of the SMP is to target where the most value is delivered in an agile way.

## **2 (b) EMR:**

**[Ofgem Feedback]:** Ofgem highlighted that there is lack of clarity on delivery timelines for Contracts for Difference (CfD) activities. Ofgem advised that the ESO could add more focus on explaining milestones alongside the Capacity Market (CM) milestones they have outlined, as there is a lack of specificity in milestones to measure progress and performance against.

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**[ESO Response]:** We seek collaboration on this feedback as it is unclear which deliverables in the Delivery Schedule are being referred to. Our assumption is that this feedback is targeted on EMR portal milestones. We would welcome further conversation with Ofgem to confirm this assumption is correct and how we can update the Delivery Schedule to meet Ofgem's expectations.

The BP2 documentation, including Delivery Schedule, have a focus on milestones associated with the deliverability of the EMR portal, with a particular emphasis on the CM section of the portal. This is based on the strong and consistent feedback from industry on the usability of the portal from a CM user experience perspective.

Regarding CfD, we implemented a high volume of changes to the existing portal successfully in 2022 to enable the Allocation Round 4 process. This was scored 8.1/10 by the CfD Participants and no constructive feedback was received on the functionalities of the portal. Furthermore, we are conscious of the additional complexities of wider energy policy change and the uncertainty of how this affects the CfD programme. As such, we prioritised CM development and are reviewing the CfD situation regularly under the new portal project in line with industry feedback, the CM programme and the overall energy change landscape.

**[Ofgem Feedback]:** Ofgem explained that delays to the introduction of the new EMR portal (descoping it from SMP plans) means that this deliverable now only meets expectations. Ofgem advised that, against the proposed Roles Guidance, the ESO could still exceed expectations with an evidenced step change improvement in user experience, which might be linked to reintroducing plans to combine the portal with the SMP. This latter ask is understood to be subject to legislative change, so the ESO is expected to remain agile in its delivery approach for SMP to ensure best value for consumers.

**[ESO Response]:** As per our response to ESOQ4 – 2a: Market Design (Delivering accessible markets), the aim of the SMP is to target where the most value is delivered in an agile way. The intention is still not to integrate the EMR portal with the SMP because the CM and CfD processes and data are currently substantially different from other markets in terms of detail, naming conventions and taxonomy. The SMP is specifically designed to manage "repeatable products" that offer much better alignment with Day Ahead Market Products and a better process for customers to use.

Therefore, integration between SMP and the EMR Portal would require standardisation of the CM and CfD data structures with other market services and products (e.g. common nomenclatures instead of the current distinction between Balancing Mechanism Units (BMUs) and Capacity Market Units (CMUs)) which would require legislative change.

We do not foresee these changes taking place by March 2026 (end of RIIO-2). However, our agile delivery approach will enable us to review this, if the structures are standardised in the future and would deliver consumer benefit, considering the rework that would be required to the data structures and processes in the new EMR portal.

Although we are no longer planning to integrate the EMR Portal with the SMP, we are exploring the feasibility of integrating the EMR portal with the Digital Engagement Platform (DEP). Enhancing user experience is still an integral part of our development of the EMR portal. Initial feedback from customer demonstrations of our developments to date has been positive. Continued enhanced capability would be delivered through either the EMR Portal or the DEP. This would enable EMR portal users, external customers and stakeholders to access the EMR data in an intuitive, predictable, personalised and seamless way, as well as to ensure compliance with the EMR regulatory framework.

Lastly, we are currently re-planning the EMR portal project with industry stakeholders. The replan will also be taking into account the best way to implement the government Capacity Market policy changes that are currently being consulted on. We will engage with Ofgem on the re-plan in due course.

**[Ofgem Feedback]:** Ofgem explained that the main ambition shown under A5 is the ESO positioning itself to be more proactive in policy, rule and process changes as the EMR delivery body. A change in line with this, whereby the EMR delivery body can share and make use of its knowledge and experience on EMR, would be beneficial and, in doing so, the ESO could somewhat exceed expectations.

**[ESO Response]:** As per our response to ESOQ4 – 2b: Electricity Market Reform (Implementation of policy and rule changes) of the Roles Guidance, we would like more clarification on this expectation. We already actively participate in established processes that are captured by Ofgem’s Capacity Market Advisory Group (CMAG) and BEIS’ Capacity Market Policy Board (CMPB).

Our role with regard to policy and rule changes for both mechanisms is unchanged and will continue into BP2, where we operate as a critical friend. We work collaboratively with Ofgem/BEIS to assess the implications and deliverability of proposed scheme amendments – before, during and after implementation. We support the drafting process for the governance framework that supports both the Capacity Market and the Contracts for Difference schemes. We use our knowledge and expertise to document the guidance materials for our customers, make the necessary changes to systems to support the change and draft clear internal process documents to ensure a smooth running of each round.

We proactively consider process improvements if no policy or rule changes are required and we raise any relevant issues through the CMAG and CMPB. Therefore, more clarity would help us understand the difference between existing processes and the expectations set out in the Draft Determination.

## **2 (c) Industry codes and charging:**

**[Ofgem Feedback]:** Ofgem explained that while the general theme of Transform the Process to Amend Our Codes (A6.4) is in line with expectations, milestones for D6.4 lack sufficient detail for them to consider delivery to exceed expectations.

**[ESO Response]:** We acknowledge Ofgem’s feedback and can confirm that we have updated the milestones for D6.4 as follows:

We are working on our internal capability to ensure we best set ourselves up to be a code manager. This includes:

- Working on Code Digitalisation to improve the usability and navigation of our codes
- Further proactive engagement with industry parties proposing changes to the codes we administer, seeking to ensure these are clear and value adding / raised at the optimum time
- Further enhancing our chairing and project management capability to ensure we maximise the value of all our stakeholder engagements, notably at modification Workgroups and Code Panels
- Continuous improvements to our reporting, ensuring this is clear and understandable
- Reviewing how we manage our code activities so that we give the best customer experience, through combining efficient and effective chairing and project management with technical expertise

These updated milestones, along with first year and second year successes for BP2, can be found in the latest version of the Delivery Schedule submitted alongside this response.

**[Ofgem Feedback]:** The activity Setting the Net Zero Cross-border Landscape (A21.1), includes the development of a cross-border strategy. Ofgem view this as an important deliverable and if the ESO can deliver outputs which are supported by relevant stakeholders, then this could exceed expectations. The ESO has a crucial role in setting direction of operability and, by extension, attracting investment in interconnection (including of multi-purpose interconnectors). It is therefore important that the ESO takes a leadership role on this and is proactive in influencing. In particular, the ESO needs to improve its explanation of the potential operational challenges and find solutions that create least impact across all parties.

**[ESO Response]:** Please note, in our response to Ofgem’s feedback, we have assumed the potential operational challenges and corresponding solutions are being referred to on long term, strategic timescales, however we would welcome further conversation to confirm this.

We welcome Ofgem’s feedback on the importance of a cross-border strategy, and we recognise the importance of obtaining support from relevant stakeholders for it to be successful. Setting out a clear vision of future operational and operability challenges is a critical pillar of this strategy, and these will be delivered through our Operability Strategy process. Any market solutions would be subject to assessment using our Market Design Framework, which would aim to optimise efficient investment, efficient dispatch and value for



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money. Key to this is balancing the needs of, and impacts on, all parties involved, including consumers, interconnectors, cross-border TSOs and trading parties.

**[Ofgem Feedback]:** Ofgem explained that, under the activity Enhancing Cross-border Frameworks and Markets (A21.2), the ESO shows good ambition by having a deliverable that aims to enhance the role of interconnectors in GB markets. Strong delivery against this deliverable could exceed expectations, however it is noted that the ESO's definition of success for this lacks ambition.

**[ESO Response]:** We acknowledge Ofgem's feedback on the definition of success lacking ambition for A21.2. However, we would like to re-iterate that the success of any Cross Border Trading frameworks is largely dependent on external factors, that are outside of our direct control. We did not feel it was sensible to commit to deliver a plan where we have little control over outcomes due to these external, macro-political pressures. As and when we have greater visibility and certainty around the macro-political context, and we get substantial engagement from EU TSO's, we would welcome further discussion with Ofgem to define expectations in this area.

## Role 3

Ofgem graded the ESO's Delivery Schedule as 4 out of 5 for Role 3. Overall we welcome this ambition grading as a reflection of our ambitious BP2 plans in a complex and rapidly evolving landscape. The GB energy sector is in a transitional period on the path to net zero - particularly with regard to long-term network planning, the need for ever more strategic insights and evolution of the connections process. We feel our plans are well placed to tackle the next phase of this transition without being over-reaching given the many areas of continuing uncertainty.

We have considered the feedback provided within Appendix 2 of the Draft Determinations report and obtained additional clarification in some areas to enable a more robust response. This has resulted in the following observations and actions:

**[Ofgem Feedback]:** Ofgem suggested the ESO could show how the activities across Role 3 work together, particularly under 3(b) and 3(c), ensuring aligned direction, and that we should make this clear to market parties so they can prepare for the future easily.

**[ESO Response]:** We recognise that Role 3 consists of a broad range of actions to address complex requirements, and that understanding how each activity contributes to the overall ambitions is complex. We are planning to engage with Ofgem in early 2023 to provide more clarity and discuss this further. This will also provide additional context for some of our other responses, such as that below regarding investment signals. We can then share this more widely with market parties.

**[Ofgem Feedback]:** Ofgem state that parties should receive the same investment signals throughout the ESO and should be able to easily identify the right place for information to meet their needs.

**[ESO Response]:** We sit at the heart of a complex industry, with rapidly changing needs and processes. To develop a market and system which has the best consumer outcomes at its heart, we must continue to develop and enhance how we share information. We have made significant improvements in this space with market participants but recognise that further enhancements are still required. We will continue to work with Ofgem and other market participants to ensure information vital to market parties to provide investment signals is consistent ESO-wide and is provided in a timely and appropriate manner.

### 3(a) Connections and access

**[Ofgem Feedback]:** Ofgem acknowledge that tackling the current challenges around connection dates and stakeholder concerns through successful delivery of A14.5 (Connections Reform) during BP2 would exceed expectations. However, in its current form, a lack of specific commitments means it cannot be rated as "exceeding".

**[ESO Response]:** We welcome Ofgem's recognition that the Connections Team are seeking to address the challenges around connections through both the tactical and long-term deliverables of the Connections Reform programme. We have further developed the timescales and deliverables for some of the phases (in particular, the earlier phases) of this programme and identified more clearly the key challenges to address through longer-term reform. Meeting these aims within the intended timescales, and with appropriate evidence of the impacts, will enable Ofgem to rate our performance with confidence.

To address some of the specific commitments at a high level (with further information linked as footnotes):

- The TEC Amnesty is a key initiative ahead of the introduction of Queue Management, which aims to remove from the queue stalled or unviable projects, enabling those in a more advanced position to progress further towards connection.<sup>5</sup>
- With the introduction of Queue Management, we expect to have a framework in place to enable contracts to be managed in line with contracted milestones, placing focus on delivery of projects and ensuring network capacity allocated is being utilised by developers. This helps to address the growing contracted TEC queue and the delay to connection of viable projects, thereby supporting the more rapid transition to net zero.<sup>6</sup>
- For the Connections Reform Project, beyond the added detail provided in the Delivery Schedule, the Case for Change report details the objectives of Phase 1 and the proposals for Phase 2 of the project.<sup>7</sup>

Refreshed deliverables can be found in the updated Delivery Schedule submitted alongside this response.

### **3(b) Strategy and insights**

**[Ofgem Feedback]:** A13's new deliverable (D13.5.3) is welcomed by Ofgem as they note it adds to the ESO's ability to be a trusted source of information on system insights. They do however note that there is insufficient detail to state whether it exceeds expectations in its current form.

**[ESO Response]:** We are pleased that Ofgem recognise the importance of our role and expertise in this space. We have learnt from our experience during BP1 that trying to define technical solutions in too much detail can present additional challenges. As such, we do not intend to define further the specifics of the outputs; as the energy sector and our modelling is constantly evolving and developing. Any elaboration would have to be at a similarly high level and subject to change. We look forward to working with Ofgem during the BP2 period to provide updates and progress on the strategic direction of this deliverable as it develops.

**[Ofgem Feedback]:** Ofgem confirmed that the new deliverable for A15.7 (Deliver Enhanced Frequency Control - EFC), adding a fifth phase to the project, and moving phases 2-4 to BP2, meets their expectations.

**[ESO Response]:** In recent months, we have been reviewing the decision to deliver EFC, as proposed in BP1, due to the successful launch of the Dynamic Containment (DC) service. In particular, we have reviewed the expected benefits to system operability of delivering EFC. Our revised position is that it would not be economic or efficient to deliver EFC in addition to DC as they both deliver inherently the same solution.

Our updated proposal for BP2 is therefore to complete the delivery of phases 0 and 1, and to cancel phases 2 to 5. This will save £21m, which would have otherwise been spent on delivery of those phases, with no expected reduction in benefits to the operability of the grid. Delivery of phases 0 and 1 will still provide benefits, including delivery of innovation learning relevant to other projects and proving the practicality of EFC and other potential Wide Area Monitoring Control (WAMC) applications for future use.

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<sup>5</sup> <https://www.nationalgrideso.com/industry-information/connections/tec-amnesty> and <https://www.nationalgrideso.com/document/266011/download>

<sup>6</sup> <https://www.nationalgrideso.com/document/264811/download> and <https://www.nationalgrideso.com/document/268806/download> (slides 30 - 35)

<sup>7</sup> <https://www.nationalgrideso.com/industry-information/connections/connections-reform>

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We have amended the Delivery Schedule (D15.7.1 and D15.7.2) submitted alongside this response to reflect this change, with Phase 1 (which is supported by NIA funding) extended out to August FY24 when the project is expected to end. We also propose to remove the £21m from our totex request.

A more detailed overview of the change can be found in the Supporting Information Annex, and we will engage further with Ofgem on this in early 2023 to agree any further changes required to BP2.

## **3(c) Long term network planning**

**[Ofgem Feedback]:** Ofgem noted that while our NOA ambitions provide ongoing opportunities to exceed expectations, the ESO should clearly define how the NOA fits within its other activities in 3(c), linked to deliverables under A22 (Network Planning Review and Offshore Coordination).

**[ESO Response]:** Our long-term network planning is rooted in the FES, ETYS and NOA processes<sup>8</sup> which were defined in BP1 through A13 and A9. We have enhanced these processes over time, and we note the recognition of our ambition for the NOA processes. While these processes are recognised as world-leading, more fundamental reform is needed to deliver a net zero network of the future.

For BP2, A22 is introduced to manage the transition to a new planning regime, driven by the Offshore Transmission Network Review (OTNR) and Electricity Transmission Network Planning Review (ETNPR), integrating them into the Network Planning process.<sup>9</sup> The transition will be to a future state known as the *Centralised Strategic Network Plan (CSNP)*. The CSNP will be a fundamental transformation of our network planning processes, and in doing so the previous incremental improvements to the processes (as defined in A9 in BP1) will be delivered as part of a much broader set of reforms to our processes.

By the end of BP2, the existing ETYS and NOA processes will be replaced by the CSNP, and A22 as a whole will deliver the enhanced expectation for long-term network planning.

Further clarity on the above, if required, can be discussed through our engagement with Ofgem in early 2023.

## **ESOQ6. Do you agree with our proposed changes to the performance metrics for BP2?**

Ofgem have proposed a number of changes to our suite of performance metrics. Several areas still need more discussion and clarification. Therefore, we cannot fully agree with the proposed changes but welcome further detailed collaboration with Ofgem on these metrics ahead of the Final Determination in March 2023. We have outlined our detailed views on each metric proposal below.

### **Role 1**

#### **1A. Balancing costs**

Ofgem propose to amend this metric to consider the impact of renewable generation and the wholesale day-ahead price of electricity on balancing costs.

We are supportive of a change to this metric as we believe the current benchmark, based on monthly historic data for both constraint and non-constraint costs, is not effective, nor a suitable incentive given the influence of factors outside of our control. We believe that an improved metric could be derived, as we have discussed with Ofgem previously.

We are also supportive of including both renewable generation and wholesale day-ahead prices for electricity in this new metric and would ask that the expectation measures assigned to a new metric are also considered for revision. This would ensure that the new metric would be achievable from the outset, taking into account the previously unforeseen increases in balancing costs. There may be further variables which could be included once further analysis has taken place.

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<sup>8</sup> Future Energy Scenarios (FES), Electricity Ten Year Statement (ETYS) and the Network Options Assessment (NOA)

<sup>9</sup> BEIS's Offshore Transmission Network Review and Ofgem's Electricity Transmission Network Planning Review

# ESO

We look forward to working with Ofgem to define and shape this new metric and associated benchmark thresholds to reward activities which are within our area of influence and contribute to balancing cost reductions.

## **1B. Demand forecasting**

Ofgem propose to amend this metric, with minor changes to the methodology and reporting requirements to account for metered volumes of dispatched demand reduction services.

We are supportive of a change to this metric but propose an alternative methodology that is not based on Absolute Percentage Error, with indicative national demand outturn used as the quantity that performance is measured on. We do not believe this recognises the complexity of demand forecasting as the power system transitions to zero carbon operation.

Percentage error is appropriate when the error made is expected to be proportional to the outturn value. This is not the case when quantities are derived from the difference between other quantities, each with their own source of error. In such circumstances, error can sometimes increase even as the overall value decreases.

Metric 1B represents the volume of generation the transmission system must supply to meet demand within GB, so does not factor in losses or demand supplied by the distribution network.

As overall true demand has remained broadly flat, the increasing volume of distribution connected generation means that the volume of transmission connected generation is declining in parallel. In addition, the generation type connected to the distribution network (most of which is weather-dependent), introduces inherent variability and irreducible error.

We believe there has been demand forecasting improvements over recent years which have delivered benefits to consumers. There is also overarching recognition that our national demand forecasting performance is very good based on feedback through our industry engagement. However, we feel these factors are not reflected in our performance against Metric 1B based on its current methodology.

We look forward to an in-depth discussion with Ofgem to demonstrate the case for change and agreeing a more suitable metric that better recognises the changing nature of transmission demand.

## **1C. Wind generation forecasting**

Ofgem propose to amend this metric, with minor changes to reporting requirements. This would include adding a locational tag to BM wind unit forecasts.

We support this proposal.

## **1D. Short notice changes to planned outages**

Ofgem propose to retain this performance metric for BP2.

We support this proposal.

## **Role 2**

### **2Ai: Phase-out of non-competitive balancing services**

Ofgem propose to amend this metric (previously 2A: Competitive procurement) with a significant revision to the methodology and associated reporting. Ofgem propose monitoring the phase-out of non-competitive contracts to ensure that they are replaced with competitive contracts in an efficient manner.

We agree with the proposal to monitor the phase-out of non-competitive contracts. The performance bands should account for new services introduced that may not replace an existing service. Due to wider consumer/system needs, we may decide to progress other projects ahead of phasing out existing non-competitive services, which should be captured within the wider reporting framework.

### **2X: Day-ahead procurement**

Ofgem propose to introduce a new metric to measure the ESO's performance around day-ahead procurement.

# ESO

We agree with this metric and what it aims to measure. If any future services need more than day-ahead procurement, which is accepted by Ofgem, we propose these volumes shouldn't be considered against this metric.

## Role 3

### **3X: Connection offers**

Ofgem propose to introduce a new metric under Role 3 to measure the ESO's performance around connections. Ofgem are considering monitoring our performance on connection offers in line with meeting timeliness and 'right first-time' (RFT) performance.

We welcome the introduction of a metric for connections offers that provides transparency of our performance in this critical area, and we agree with Ofgem's proposal to focus on timeliness and/or quality of connection offers. In line with that approach, below we propose two metrics that address those two areas. We feel these provide a fair and complete view of our performance on connection offers.

The focus on our performance for connection offers should be to provide a view of our performance on delivering to time (licenced timescales) and quality. To ensure performance is clearly understood, our performance metrics reporting will be supplemented by (1) the same System Operator Transmission Owner Code (STC) metrics for TOs on performance to time (licenced timescales) and quality, and (2) a report on derogations obtained, which should list reasons for the derogation (including confirmation if it was due to a risk within or outside our control).

See below details of each of the proposed metrics:

- **Performance Metric 1 – Connection offers - Licenced Offer Timescales** - % of licenced offers delivered within 90 calendar days (excluding approved derogations to licenced timescales when an extension to time has been agreed with Ofgem due to reasons outside the ESO's control, or due to extenuating circumstances). A subset of data will be supplied to provide an overview of TOs' performance against STC timescales.
- **Performance Metric 2 – Connection offers - Licenced Offer Right First Time** - % of Right First Time (RFT) for licenced connection offers (excluding errors or challenges which are an outcome of the Transmission Owner Construction Offer (TOCO) provided by TOs and where we wouldn't have the information/access to data to challenge the content of the offer). A subset of data will be supplied to provide an overview of TOs' performance against STC timescales.

We will continue to work with Ofgem on these metrics, including appropriate benchmarks, up until Final Determinations.

### **ESOQ7. Do you agree that the full suite of metrics provide a comprehensive view of measurable ESO performance? If not, what is missing?**

In line with our response to ESOQ6, Ofgem has proposed a number of changes to our suite of performance metrics. Several areas still need more discussion and clarification. Therefore, we cannot fully agree with the proposed changes at this stage but welcome further detailed collaboration with Ofgem on these metrics ahead of the Final Determinations in March 2023.

Subject to further collaboration, we agree that the suite of metrics, as set out in the Draft Determinations, target key areas of measurable ESO performance. We do not consider any measurable performance elements to be missing.

### **ESOQ8. Do you agree with our proposed changes to the performance benchmarks for measuring stakeholder satisfaction?**

We welcome Ofgem's proposed change to the performance benchmark for measuring stakeholder satisfaction. It is broadly in line with the proposal we set out in our BP2 submission. It also recognises that a combination of meeting and exceeding expectations categories can be seen as an overall positive performance indicator.

We do, however, seek further clarity on how “significantly outweighs” will be assessed in practice. The subjective nature of the statement reduces predictability, and we believe expanding the definition or providing examples will improve clarity.

## **ESOQ9. Do you agree with our proposed changes to the regularly reported evidence for BP2?**

Ofgem have proposed several changes to our regularly reported evidence (RRE). As per our response to the performance metric changes, several areas still need more discussion and clarification. Therefore, we cannot fully agree with the proposed changes at this stage but welcome further engagement on these RRE measures. We have outlined our detailed views on each RRE proposal below:

### **Role 1**

#### ***1E: Transparency of operational decision-making***

Ofgem propose to amend this RRE to include an update to the associated reporting to include a narrative to explain the reasoning behind our decisions to skip units in the dispatch order beyond reason code. Currently the metric shows the percentage of balancing actions taken outside of merit order in the Balancing Mechanism (BM) each month and is published on a weekly basis.

We are not supportive of the proposal to include a narrative for each skip due to the sheer volume of instructions and associated resource burden this would create, however we feel we can provide the required transparency through our current reporting and engagement. See below for further details.

We accept a skip occurs when a Bid Offer Acceptance (BOA) instruction sent by our Control Room to increase or decrease the output of a generator is at a higher price than an alternative option. That is, we “skipped” an option that appears to be more economic.

There are a small number of genuine skips, where alternative instructions could have been sent for a lower cost. However, most actions that appear to be skips in data analysis are taken for operational reasons and are not preventable. We strive for zero preventable skips.

We have a licence condition to operate efficiently and economically and a target to reduce balancing costs. There is no obligation to operate in strict cost-order, particularly when this would result in inefficient dispatch or increase the overall cost of actions required to maintain a secure and stable energy system. The current metric aims to demonstrate the efficiency of the current dispatch processes undertaken by the Electricity National Control Centre (ENCC). For example, during October 2022 we issued 64,312 BOAs, and, of these, only 0.3% (191 individual actions) were not able to be categorised or assigned to a reason code.

We recognise that understanding our dispatch activities and decisions is important to the electricity market. Through our engagement on this topic with stakeholders (through, for example, monthly incentive reporting, the weekly Operational Transparency Forum, dispatch transparency bilateral discussions and our industry event in December 2022) we have explained the dispatch process for a number of scenarios to bring the required decisions to life.

Future evolution of our balancing dispatch tools will enable additional narrative to be logged at the point of instruction. This will happen as part of our Balancing Programme work. We have shared with the industry (including those that attended our skip rate stakeholder event), the planned improvements in balancing capabilities, how these impact on dispatch decisions and what the planned timescale is for these releases.

We will continue to work with industry to ensure our operational decisions are as transparent as possible, including continuing to revise how we categorise our actions and continuing to explain our dispatch process. We will also be highlighting when system changes are implemented that should eliminate some reason codes.

At this point in time, we would not be able to consistently provide a greater narrative around the dispatch process and why each individual unit would have been skipped given the sheer volume of instructions issued per month and the resource required to retrospectively create the narrative.

We would suggest that additional assurances around our dispatch processes could be provided through the Balancing Mechanism Audit, and Balancing Principles Statement Audit opinions that we are obligated, under the BSC, to have carried out.

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## **1F: Zero carbon operability**

Ofgem propose to retain this RRE for BP2.

We support this proposal.

## **1G: Carbon intensity of ESO's actions**

Ofgem propose to retain this RRE for BP2.

We support this proposal.

## **1H: Constraint cost savings from collaboration with TOs**

Ofgem propose to retain this RRE for BP2.

We support this proposal.

## **1I: Security of supply**

Ofgem propose to retain this RRE for BP2.

We support this proposal.

## **1J: CNI outages**

Ofgem propose to retain this RRE for BP2.

We support this proposal.

## **Role 2**

### **2Aii: Balancing services delivered in a non-competitive manner**

Ofgem propose a new accompanying RRE for performance metric 2Ai. which would allow us, where appropriate, to provide supporting narrative to demonstrate the value of our approach - beyond the current reporting required as part of the incentives framework.

We would consider that % or volume of services delivered in a non-competitive manner offers a better metric than £, which wouldn't take account of underlying market conditions. Some actions/services do not have alternative competitive procurement methods, such as SO-SO trades and Mandatory Frequency Response (MFR). We will continue to work to reduce the need to use these services through other existing/new markets, however these will still be needed where alternative/competitive procurement methods are not currently available.

For the reporting of this RRE, we therefore ask for recognition that certain markets are necessarily procured in a non-competitive manner because of the nature of the service.

### **2B: Diversity of service providers**

Ofgem propose to retain this RRE for BP2 and are considering a rationalisation of the data provided.

We welcome a review of the data for this performance measure and will continue to work with Ofgem between now and Final Determinations to agree a more suitable approach.

### **2C: EMR decision quality**

Ofgem propose to remove this RRE from our performance measures for BP2.

We support this proposal.

### **2D: EMR demand forecast accuracy**

Ofgem propose to retain this RRE for BP2.

We support this proposal.

# ESO

## **2E: Accuracy of forecasts for charge setting**

Ofgem propose to retain this RRE for BP2.

We support this proposal.

## **Role 3**

### **3A: Future savings from operability solutions**

Ofgem propose to retain this RRE for BP2. However, they recognise that the reporting could be improved to increase understanding of the estimated benefits being reported.

The current savings reported in this area arise from analysis undertaken as part of the business case and economic assessment for a particular solution, for example Network Services Procurement (formerly Pathfinders). This analysis – based on sound economic principles – is tailored to each specific situation.

We believe that we can either continue to report benefits derived from our processes with further narrative, or the RRE should be removed. We do not believe that calculating benefit in a different way is proportionate or useful.

### **3B: Consumer value from the NOA**

Ofgem propose to amend this RRE for BP2. Ofgem propose to introduce a 'mini-CBA' framework for each NOA activity (excluding Network Services Procurement, formerly Pathfinders), which they believe could provide greater transparency on the associated benefits it reports. Additionally, Ofgem propose focusing this performance measure on Network Services Procurement projects (previously called Pathfinders), particularly as these have now started to move from concept to delivery. There may be further scope to refocus this measure to address some of the other network planning tools Ofgem expect us to develop in the BP2 period.

We would welcome the opportunity to engage further with Ofgem on this topic. We recognise the reported benefits identified by processes such as the NOA can be large, but these are the sum of hundreds of options, each costing hundreds of millions of pounds, mitigating up to forty years of constraint costs.

The NOA is a macroscopic assessment of the future GB network need. In future, the transition to the CNSP will continue to set this strategic design. Disaggregating benefits of individual schemes from a macroscopic process is complex and subjective. Moreover, we would question what additional value further assessment of this nature will bring. Therefore, we do not support the proposal of an additional 'mini CBA' framework for each NOA activity.

### **3C: Diversity of technologies considered in the NOA**

Ofgem propose to remove this from our performance measures for BP2.

We support the proposed approach. We will continue to look at how an increasing range of innovative and diverse technologies can be considered in our network development processes, but this specific RRE is outside of our control.

## **Internal costs**

### **ESOQ10. Do you agree with our proposal to approve the ESO recovering its full BP2 funding request of £671m?**

We are pleased that Ofgem have provisionally allowed the full amount of our total expenditure (totex) request for the two years of the BP2 period. This allows us the certainty needed to continue to invest in the systems, processes and people capabilities necessary to enable the energy transition and deliver substantial benefits for consumers.

Since our final BP2 submission, we have found a reduction in our totex due to activity A15.7 (Deliver Enhanced Frequency Control - EFC), as referenced on page 14 of this response and in our Supporting Information Annex (SIA). We propose to remove the £21m associated with this activity and would welcome further discussion with Ofgem on this area.



## **ESOQ11. Do you agree that the activities and investments proposed by the ESO are necessary and should proceed?**

We agree with Ofgem's view that all of the activities and investments we have proposed are necessary and should proceed.

In BP2 we've set out an ambitious suite of prioritised deliverables to ensure we can effectively fulfil our evolving role as electricity system operator and enable current and future industry participants to play their part. These priorities will deliver the outcomes our stakeholders need from us over the next two years – delivering excellence in system operation, building efficient and effective markets, driving clarity in our path to net zero and enabling our organisation to perform.

We estimate that our proposed activities will generate net benefits of around £2.8 billion for consumers over the five-year RIIO-2 period. Our plan is not just about delivering value in the short-term. Delivery of our BP2 activities will drive longer term value by providing the pathway to deliver a reliable, affordable and fair transition to net-zero.

## **ESOQ12. Do you agree with the proposed Value for Money scoring?**

The Value for Money scoring is applicable to all of our costs. Ofgem have split their rationale into IT and non-IT costs. Therefore, we have taken the same approach and provide specific views below on both areas.

### **IT costs**

Technology and data are fundamental to our role and will have greater importance as the energy system becomes increasingly complex. In particular, we believe that successful digitalisation of products, services and processes will further unlock innovation, flexibility, and transparency and deliver cost savings for the benefit of consumers. Given that our technology investments play a central role in enabling substantial consumer benefits, Ofgem applied a higher level of scrutiny to this area of our plans. Accordingly, through the BP2 submission process, we have provided a large quantity of information in support of our technology investment plans. This included a cost data model describing our enterprise IT and a Digital, Data and Technology annex containing full details of each of our investment programmes. We have also engaged extensively with Ofgem and their independent consultant via meetings and through detailed responses to Supplementary Questions. We will, of course, continue to collaborate with Ofgem as we deliver our technology investments throughout the remainder of the RIIO-2 period. Against this backdrop of substantial information provision and review, our response to Ofgem's findings in the technology area is as follows:

#### *We have confidence in our technology plans*

We reaffirm our confidence in the robustness of our technology plans. All our investments are strongly cost beneficial, delivering substantial consumer benefits. We believe our chosen technology solutions best meet the challenges of a complex and changing external environment. We will continue to use the agility offered in our regulatory framework to ensure our plans, and associated costs, evolve with industry needs.

#### *We recognise the need to justify strategic decisions and respond to questions*

We are pleased that our technology investments are recognised as being vital to the delivery of priority activities across our three Roles and are essential to delivering the majority of benefits in our business plan. At the same time, we acknowledge that there are some areas where we need to provide additional information to justify our strategic decisions and respond to the questions that have been raised. In this regard, we agree that the proposed cost monitoring framework can be suitable for this purpose.

In order to provide confidence in our technology delivery, we have set out a roadmap to collaborate and engage with Ofgem on key areas of our technology delivery. This is set out in our Supporting Information Annex (SIA). In the same annex we also set out our proposals on information provision via the cost monitoring framework.

One technology delivery area we wish to clarify as soon as possible is the inclusion of "cyber resilience" work in our BP2 submission, when in fact we feel the associated investments should be classed as "architectural resilience" instead. More information on this topic is presented in the Supporting Information Annex. We hope this will clarify the classification of this work and seek further discussion to agree the inclusion of these aspects of investment in BP2.

## *We feel elements of the Value for Money assessment were subjective*

Whilst acknowledging the need to engage Ofgem throughout the BP2 period to justify our strategic decisions and respond to the questions that have been raised, we feel that the Value for Money assessment of our technology investments was subjective and incorrect in some areas and not aligned to either energy industry best practice or how technology of this type is typically delivered. The Supporting Information Annex contains some examples where the lack of knowledge or subjective application of findings has, in our opinion, led to incorrect conclusions. Based on the information we set out in the Supporting Information Annex, we would expect the following investments to have an improved RAG rating:

- **120** Interconnectors would be Green instead of Amber.
- **200** Future Training and Simulation Tools would be Green instead of Red.
- **270** Role in Europe (formerly EU regulations) would be Green instead of Red.
- **500** Enhanced Frequency Control (formerly Zero Carbon Operability) would be Green instead of Amber.
- **280** GB Regulations would be Green instead of Amber.

## *We seek clarity on future technology assessment criteria*

Clarity is needed on how future technology assessments will be conducted and what they will cover, including scope, parameters and assessment criteria. We feel that the scope of the BP2 technology assessment, conducted by Ofgem's independent consultants, was unclear in some areas. We therefore request that the scope of future assessments of our technology investments, such as during the proposed annual review of the ex-ante Value for Money scores, is set out more clearly in advance.

Within the Supporting Information Annex, we set out proposals for a more defined RAG criteria definition for assessing our IT investments. We also do not agree with the principle of basing the scoring of an investment on the worst scoring of the seven criteria, as this does not provide a balanced view of the level of concerns or topics. We welcome further discussion and clarity with Ofgem in this area.

Finally, we've also added to the Supporting Information Annex some corrections to our **Annex 4** Data, Digital and Technology publication identified by us and Ofgem. These corrections provide clarification on what information to use when assessing our plans and will feed into Ofgem's monitoring framework data baseline.

## Non-IT costs

We welcome Ofgem's assessment of our non-IT costs and recognise that this was not the main driver for our value for money scoring for any of our Roles. As per ESOQ2, there is an outstanding question about how the non-IT costs will be assessed.

Ofgem did, however, note specific areas where they would like more information on our non-IT costs. Please see below for more information on the relevant areas:

### **Role 1**

We welcome Ofgem's assessment that our increase in non-IT costs in Role 1 have been well justified and are proportionate to the activities we will carry out during BP2.

### **Role 2**

**[Ofgem Feedback]:** Ofgem specifically asked for more information to understand the drivers behind the significant additional opex we have requested to fund an increase in headcount for sub-activities A4.2 Power Responsive and A4.3 Deliver a single day-ahead response.

**[ESO Response]:** We acknowledge that sub-activities A4.2 and A4.3 have been marked as having undergone 'no or minor change' in our BP2 submission, yet we have requested funding for an increase in headcount.

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However, from BP1 to BP2, due to an internal restructure, there was a re-alignment of headcount within Role 2. This meant that 10 FTE were transferred from A4.1 and re-accounted for under A4.2/A4.3, resulting in no increase in overall spend.

Furthermore, three more FTEs were requested to support Network Services Procurement (formerly Pathfinders) projects, another two FTE were requested for Frequency Risk and Control Report (FRCR) related activities, and the final one FTE was requested for the Enduring Auction Capability, transferring from product owner to business as usual. Due to requesting only six FTEs across A4.2 and A4.3, this didn't affect the materiality threshold and the sub-activities remained as 'no or minor change'.

We would welcome a further conversation with Ofgem on this area of activity to provide more clarity, if required.

**[Ofgem Feedback]:** Ofgem acknowledged that we have also expanded our work around sub-activity A6.1 Code management/market development and change and that the level of spend has been justified. However, further detail was requested to understand what we expect market reform to deliver for the inputs.

**[ESO Response]:** To ensure we address the correct areas in our response, we need further clarification on what is meant by Ofgem's feedback and would welcome further discussion. Specifically, we are unsure what is meant by the word 'inputs' in "to understand what we expect market reform to deliver to for the inputs".

If this relates to the increase in FTE, we are aware that there are significant programmes of change that will impact the industry code and frameworks over the next several years through the implementation of major programmes of reform, such as onshore competition, OTNR, implementation of the restoration standard and market-wide half hourly settlement. We consider that the additional resources will allow us to deliver this programme of work effectively, although there is still some uncertainty over how the Energy Code Reform programme will impact this overall.

**[Ofgem Feedback]:** Ofgem noted the addition of the new sub-activity A6.8 Digitalisation of code and asked to understand the material differences between sub-activity A6.8 and A6.5 Work with all stakeholders to create a fully digitalised whole system technical code by 2025.

**[ESO Response]:** To give Ofgem confidence that we have allocated spend efficiently across activities and avoided overlap between the sub-activities A6.5 and A6.8, the material differences are as follows:

- A6.5 Work with all stakeholders to create a fully digitalised Whole System Technical Code by 2025 aims to create a single technical code for distribution and transmission connections that is focused on providing minimum standards to allow safe and secure operation of the electricity systems. A6.5 focuses on stakeholder engagement, looking at stakeholder-led challenges through workstreams overseen by the industry through the Whole System Technical Code Steering Group and will pick up the development of code modifications to deliver this and any other deliverable as a result of Ofgem's Energy Code Reform work.
- A6.8 is focused on the digitalisation element itself. Digitalisation is fundamental to improving stakeholder experience of the industry codes and will contribute 80% of the benefits for this overall activity, by allowing easier access to the Grid Code for multiple parties. (A6.5 contributes the remaining 20% of the benefits).
- In BP2, we will continue to inform technical code consolidation in line with any proposed Energy Codes Reform (ECR) or other reforms mandated by Ofgem. However, due to significant stakeholder feedback on the potential for interactions with the ECR, we de-prioritised the consolidation element of A6.5 at the end of the first year of BP1. As a result, we created the new sub-activity A6.8 Digitalisation of codes to look more specifically at digital solutions, which can run independently of A6.5.

### Role 3

We are happy with the Role 3 Value for Money scoring overall, and note the feedback given for A15.8 and A14 meant Ofgem did not have sufficient detail to have full confidence in delivery or that these activities would exceed expectations. Additional detail has been provided below, and the Delivery Schedule has been updated to further clarify the ambitions.

**[Ofgem feedback]:** Ofgem concluded that Role 3's non-IT costs have sufficient evidence to justify proposed cost increases, which are noted as being driven by a marked increase in headcount for A14 and A22. They noted that the expectation is to see clear positive outcomes for this level of funding increase.

**[ESO Response]:** We are happy that the proposed increases are sufficiently evidenced based on the information currently available and feel that delivery of the proposed ambitions will result in the clear and positive outcomes expected. Many of these resources are already in place on the Offshore Coordination project, although do not appear in the BP1 baseline as the activity started within the BP1 period and, as a result, the cost pass through mechanism has been used. A22 has yet to set out specific BP2 deliverables, so we will work with Ofgem within-scheme as the sub-activities develop to set appropriate expectations and monitor progress once there is more clarity on the direction.

**[Ofgem Feedback]:** Ofgem noted some concerns over deliverability of the plan, and lack of clarity with some specific deliverables, particularly in relation to sub-activity A15.8, and activity A14.

We sought further clarity from Ofgem on this point. Ofgem emphasised that additional information on the scale of targeted improvements, such as key measures of success for A14.3 and A14.4, would be useful. Also, more detail on targeted improvements to internal processes for managing connection applications and assessing compliance (D14.3.4 and D14.3.5) would be preferred. Lastly, if we had a view of the impacts we expect to result from Queue Management it would be beneficial.

For A15.8, Ofgem noted the need to understand dependencies further, and more information on Primacy rules was requested for D15.8.3.

Ofgem stated that they expect to see further clarity and action to remedy the points raised.

**[ESO Response]:**

**A14 Connections:** Ofgem are correct to observe that much of the conceptual work for A14.3 and A14.4 (improving the customer connections experience) is to be defined through stakeholder engagement. As such, we have updated the deliverables to provide further insight into the targeted improvements and key measures for success which will result from team growth, new roles and development of our IT project (A14.4). These updates can be found in the Delivery Schedule submitted alongside this response.

For the additional detail on D14.3.4 and D14.3.5, the improvements to internal processes will enable Ofgem to better measure performance through feedback from customers, including CSAT scores, reduction of complaints and referrals, and performance through reporting of substantive information. These improvements should demonstrate improved customer service and user experience. It must be recognised, however, that the overall experience in the connections process is not totally within the ESOs control. The TOs and DNOs have a very large role to play in the quality and timeliness of the offered connection contracts. We are working hard with the TOs to improve ways of working and processes to ensure that the customer receives the best possible experience.

We have also added more detail to the deliverables on key measures of success for A14.5 to further enhance the clarity of our ambitions. Please see our response to ESOQ5 for additional detail on the specific commitments for BP2, and the expected impacts of implementing Queue Management.

Again, it should be noted that the success of many of our BP2 aims is greatly reliant on the active participation of other organisations (DNOs and TOs), government organisations, and other stakeholder groups.

**A15.8 Facilitate distributed flexibility and whole electricity system alignment:** We have updated deliverable milestones in the Delivery Schedule (submitted alongside this response) for D15.8.2 and D15.8.3 to provide further clarity on A15.8; particularly those areas associated with our IT discovery process and dependencies beyond our control. These areas of focus require successful progression of both our and DNO actions in order to succeed in the intended timescales. We have also addressed Ofgem's feedback in the following ways:

- **D15.8.2 covers DER visibility** - Recent work in the Electricity Networks Association (ENA) Open Networks initiative has suggested there may be significant consumer value in obtaining operational

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metering data on Distributed Generation from DNOs<sup>10</sup>. This data will need to be extracted from remote substations by DNOs and passed to their control centres before sending to us via Inter-Control Centre Communications Protocol (ICCP) links. Delivery of such work would be dependent on the DNOs' ability to obtain and transfer data.

- **D15.8.3 covers Primacy rules** as detailed in the Smart Systems and Flexibility Plan 2021<sup>11</sup>. To summarise, the ESO and DNOs may require one or more services to manage the transmission or distribution networks respectively. To manage potential service conflict and enable networks to be optimised efficiently and transparently, there is a need to develop a set of clear principles and “primacy” rules. Co-ordination of flexibility services would need both ESO and DSOs to exchange details of system needs, potential providers, and potential system limitations to this provision. Successful delivery of this work will require both parties to develop and enable data exchange methodologies and systems collaboratively.

We are keen to work with Ofgem as this work develops to support the understanding of our role in improving DER visibility and implementing primacy rules alongside other industry parties and developments, such as ENA's Open Networks programme.

## ESOQ13. Do you agree with our proposed approach to monitoring the ESO's costs?

As stated in ESOQ2, we welcome the introduction of the cost monitoring framework. The high level of change and uncertainty in our industry means that changes in scope, and consequently changes in the costs, schedule and outputs of our technology investments, are almost inevitable. A cost monitoring framework will allow us to give Ofgem better and more timely awareness of these changes, together with their reasons.

However, we have some questions about how this monitoring framework will be applied in practice. As mentioned in our response to ESOQ12, we feel there is the potential for subjectivity and scope creep, leading to less effective and efficient delivery of our Business Plan and benefits, as well as potential overlap between managing outputs and plan delivery.

Clarity is needed on how the monitoring framework will operate to ensure consistency of application and alignment of expectations (see below)

Specifically, we seek:

- **An Ofgem decision** on whether non-IT cost assessment will follow the same process and criteria as technology investments.
- **Further engagement:**
  - Further discussion is required on the proposed monitoring framework regarding the type of feedback that will be received throughout the process, how the RAG criteria will be applied (and associated impact) as well as how and who will conduct the value for money assessment.
  - We also seek collaboration to understand what type of external validation is needed to exceed Ofgem's expectations, as well as timings for its provision.
  - We note that scoring and justifications in the Role scoring table suggests that, as long as there are 1 or 2 investments that are red, then the whole Role will be scored below expectations. We wish to engage with Ofgem to understand in more detail how this will be applied.
- **A minor wording correction** is also needed for accuracy. Percentages are related to costs and not the number of investments that are red.

## IT costs

To help to provide greater detail of our investments, enhanced transparency and an objective assessment of our investment decisions, the Supporting Information Annex contains a proposal for how the monitoring

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<sup>10</sup> [https://www.energynetworks.org/industry-hub/resource-library/on21-ws1b-p6-operational-der-visibility-and-monitoring-requirements-\(13-dec-2021\).pdf](https://www.energynetworks.org/industry-hub/resource-library/on21-ws1b-p6-operational-der-visibility-and-monitoring-requirements-(13-dec-2021).pdf)

<sup>11</sup> [Transitioning to a net zero energy system: Smart Systems and Flexibility Plan 2021 \(publishing.service.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/97848/Transitioning_to_a_net_zero_energy_system_Smart_Systems_and_Flexibility_Plan_2021.pdf)

# ESO

framework for the technology (IT) component of our costs could operate. We hope to engage with Ofgem to discuss this.

## Non-IT costs

As currently drafted, it appears Ofgem propose to monitor all the ESO's costs as part of the monitoring framework. However, we question how the criteria proposed would be fully applicable to non-IT costs.

Our non-IT costs are typically more stable and predictable than costs related to our IT investments. The forecasts for these costs do not change significantly each quarter, so we believe that monitoring our non-IT costs quarterly will deliver minimal insight into cost changes.

Currently, every six months we provide Ofgem information on our forecast spend compared to our 'benchmark' costs for the business plan period. This information is similar to that which we provide annually as part of our Regulatory Reporting Pack (RRP). We propose to continue providing this information during BP2. We would also provide additional narrative, if/when our non-IT costs deviate significantly from our BP2 submission. Based on our historic spend against non-IT cost forecasts, we have seen variances to benchmark within the 10% tolerance in all areas other than those where additional roles have been added. Therefore, we feel that reviewing these costs less frequently does not pose a risk to Ofgem's intent of introducing this new cost monitoring framework (which has been designed to deal specifically with monitoring changes to IT costs). We therefore consider that continuing to provide cost information on a six-monthly basis for non-IT costs would remain appropriate for the BP2 period.

Therefore, given the existing level of information already provided, and the relative stability of the relevant costs, we would welcome further discussion with Ofgem to clarify the suitability of the cost monitoring framework applying to non-IT costs.

## ESOQ14. Do you agree with our proposal to not change the disallowance cap value for BP2?

We agree with the proposal to not change the cap on our Demonstrably Inefficient and Wasteful Expenditure (DIWE), which aligns with our proposals in our final Business Plan.

## Finance

### ESOQ15. Do you agree with our proposal to not increase additional funding for BP2 based on the current information available?

We do not agree with Ofgem's consultation position regarding additional funding. Alternatively, we see merit in extending the methodology (a return on capital employed approach aligned to the CMA's energy market investigation approach) used by Ofgem in its Final Determinations for BP1.

At the time of Ofgem's RIIO-2 Final Determinations in December 2020, their view was that new roles in Early Competition or Offshore Co-ordination would not materially increase our risk profile. Since then, more work has been carried out across both activities. In our BP2 submission we noted, as an additional consideration<sup>12</sup>, that our developing plans, particularly around Early Competition, highlighted that there could be additional risk to us. We also said that we would welcome further discussion on potential risk mitigation and/or additional funding for these activities. These statements were not linked to our request for £4.4m additional funding as inferred by Ofgem in their Draft Determinations (para 5.4). We did not present any evidence for additional funding for these activities. At this stage the roles are not fully scoped and there is an opportunity to mitigate additional risks through future discussions.

Regarding the ex-ante fixing of BSUoS tariffs, we continue to work with industry and Ofgem to implement a solution. We note that since the publication of the Draft Determinations, Ofgem have approved CMP361 (WACM3) which will introduce ex-ante fixed tariffs from April 2023. Implementation of this code modification will require us alone to fund the risk of a cost under-recovery, with the backstop that tariffs can be revised if we forecast that our facilities would be insufficient to fund any under-recovery. On the basis that an annually fixed BSUoS tariff is implemented in line with CMP361, we have set out below detail on the additional risks

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<sup>12</sup> [download \(nationalgrideso.com\)](https://nationalgrideso.com) BP2 Supporting Information Annex para 6.4.13

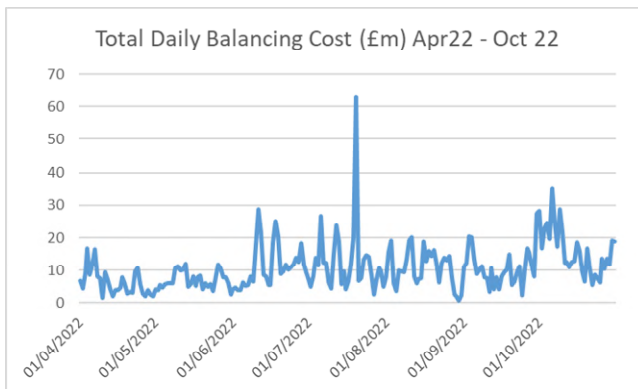
presented, the reason for our choice of funding methodology and the reasoning as to why we do not consider there to be a double count with any other aspects of our remuneration.

## Additional risks associated with fixed BSUoS tariffs

### Liquidity risk

In supporting the implementation of fixed BSUoS tariffs we will provide a working capital facility (WCF) to manage any under-recovery. As outlined in our BP2 submission<sup>13</sup> we already commit funds of £250m to support existing regulatory timing risks, so further funds to support fixed BSUoS tariffs would be needed. While CMP361 seeks to limit our exposure to cash flow risk through the ability to adjust tariffs if balancing costs are higher than forecast, we still see scenarios where we could be exposed.

- Timing of tariff re-set** – Under code modification CMP361 we can increase tariffs when we forecast that we will neither recover sufficient funds through BSUoS charges or hold sufficient funds through the BSUoS WCF to meet balancing costs during that fixed price period. Given the volatile and unpredictable nature of balancing costs, the decision as to whether and when to increase tariffs will be difficult. There is a risk of increasing tariffs which is subsequently not necessary and would impact on supplier cash flow and consumer bills. Conversely, there is a risk of making a decision too late so that the increase in tariffs does not build enough cash for us to settle immediate liabilities.
- Short term cost shock** – Balancing costs are highly volatile as demonstrated in July 2022. Following some significant high costs days at the beginning of July 2022, we experienced a record balancing cost of £62m on 20 July 2022 as shown in the chart below.



Any cost shock that occurs close to or just after a tariff re-set would leave us exposed to a cash outflow which would be gradually recovered through increased tariffs. This would see us needing to access additional credit facilities above our agreed BSUoS WCF.

- Corporation tax** – Under current International Financial Reporting Standards (IFRS), accounting treatment any over- or under-collection of BSUoS revenue impacts on our reported and taxable profits. In principle, corporation tax is a 'passthrough' within the RIIO-2 price control. Tax allowances are provided through a notional company corporation tax calculation within the Price Control Financial Model (PCFM) and collected through internal revenues. However, this provision of an allowance to cover corporation tax charges only applies for internal revenues and costs, with no such provision relating to external (balancing) revenues and costs.

While, over time, the costs and revenues for external balancing costs will be equal, there is scope for some longer-term cash flow risks for corporation tax payments. For example, if we were to significantly over-recover in a financial year, without making an equal loss in the next financial year, then in some scenarios, due to the restrictions on carrying back tax losses, it could take several years to recover the initial corporation tax cash outlay. This would be especially difficult to manage once separated from the National Grid Group, when there will be no opportunity to surrender losses within the Group. We do not currently have provision in our credit facilities to cover these cash timing differences and there is no mechanism for us to recover any time value of money for a net deficit of cash being carried.

<sup>13</sup> ESO RIIO-2 Business Plan 2 Supporting Information - Annex 1 - Para 6.4.7

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## **Credit risk**

We have a licence obligation to maintain an investment grade credit rating. Having a strong credit rating is also necessary for us to obtain the credit facilities we need to manage regulatory timing risk. In Moody's most recent credit opinion (May 2022) it was noted that among our credit challenges was the "Regulatory decision pending on the proposal to materially increase NG ESO's exposure to timing differences on balancing costs". While we currently have strong credit metrics, Moody's note "The large differential between the scorecard-indicated outcome and the assigned rating reflects NG ESO's exposure to timing differences, which remain sizeable in the context of this asset-light business". It is therefore clear that taking on the additional BSUoS cash flow risk would be seen as credit negative and could have the potential to lead to a downgrade in credit rating. This would be even more likely in the case of an independent FSO, outside the mitigating effects of being part of the much larger National Grid Group.

## **Profit volatility risk**

Our five-year RIIO-2 Business Plan set out the importance of why our regulatory framework must provide investors with enough certainty, stability, and fair returns to make sure the notional company is financeable. The ability to pay stable dividends attracts the necessary investment for us to deliver our ambitious plans and sends a strong signal of commitment from the regulator that investors will get a return.

Under a new regime of fixed BSUoS tariffs, we will be exposed to significant profit volatility. Any under-recovery of BSUoS costs in a financial year will directly impact on profit and amounts available for distribution to shareholders. Under current proposals, we would commit to funding around £300m of under-recovery at any point in time. This would lead to a £300m loss and prevent any dividends being paid. While tariffs for the following year would be set to recover any shortfall, there could be no certainty that the deficit would be fully recovered and no certainty around a dividend payment. We consider that the inability to provide a stable return to investors provides an additional level of risk, which significantly diminishes our equity proposition and overall financeability.

## **Funding methodology**

In our five-year RIIO-2 business plan we considered several ways of determining an appropriate amount of funding to remunerate risks that were not covered through a return on RAV, which would support the ambitious regulatory framework needed to drive benefits for consumers, while providing a fair return for the risks we need to manage<sup>14</sup>. We recognised that no single approach could be deemed the correct one. We provided a range for our view of a suitable level of additional funding based on regulatory precedent, remuneration of risk capital and EBIT<sup>15</sup> margins. More specifically, in our consideration of funding for the revenue role we explored:

- The regulatory precedent of the SONI CMA appeal<sup>16</sup>, where SONI were awarded a 0.5 per cent uplift on revenues for revenue collection risks as well as a 1.75 per cent return on the parent company guarantee to remunerate contingent capital supporting SONI's credit facility.
- The return on the capital at risk for a fully drawn WCF.
- A lower uplift on revenues than determined in the SONI appeal of 0.35 per cent, taking into account private sector benchmarks.
- An overall EBIT margin of 10–15 per cent taking into consideration Moody's minimum required EBIT margins for investment grade, asset-light companies, comparator regulated entities e.g., Ofgem's determination for the Smart Data Communications Company (DCC), and typical margins for two further comparable sectors: industrial and commercial services, and software and IT services.

In Ofgem's Final Determinations for BP1 they agreed that the revenue collection role merited additional funding and set out their preferred methodology, which was based on a return on capital employed approach aligned to the CMA's energy market investigation. We recognise that deciding on a suitable level of remuneration requires judgement, both in the choice of approach and in terms of the parameters and values

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<sup>14</sup> [ESO RIIO-2 Business Plan Annex 5 – Finance report](#)

<sup>15</sup> EBIT – Earnings Before Interest and Tax

<sup>16</sup> [SONI Limited v Northern Ireland Authority for Utility Regulation](#)



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within a specific approach. While the choice of approach for RIIO-2 was a matter of judgement for Ofgem, we see merit in continuing to use the same approach for the remainder of the RIIO-2 period since it:

- Provides consistency and certainty of how capital employed will be remunerated.
- Scales with the level of capital committed to the revenue management role and can flex if the level of capital to support BSUoS fixed tariffs increases or decreases.
- Is independent of the scale of revenues invoiced, which has increased significantly since we published our RIIO-2 plan driven by Russia's illegal invasion of Ukraine and rising energy prices across Europe.

Furthermore, this approach aligns to the cost benefit analysis in the Frontier Economics report<sup>17</sup> on the impacts of recovering balancing services costs with an ex-ante fixed charge. The report concluded that there were still benefits in implementing an ex-ante fixed charge even if any ESO under-recovery was financed through a combination of debt and equity.

## Does our proposed methodology result in any double counting?

We consider that the methodology set out in our BP2 submission remunerates only the additional risks presented by the introduction of BSUoS fixed tariffs. Our reasoning for this is set out below.

We are currently remunerated for our revenue role through a return on capital for a capital range which was determined by CEPA in its final report on our returns in July 2022<sup>18</sup>. CEPA estimated the capital base to be between £165m and £260m (average £213m) which we agreed at the time might be an appropriate range once RIIO-2 arrangements were embedded. In our BP2 submission, we updated our view of the capital required to manage the revenue management role. We made adjustments to reflect new timing risks such as the increased regulatory risk in RIIO-2 and reduced provisions in areas such as large supplier failure, where we had experienced the Special Administration Regime (SAR) process for the first time. We concluded that £250m was an appropriate level of capital needed to support our regulatory timing risks and proposed no increase in the additional funding that underpinned an average capital requirement of £213m.

Moving to a fixed tariff regime for BSUoS charges, would require an additional and separate amount of capital to be made available. We propose that this capital should be remunerated using the same methodology as the existing capital available since it supports new risks which we have outlined above. In our BP2 submission we suggested this be remunerated using the same equity percentage assumptions and at the cost of equity as published at the time of Final Determinations. This approach would be consistent with the current award for additional funding that was set at the beginning of the RIIO-2 period and assumed to be set at nominal prices for the full period.

## ESOQ16. Do you agree with our proposal to set annual capitalisation rates in keeping with the previous methodology for BP1?

We agree with Ofgem's proposal to set capitalisation rates in accordance with our BP2 submission and in keeping with the methodology for BP1. We note that the rates set out in the Draft Determinations (34% for 2023/24 and 35% for 2024/25) were obtained from a recent ESO Price Control Financial Model (PCFM) publication<sup>19</sup>. We do not agree that the PCFM publication should be the source for this information because:

- The PCFM contains our forecast for costs rather than the costs assessed by Ofgem from our BP2 submission.
- The PCFM does not reflect Ofgem's current view that FSO costs would not be classed as totex and would not be added to the RAV.

We would be happy to work with Ofgem ahead of Final Determinations to determine appropriate capitalisation rates for the BP2 period based on the BP2 submission and taking into account the final agreed treatment for FSO costs.

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<sup>17</sup> [Final Modification Report - Annex 4](#)

<sup>18</sup> Report published alongside [Draft Determinations](#) (Technical Annexes – 2 – ESO returns)

<sup>19</sup> [ESO PCFM published 11 November 2022](#)

# ESO

## Innovation

### **ESOQ17. Do you agree with the level of proposed NIA funding for the ESO? If not, please outline why.**

We agree with level of NIA funding proposed as this amount will enable us to continue to fund projects which can focus on the higher-risk, more uncertain activities needed to solve the problems of achieving net zero.

We would, however, request further engagement with Ofgem to understand the comments made on benefits tracking in the Draft Determinations (as 'benefits tracking' is given as the reason for the proposed 10% reduction in the amount of NIA funding requested). The assessment from Ofgem refers to us being more 'transparent' and demonstrating our ambition to implement innovation into BAU. We already follow the regulatory reporting requirements, and Innovation Measurement Framework agreed between ENA members and Ofgem, so we would like to clarify any additional information we should be providing and discuss examples of how we've implemented project outcomes into BAU.

We have previously provided Ofgem with examples of the benefits we have delivered from innovation projects, which were commended at the time. We've also agreed with Ofgem in the past that benefits of our innovation work should be assessed differently to those of other network companies, due to the indirect impacts our innovation has on the wider energy system (beyond financial value) and the lack of incentives for us to directly benefit from innovation project outcomes. Therefore, we believe further discussions with Ofgem would be beneficial to help us understand this feedback.

Through enabling innovation across the industry, we strongly believe that this level of proposed NIA will continue to deliver exponentially more long-term value for the GB energy system when weighed against the short-term costs to consumers. Collaborative industry projects on early-stage research, new developments and the demonstration of emerging technologies will reduce the amount of effort, time and resources needed to solve these challenges in the future while mitigating the negative impacts for consumers.

## FSO

### **ESOQ18. Do you agree with our intention to fund the ESO's efficient FSO transition costs through a mechanism set out in the ESO's licence, and that this should not be classed as totex and therefore not added to RAV? If not, please detail why.**

We welcome the proposal that efficient FSO transition costs will be funded through the ESO licence, with ex-ante comfort provided by Ofgem on what activities it considers to be efficient. In assessing expenditure, we believe that any cost protection measures (i.e., those relating to demonstrably inefficient and wasteful expenditure or DIWE) should be the same as the established principles set out for RIIO-2.

We note that Ofgem has signalled that it may consult, in early 2023, on the plans to deliver the FSO, based in part on our December 2022 FSO submission to BEIS and Ofgem. We welcome further engagement on our indicative plan. Given the nature of the programme, along with several factors which are outside of our control, such as the progression of legislation and deliverables owned by other parties, we believe the consultation should focus on the plan and which activities Ofgem will consider funding, rather than specific costs (which, per the above, will in any event be subject to separate regulatory scrutiny).

In terms of funding, we believe that the proposed pass-through mechanism is only appropriate for the one-off costs to achieve the creation of the FSO – as it does not provide the ESO with any return. An example of a one-off cost is the migration of direct IT applications from National Grid Infrastructure to FSO infrastructure. Enduring costs for running the business, such as additional employees to fulfil the new advisory role, should be subject to recovery and incentivisation in line with the current ESO regulatory model.

As a result of treating capital expenditure as pass-through costs, it should be noted that there will be an impact on the timing of tax charges. In practice, the regulatory treatment of these costs as pass-through will differ from the accounting treatment. Regardless of the regulatory treatment, the company will follow accounting standards and capitalise costs as required. This means that we will have higher accounting profits in the year revenue is recovered, resulting in a higher within-year tax charge. This higher tax charge would be recouped by lower tax charges in future periods. While the overall value is neutral (with the exception of the time value of money), theoretically the tax payment in the earlier years will be funded through working capital drawdown, putting additional risk on the existing facility and increasing interest costs.

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## **ESOQ19. Do you agree with our proposals for a regulatory and incentive framework for FSO delivery? If not, please outline why.**

We welcome the proposal that the FSO monitoring framework is to be entirely separate and decoupled from the BP2 determination and incentive process. It is correct to apply this approach to the one-off costs to achieve the FSO, which are discrete from our BP2 commitments and will unlock significant value across the energy industry and for consumers.

We believe the additional run the business costs associated with the transformation to the FSO should be treated consistently with other BP2 deliverables. We would welcome a discussion on how these costs could be incorporated into our business-as-usual activities going forwards.

We broadly agree with the principles set out on the scheme's design and value. The scheme should remain in place until 'Day 2' of the FSO<sup>20</sup>, when an enduring desired operating model has been reached with new and enhanced industry roles, and the organisation no longer has any transitional service agreements with National Grid plc. We look forward to working collaboratively with Ofgem to design the assessment criteria and specific output expectations.

We recognise the need for appropriate ongoing monitoring and scrutiny of our transition activities and costs given the scale and significance of the FSO programme. However, any reporting should remain proportionate, recognising the current level of governance oversight in place, including the Joint Implementation Delivery Group and Senior Leadership Group. We believe that aligning reporting to the quarterly BP2 cost monitoring framework could introduce a disproportionate regulatory burden. As outlined in our response to ESOQ18, our December 2022 submission includes a level of uncertainty due to factors outside of our control and reliance on other parties. We recognise the current reporting will need to be adapted and would welcome further discussion on whether a similar approach to the Legal Separation Programme (of reporting the costs via the annual regulatory reporting pack) would provide sufficient assurance while enabling the programme to proceed at pace.

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<sup>20</sup> This is the assumed date that all Transitional Service Agreements (TSAs) have been terminated. The planning assumption is 1 April 2026