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Re: The Electricity System Operator Reporting and Incentives Arrangements: Guidance Document (draft for consultation)

Dear ESO Regulation Team,

We have valued the constructive engagement so far with Ofgem on the incentive arrangements for RIIO-2, and welcome the opportunity to respond to this consultation. We welcome the improved clarity provided in this document, and the changes that have been made since October's consultation which provide the ESO with more frequent feedback, and more visibility of how the Performance Panel's scores are converted into an incentive reward.

We recognise that there are a number of areas where the detailed requirements are not fully specified and look forward to engaging with the Ofgem team on these points over the coming months. We believe that further discussion is needed for the following:

- **Streamlining reporting**: we would like to work with Ofgem to identify opportunities to streamline the incentive reporting process, including ensuring that the reporting required for the value-for-money criterion does not duplicate the information in the Regulatory Reporting Pack (RRP). We would also like to work collaboratively to agree a suitable format for the cost and revenue RRP tables.
- **Process for developing the next business plan**: we look forward to seeing the Business Plan Guidance Document which we hope will be published soon, and clarifying the requirements and timings for the second Business Plan (BP2). We also hope that the Roles Guidance for BP2 will be made available in advance of the Business Plan being developed, so that we can develop a high-quality Business Plan in line with any changes in expectations on the ESO.
- **Value for money reporting**: we welcome the inclusion of the majority of the ESO's proposed costs in the benchmark. We look forward to finalising the detailed requirements for this reporting, in particular the process for adding the costs of "red" projects and new activities to the cost benchmark, and the process for allocating Capex and Business Support costs to roles each year (the Targeted Allocation Methodology referred to in the table in section 4.32 of Final Determinations).
- **Performance measures**: we welcome the changes Ofgem has made to several of the performance measures in response to our feedback. We provide comments on the outstanding issues in the annexes to this document.
- **Relative importance of evaluation criteria**: we would welcome guidance on which evaluation criteria are most important for each role. This would ensure that reporting is focussed on the most relevant areas, and give the ESO more clarity on how its performance would be assessed.
- **Consumer benefit reporting**: we provide below a suggestion for reporting the consumer benefits associated with the ESO's activities, which we believe provides the information necessary to assess the ESO's performance without creating a disproportionate reporting burden

Detailed feedback on the ESORI drafting, as well as responses to the specific questions within the consultation, is contained within the annexes to this response. We look forward to discussing the outstanding details of the incentive reporting process with the Ofgem team over the coming months.

Following these discussions, we hope that a finalised version of the ESORI guidance can be made available well in advance of April 2021, to allow the ESO to ensure that it is ready to fulfil the new reporting requirements.

Yours sincerely

Craig Dyke

Head of Strategy and Regulation, Electricity System Operator

Annex 1: Detailed feedback on ESORI guidance document

Paragraph	Wording	ESO comment
2.9/ Figure 1	Mid scheme review: Performance Panel and Ofgem review ESO performance and stakeholder event held (March 2022)	We assume that the intention is for the report to be due after the end of the financial year (e.g. 7 May as per RIIO-1 arrangements) with the subsequent stakeholder event taking place in June. It will not be possible to provide a full report on the first year of the scheme before that year has ended.
2.9/ Figure 1	Six-month/ eighteen-month review	It would be helpful for the diagram to clarify that the reports are due on the 17th working day of October, with the Performance Panel and Ofgem review taking place after this.
2.9/ Figure 1	End of scheme review	We would expect this box to refer to a stakeholder event, which would take place in June.
2.9/ Figure 1	Ofgem explains any deviation from Performance Panel recommendations. The Authority makes decision on financial reward/penalty for the scheme.	This should also refer to the process described in 2.28 and 2.29, where the independent chair of the Performance Panel provides input to the Authority decision, and the ESO has an opportunity to provide additional evidence of its performance where needed.
2.10 Step 4	The ESO's delivery schedule	We would expect one of the previous steps to describe the production of the Delivery Schedule which is then graded as part of step 4. For future cycles, it would be helpful for the Business Plan Guidance to differentiate between the Business Plan and Delivery Schedule.
2.10 Step 4	Our value for money assessment	We believe that step 4 should just refer to "our proposals for a cost benchmark": the value for money assessment is the process of comparing outturn costs to the cost benchmark once the expenditure has taken place.
2.13	The ESO must publish on its website monthly updates of its performance	Under the current scheme, the ESO meets with Ofgem following the publication of each report, to discuss its contents. Should the guidance refer to this?
2.15	The ESO will be required to publish a report at six months and eighteen months into the scheme.	It would be helpful to clarify the deadline for these reports: we assume it is by the 17th working day of October, consistent with other reports.
2.19	The ESO is required to produce and publish a report covering its performance during the first year of the business plan cycle, known as the Mid-Scheme Report, by the 17th working day in May in the second year of the business plan cycle	We assume that the intention is for the ESO to publish the Mid-Scheme Report by 7 May. On the 17th working day in May, the ESO will publish a monthly report covering the month of April: it would cause confusion to publish two reports on the same day covering different time periods.
3.3	Plan grading –This provides the ESO with an ex-ante expectation of our assessment of plan delivery if these deliverables are met.	The current process does not give the ESO visibility of its score for each criterion. Is the intention to explicitly grade the ESO for plan delivery, or for this grading to provide an ex-ante expectation of the assessment for that role if performance for other criteria is in line with that grading?
3.3	A value for money assessment and cost benchmark – Ofgem assessed the ESO's	It would be helpful to clarify what is meant by a "key point of reference". We welcome the intention within Final Determinations for the pass-through funding approach to enable the ESO to be agile and adapt

	proposed internal costs and set (and if necessary, will update) a cost benchmark for each role. This will be a key point of reference for our within-scheme monitoring and value for money evaluation	quickly. It is important that an undue focus on comparing costs to the benchmark does not counteract this principle. It may be better to just refer to "a point of reference".
3.5	For the avoidance of doubt, we expect innovation to be a core part of the ESO's business-as-usual activities and for this to be demonstrated through the ESO's planned deliverables. Undertaking innovation projects, whether funded through the ESO's main price control totex or through dedicated innovation funding, does not automatically qualify as exceeding expectations. The ESO's delivery of outputs and outcomes as part of innovation-funded projects will be considered as part of the performance evaluation. However, we have excluded innovation-funded projects from the cost benchmarks because these costs are funded through a separate Use it or Lose It (UIOLI) funding mechanism, reflecting the lower technological readiness of these projects	We support the principle of innovation-funded activities being eligible for an incentive reward. It is worth noting that, where TOs carry out innovation activities which lead to cost savings, such savings will be rewarded by the Totex Incentive Mechanism (TIM). However, this potential for reward would not be applicable to the ESO due to its pass-through funding model. It therefore follows that, where innovation projects contribute towards the ESO's mission or successful delivery of its Business Plan, this should be rewarded under the ESO's incentive scheme. As Network Innovation Allowance (NIA) and Network Innovation Competition (NIC) spending are currently reported separately through the Regulatory Reporting Pack (RRP), we assume this would continue in RIIO-2 for NIA and the Strategic Innovation Fund (SIF). As innovation activities are inherently risky and are not guaranteed to succeed, we agree that innovation activities should not form part of the cost benchmark or value for money evaluation under the RIIO-2 incentive scheme. However, Innovation activities may contribute to Plan Delivery, and we may refer to these in our reporting against the Delivery Schedule. Innovation activities may also contribute towards the ESO achieving its Long Term Vision (ESO Mission), these activities could be described alongside other activities which contribute to the ESO mission. For any particularly significant innovation activities, the ESO may produce a case study to demonstrate the consumer benefit which is expected to result from this work. Innovation activities should also feed into the Stakeholder Evidence criterion. It is unclear exactly how Business As Usual (BAU) activities would be classified as 'innovation' and whether this categorisation would be necessary to highlight where we believe planned BAU activity is 'exceeding expectations'. It is also unclear exactly how NIA and SIF funded projects would need to report into the incentives performance evaluation, and whether this would change depending on how the proportion of innovation funding to BAU is used on specific projects.
3.13	The Performance Panel should also consider any wider factors outside of the	It is important to note that these factors could also include the effects of government policy. For example, the Connect and Manage policy has led to the

	ESO's control that could have impacted the performance metric (such as weather, market trends, etc.).	connection of significant volumes of renewable generation ahead of wider reinforcements to the transmission system. This has led to increasing constraint costs. Although this effect may be masked in the short term due to the effect of the COVID-19 lockdown on balancing costs, it still represents an underlying factor that will lead to increases in balancing costs in the long term.
3.16-3.18	Stakeholder evidence	We are happy to work with Ofgem to propose and agree a benchmark for the new Roles based survey.
3.19-3.22	Demonstration of plan benefits	Given that the ESO has already articulated the expected consumer benefit of its RIIO-2 activities in the 2021-26 Business Plan[1] and RIIO-2 CBA document[2], we believe there is an opportunity to streamline the current reporting arrangements for Plan Benefits. This would avoid the need to estimate counterfactual costs, and provide a greater focus on what the ESO has delivered to benefit consumers. We propose that this should take the form of reporting progress against the delivery schedule (linking to the specified measures of success), referring to the relevant Regularly Reported Evidence and Metrics, providing descriptions and justifications for any changes to the plan, and a description of any sensitivity factors which may have impacted on the originally assumed consumer benefit. These aspects could be described for each of the transformational activities for which a cost-benefit analysis is quantified within the original RIIO-2 CBA document (11 activities). For any new activities not covered by the original RIIO-2 CBA document, case studies could be presented by exception to describe the consumer benefit of these activities. This could be similar to the consumer benefit sections of the ESO's RIIO-1 incentive reports[3]. It should not be necessary to re-perform the cost benefit analysis set out in the original RIIO-2 CBA document. The reporting described above should be sufficient to demonstrate whether the ESO is on track to deliver the benefits it had originally assumed. The ESO's progress against its long-term vision could be described as part of the Executive Summary of its incentive reports. As we understand Medium Term Strategy to refer to the 2021-26 Business Plan, progress against the Delivery Schedule should automatically imply progress against the medium-term strategy.
3.23-3.26	Value for money- changes in costs or material deviations from the cost benchmark	It would be helpful to define "material" deviations, and "changes in costs" if this refers to something different. Both paragraph 5.19 later in this document and Final Determinations refer to an indicative reporting threshold, where costs are within 10% of the cost

[1] https://www.nationalgrideso.com/document/158051/download

[2] https://www.nationalgrideso.com/document/153631/download

[3] For example, the 2020-21 Mid Year Report, https://www.nationalgrideso.com/document/178351/download

		benchmark and there have been no major changes to output delivery. It would be helpful to include this definition of "material" in Annex 3 of the ESORI guidance.
3.28	There is no explicit weighting associated with the evaluation criteria for each role	This contradicts with recent experience, where the Panel reports for Mid Year 2020/21[4] and End of Year 2019/20[5] refer to the Panel focussing on particular evaluation criteria for each role. It would be helpful to set out up front which evaluation criteria will be considered most important for each role, so that the reporting can focus on the most relevant aspects of the ESO's performance.
4.2	process for determining the overall reward or penalty	This should also refer to the step described in paragraph 2.29 where the proposed reward or penalty is discussed with the ESO, and the ESO has the opportunity to provide additional information if required.
4.4	This scoring review will also include a review of the grading of the ESO's delivery schedule as part of Ofgem's Determinations and the Roles Guidance.	We assume the intention is to take into account the grading of the delivery schedule, rather than revise it. If so, it would be clearer to use the wording "take into account" rather than "include a review of".
4.8/Table 3	Role 3 range	We believe this should say -£2.4m rather than -£2.4
4.9	The Authority may consider the evidence presented and judge whether the additional benefits/costs are justified by the incentive payment/penalty. If the Authority does not feel that this is the case based on the presented evidence, then it may adjust the payment up or down	As we stated in our response to the previous ESORI consultation, this implies that the Authority is able to disregard the guidance documents and evidence presented, including its previous assessment of the Business Plan. There should be more precise criteria to determine whether the Authority can make an adjustment to the incentive payment or penalty. As the text stands, this implies a highly subjective scheme, which undermines the clarity provided by setting out expectations in the Roles document at the start of the scheme. We hope that Ofgem's proposal to communicate its view on the expected financial outcome every six months will give the ESO more predictability of the eventual incentive outcome.
5.2	The ESO must ensure it considers the supporting guidance outlined in the Roles Guidance document when structuring its reports for each role.	It would be helpful to include a reference to the paragraph number for this "supporting guidance" for structuring reports, so that it is clear which section is being referred to.
5.11-5.13	Stakeholder surveys	Ofgem's Final Determinations document (Annex 3) refers to two options for stakeholder surveys: asking survey respondents to score the ESO's performance out of 10, or asking respondents whether the ESO's performance is considered to be below, meeting or exceeding their expectations. We feel that asking respondents to describe whether performance is below, meeting or exceeding is a more straightforward way to seek views on ESO's performance, as it does not require a way of inferring from participants' scores

[4] https://www.ofgem.gov.uk/system/files/docs/2020/12/eso_performance_panel_mid-year_review_2020-21.pdf

[5] https://www.ofgem.gov.uk/system/files/docs/2020/07/direction_on_the_electricity_system_operators_financial_incentive_for_2019-20.pdf

		whether they consider the ESO's performance to meet expectations .
5.14	The ESO should provide six-monthly reporting against the original Business Plan CBA, focusing predominately on areas not picked up by performance metrics or regularly reported evidence.	As we propose in our comment on paragraphs 3.19-3.22, we believe that this reporting should focus on the ESO's progress against its deliverables, and link each of the CBAs to the relevant areas of performance metrics or regularly reported evidence.
5.15	Reporting should include a clear quantification and/or articulation of the ESO's achievement of the benefits outlined in its original Business Plan (BP1). The ESO's calculation of benefits should follow the requirements outlined in the section on general standards of conduct on reporting section below.	We believe that an articulation of the benefits, as described in our response to paragraphs 3.19-3.22, should be sufficient: it should not be necessary to re-perform the quantitative analysis of the benefits already described in the original Business Plan and CBA document. It would therefore be preferable just to refer to an "articulation of the ESO's achievement of the benefits outlined in its original Business Plan and CBA document". As these benefits are described in the 2021-26 Business Plan, it may not be correct to refer to BP1.
5.16	Where there are new material interventions or changes to arrangements, strong evidence should also include a clear demonstration that the ESO has, where appropriate, assessed multiple solutions to issues and chosen the ones that maximise consumer value. In addition, it should be clear that the ESO has not solely pursued an ESO-led solution without considering whether pursuing or supporting other industry initiatives could have resulted in greater consumer value.	For such interventions or changes to arrangements, it may not be practical to provide a thorough cost-benefit analysis of all options considered. However, we could provide a description of why the particular option was chosen in preference to other options.
5.17-5.20	ESO value for money reporting	We believe that Capex costs and their associated project Opex costs should be apportioned annually to the Role they primarily deliver. We would like to continue to work with Ofgem to agree a suitable format for value for money reporting.
5.20	The ESO is also required to submit, for four high value IT projects with at least two 'amber RAG ratings', information on delivery and the latest total cost forecast, every six months.	We welcome the streamlining of the reporting requirements for IT projects. The information that has been requested is aligned to content that we capture as part of the project delivery lifecycle. For investments 110 Network controls, 180 Enhanced balancing capability, 220 Data and analytics platform, and 500 Zero carbon operability we will provide an update on a six-monthly basis.

		We are developing a template in collaboration with Ofgem to ensure that our expectations are aligned ahead of the RIIO-2 period. This is anticipated to be a brief update per investment (circa one paragraph) covering the latest status. All other IT project performance will be reported through the Roles.
5.21	Where Ofgem agree an update to the delivery schedule and/or cost benchmark is likely to be merited, the ESO should provide a detailed submission on its proposed deliverables and/or costs. The information should be in line with the requirements for BP1	We understand that the detailed submission could also take the form of a Business Case. Once Ofgem has made a decision on the cost and scope of the project, we believe that Ofgem should publish an update to the Cost Benchmark and Delivery Schedule grading, and the ESO should publish an update to the Delivery Schedule. Any future reporting should then be against the updated Cost Benchmark and Delivery Schedule.
5.22	Ofgem may also update the cost benchmark to include costs for the two capex projects that received a red RAG rating in the Final Determination for BP1. The ESO should submit updated information with reference to each of the capex assessment criteria.	The two Red RAG capex projects relate to non IT capex investments and were incorrectly assessed under the Atkins assessment. The evidence for these investments was included in Annex 1 of our ESO RIIO-2 Draft Determinations consultation response. A copy of this information has been sent to Ofgem and is with the Ofgem policy team to add into the baseline once a process has been defined. It would be helpful to add the costs of these projects to the benchmark before the start of RIIO-2, such that the ESO can confidently incur this expenditure, and report against the benchmark in the first six-monthly report in October 2021. This would simplify the process described in paragraph 4.2 of Final Determinations, where the benchmark is adjusted upwards during the BP1 period.
5.22	Ofgem will review this information and may update the cost benchmark on a biannual basis, alongside the ESO's six-monthly performance reviews. New information submitted less than six weeks ahead of a performance review may not be considered until the subsequent review point six months later.	It would be helpful to define "performance review". Does this refer to the deadline of the incentive report, or a later date where Ofgem and the Panel meet to discuss performance? It would be helpful to include a diagram to show the process for the ESO submitting information, Ofgem updating the Cost Benchmark and Delivery Schedule grading, the ESO updating the Delivery Schedule, and how this interacts with the reporting cycle.
Table 6	Performance metrics set for RIIO-2	We understand that these metrics apply from 2021-23, rather than for the entire RIIO-2 period. If so, it would be clearer to title the table "Performance metrics set for 2021-23".
Table 7	Regularly reported evidence set for RIIO-2	We understand that this set of Regularly Reported Evidence applies from 2021-23, rather than for the entire RIIO-2 period. If so, it would be clearer to title the table "Regularly Reported Evidence set for 2021-23".

Annex 2: Specific consultation questions

Q1. Do you agree with our preferred approach of using a two- or three-year period, without weighting, to define the performance benchmark for balancing costs?

Our preference would be for a two-year period, without weighting. As the energy market and transmission system have both changed significantly in recent years, using a longer period would mean that the benchmark would be formed from costs which were incurred in a market and managing a system which could significantly differ from today's. Although this could be partly mitigated by using weightings between different years, this introduces unnecessary complexity, making it less straightforward for stakeholders to understand the data we present.

It is worth noting the effect of COVID-19 on balancing costs: the low demands associated with lockdown have meant that additional tools needed to be developed, and more balancing actions needed to be taken. A two-year period would mean that the benchmark for 2021/22 would be in between the outturn costs for 2019/20 and 2020/21: this initially seems reasonable given that some level of restrictions may still be in place during the 2021/22 year. However, a three-year period would mean that the effects of COVID-19 from 2020/21 would still feed into the benchmark during 2023/24.

We also note that the Connect and Manage policy means that balancing costs will continue to increase in future years, as an increasing volume of renewable generation will be connected to the system before system reinforcements are built. However, in the near term, this is expected to be masked by the effects of COVID-19.

Q2. Do you have any views on the areas suggested for ex-ante adjustments to the balancing cost benchmark, or on any other suggestions for ex-ante adjustments we should include?

We do not support the use of ex-ante adjustments to the balancing cost benchmark for RIIO-2. Stakeholders have previously expressed their concerns with such adjustment factors under the current scheme. Using a shorter period to derive the benchmark should avoid the need for such adjustments.

The factors contributing to balancing costs are complex, and there is no simple and transparent model which adequately accounts for the interacting effects of each of these different factors. It is therefore our preference for the benchmark to simply be used for comparison purposes, and the ESO's performance to be judged on the accompanying narrative in its reports which explains the main drivers of the balancing costs which have been incurred.

We do not believe it would be practical to make an adjustment for the impact of COVID-19. Where the effects of COVID-19 lead to outturn costs differing significantly from the benchmark, we will describe this in the accompanying narrative within our reports.

Q3. Do you have any views on the final detailed calibration of the ex-post monthly wind adjustment, including the data used and adjustment approach?

We agree that wind conditions should be categorised at a national level and a monthly resolution, for simplicity. We agree with the use of monthly average load factors of wind generation units to define whether a month is low, normal or high wind. The data used to derive these load factors should be publicly available, for transparency. We agree that five years is sufficient data to determine typical wind levels for each month.

We are generally in favour of a simple, transparent approach. We therefore do not believe it is necessary to "unwind" balancing actions to give the original output of wind farms: Afry's analysis suggests that this would not have a material effect. Similarly, we believe it would be simpler to add or subtract a set percentage point from each month's average load factor, rather than applying percentage adjustments which would result in error bands of varying sizes.

We support Afry's proposal to define discrete low/normal/high wind classifications, and adjust monthly benchmarks by a pre-defined delta when wind is outside of normal conditions. We believe this would be simpler than the option of using a continuous relationship.

Ofgem proposes that the ex-post wind adjustment only impacts on the constraint costs part of the benchmark. We are concerned that this adds unnecessary complexity, and would require additional processing to split out the different types of costs and apply the benchmark. It is also worth noting that wind levels can also impact on other categories of costs, such as response and reserve.

Q4. Are there any other elements/variables that should be included within the ESO's regular balancing costs reporting?

We agree with the proposal that ESO include reference to the key monthly drivers of balancing costs which would include the influence of external factors, the key actions taken to reduce costs and actions attempted which were unable to be progressed, where appropriate. We can include additional details to build the narrative as follows:

- Details of any major outages or schemes which are impacting balancing costs. We will name circuits only when they have returned to service from outage, but prior to this we can use scheme names.
- A monthly review of any material changes in market prices which could be influencing balancing prices.
- A high level view of the solar generation output versus previous years
- A monthly comparison of outturn demand against 2020/21 to more fully understand the impact of COVID-19

Q5. Do you agree with our proposal to use five years of historical data to set the wind generation forecasting performance benchmarks?

We agree with the proposal to use five years of historical data to set our wind generation forecasting benchmarks.

Q6. Do you consider that an annual improvement should apply for the wind generation forecasting metric?

As described in our response to the Draft Determinations consultation, we find that wind output is increasingly influenced by market as well as weather conditions which are outside of our control. Detailed turbine-level data would be needed to improve our forecast accuracy. In addition, the precise timing of the wind generation profile is hard to predict with limited information which is currently available from wind farms. With larger wind farms coming on line, which cover vast geographical areas, a single wind forecast may not be sufficient to predict the output of the entire wind farm. It is therefore becoming increasingly challenging for us to maintain our current wind forecasting accuracy.

Q7. Do you have any other suggestion for the wind generation forecasting metric methodology or associated reporting?

Since wind generators provide maximal generation output to ENCC in real-time as part of Power Available (PA), they have models for converting meteorological data to power. Exactly the same models would work as wind forecast models if forecast wind speeds replaced measured wind speeds. Hence, as wind generators have the data and models to deliver wind power forecasts, it seems right to extend the time horizon of this information.

They, wind generators, could provide accurate and unbiased forecasts from day ahead, by 09:15 on D-1, onwards both to ESO and market participants.

Wind generators have all the detailed information that is necessary to calculate the power forecast. The detailed information includes, but is not necessarily limited to, turbine(s) operational data, any outages (from a single turbine to the whole of the wind farm) and topographical data including relative positions of individual turbines.

To improve ESO forecasts, wind generators would need to provide this data to ESO. Alternatively, they could use this data to make their own forecasts, and transfer the forecasts to ESO (effectively as a reasonably accurate Physical Notification (PN)).

Annex 3: Detailed feedback on performance measures

Performance measure	Wording	ESO comment
1A Balancing Costs		Please see our comments above.
1B Demand Forecasting	Measures the average absolute % error between forecast and outturn day ahead demand for each half hour period. The current benchmarks are drawn from analysis of historical errors for the period between April 2014 and March 2020, looking at average Winter (November to March) and Summer (April to October) errors, and applying a smoothing over the two-month ramp period either side of Summer (as shown in Figure 3). 5% improvement in performance expected each year, with range of +/-0.2% used to set benchmark for meeting expectations.	We believe that the requirement for a 5% improvement each year is not realistic for demand forecasting. We anticipate that the 2021/22 and 2022/23 financial years will be challenging to forecast, due to the uncertainty caused by the economic consequences of both COVID-19 and Brexit. As COVID-19 has impacted on demand patterns during 2020/21 to varying degrees, it may be more difficult to make use of this data to forecast demand in future years. On several occasions during the RIIO-2 process, the ESO has presented arguments to explain why the percentage error approach in relation to the Demand Forecasting performance is not appropriate. From a mathematical perspective, it is unjust to expect the percentage errors to improve. Errors are not proportional to Transmission demand, they are proportional to the overall source of error, such as weather error, error from each weather driven generation type (such as wind and solar), and errors from other generation sources connected to the distribution system. We would welcome an opportunity to discuss this further with Ofgem. This aside, we welcome the smoothing approach. Similarly, we support the increase in the historical period used to calculate the benchmark. Five years rather than three years should better capture weather variability. However, the expectation of continuous incremental improvements of 5% per year is not achievable. However, what would assist improvement would be to introduce fundamental changes to the provision of information to ESO. In order to calculate an improved forecast, ESO would need to know the

		following information from each generator greater than 1MW: • Location • Fuel type • Capacity and any updates of it • Operating pattern, e.g. any planned outages If ESO had access to this data, not only would it drive improvements in the forecasting of demand and embedded generation sources, but it would also improve situational awareness which is critical at times of system stress. As the capacity of wind and solar generation increases, the uncertainty and therefore error associated with it will increase. We could control the uncertainty from other distributed generation sources which are not weather driven, if we knew what their running pattern was. However, we are not in a position to forecast their running pattern as it is price dependant. Grid Code, OC1.6 The Company Forecasts, prevents us from taking price response in consideration when making our forecast. With our current data limitations, the uncertainty and therefore the error from this type of distributed generation is proportional to its capacity, and therefore will increase as capacity increases. All of this shows that demand forecasting error is not proportional to demand on the transmission system, but to the sources of error. Therefore, a percentage error measure is not appropriate. It is also not possible to expect an ongoing reduction in error as the drivers of this error (distributed wind capacity, distributed solar capacity, capacity of other distributed generation sources) are all increasing. We therefore propose that an annual improvement in forecast accuracy should not be required to meet expectations under this metric.
1C Wind Generation Forecasting		Please see our comments above.
1D Short Notice Changes to		We are happy with the proposed performance measure.

Planned Outages		
1E Transparency of Operational Decision Making	The ESO's supporting rationale for % of actions taken outside of merit order including trends seen over the course of BP1. This should include an explanation of any steps being taken that may influence these trends.	We have published a methodology[6] on the data portal which provides additional information to support the understanding of this RRE. As a high level summary: there will be data published on the data portal each day. This data will detail all the actions taken in the control room for the previous 24 hours with categories assigned for actions taken either in merit or out of merit for a particular electrical reason (e.g. voltage control). For any actions which appear to have been taken out of merit order and not for any defined electrical purpose, a reason will be applied so that the actions can be grouped to focus process improvement activities. We propose to add clarity to this metric to enable greater visibility of ongoing improvements by reporting three statistics in the incentive report on a monthly basis. The combination of the three statistics will give a fuller picture of the monthly dispatch performance, whilst daily reporting of the actions taken on the Data Portal will give opportunity for detailed review. The first statistic reported monthly will be monthly percentage of actions taken in merit order, or out of merit order due to an electrical parameter (e.g. Voltage constraint). The second statistic reported monthly will be the monthly percentage of actions that have reason groups allocated. Reason groups are defined in the methodology published on the data portal and provide a descriptor for when an action is taken out of merit order. These are the areas where it is most likely that the ESO can influence the trends. The third statistic reported monthly will be the monthly number of actions without a reason.

[6] https://data.nationalgrideso.com/balancing/dispatch-transparency

		The RRE will be accompanied by a narrative to describe the data and any themes and trends identified. This would also indicate any process improvement activities which have been delivered and whether these have impacted the data. The combination of these statistics will offer insight into the emerging data, trends in reasons and highlight the areas of focus for process development and improvement.
1F System Zero Carbon Penetration	Measures the maximum amount of zero-carbon generation achievable on the system without compromising system stability. $SZCP\ (\%) = \frac{(Zero\ carbon\ generation + Net\ interconnector\ imports)}{(System\ demand + Net\ interconnector\ exports} \times 100$ We currently expect this to include the ESO reporting on: i. An indicative SZCP limit for the start and end of BP1 ii. Regular calculation of actual SZCP iii. Annual deep dive on periods with the highest SZCP and the actions taken by the ESO in response	We propose to change the name of this RRE to Zero Carbon Generation Proportion, to provide a better definition of the data within it. We propose that the metric should be a measure of the proportion of zero carbon generation. This reflects our ambition to be able to operate the network using zero carbon generation. Therefore the denominator of the describing equation should be total generation, rather than total demand. The indicator will require decisions about which asset types should contribute towards meeting our zero carbon ambition. We look forward to working through the detail of this with Ofgem and supporting the creation of an indicator that stakeholders find useful. For Part 1, we intend to set out the indicative limits at the start of the BP1 period: both figures could be included in the first quarterly report (in July 2021). These indicative figures would not be updated in subsequent reports, until the end of BP1 where the indicative figure for this time period can be compared to the outturn. It is important to clarify what is being forecast here: we believe it should be the proportion of zero-carbon generation which can be accommodated in a reasonable approximation of likely operating conditions, rather than a best or worst case. For Part 2, we believe this should be reported on a quarterly basis. Some of the data used will be based on forecasts, as we do not have visibility

		of the providers (e.g. embedded solar). This is consistent with our other reporting. The assumptions made and method used will be set out in our reporting. For Part 3, we believe that the Operability Strategy Report, which is published in December of each year, should fulfil this requirement: please see the most recent Operability Strategy Report[7] for an example. To avoid duplication, we suggest that Part 3 should not be listed here, as its requirements will be met by the Operability Strategy Report which is listed in our Delivery Schedule[8] and will be reported on as part of our Plan Delivery reporting.
1G Carbon impact of ESO actions	Calculates the approximate gCO2e/kWh of actions taken by the ESO, considering the proportion of the total CO2 emissions on the system which is a result of ESO actions.	We will use our carbon intensity forecast methodology[9] to estimate carbon intensity factors for each fuel type and interconnector import[10]. We will estimate the carbon intensity of Final Physical Notification (FPN) generation profile and look at the difference between this and the estimated carbon intensity of outturn generation profiles. It will provide a national summary separating balancing actions from final market position and include changes in demand and embedded generation outturn against forecast. However, the figures in their current form are peer reviewed approximates, and do not reflect individual plant efficiencies or operating points. We will be looking for improvement on the following aspects : • Carbon operating curves from operators (generation, interconnectors) will be required to understand their efficiencies at different loads. • Publishing individual plant performance in BM would improve transparency • Understanding the operating curves allows to attribute improvements to demand forecasting to reductions in carbon intensity figures. (Reserve holding)

[7] https://www.nationalgrideso.com/document/183556/download
[8] https://www.nationalgrideso.com/document/158051/download, D1.1.6.
[9] Available at www.carbonintensity.org.uk

		We will report monthly gCO_2/kWh data, which is aggregated from settlement period data. Meanwhile, access to the full data is available in our Data Portal[11].
1H Constraint Cost Savings from Collaboration with Network Operators	Measures the estimated £m of avoided constraints costs from solutions brought forward through the ESO-TO funding mechanism. Where applicable, these savings should be calculated in line with the methodology that may be developed as part of the new trial financial incentive on TOs (the SO:TO Optimisation ODI-F). In other cases, the ESO should clearly state the assumptions used for its estimated savings.	We understand the purpose of aligning this metric to new trial financial incentives on TOs to minimise unnecessary overlap. However, we are concerned that the STCP 11.4 solutions are only a small component of our customer value opportunities which does not reflect the extent to which we have made savings for end consumers. We therefore propose to continue to report the customer value opportunity as defined in the 2020-21 Forward Plan Addendum, but providing an approximate £m saving with clearly stated assumptions. We propose to report the constraints costs from solutions brought forward through the ESO-TO funding mechanism stated in STCP 11.4 in a separate chart. It is worth noting that, due to the small number of solutions which are expected to come through the ESO-TO funding mechanism, the data in this separate chart may not change very often.
1I Security of Supply		We are happy with the proposed performance measure.
1J CNI Outages		We are happy with the proposed performance measure.
2A Competitive Procurement	Measures the overall % of services procured through competitive means (auctions and tenders) calculated by £ expenditure. Whilst the metric will assess the overall percentage of competitive spend, the ESO should also provide a breakdown of the percentage of competitive spend for its different services: frequency response, reserve, reactive, restoration and constraints. Data should be presented on a monthly granularity. The ESO should provide rationale for performance against benchmarks, with a clear link to associated deliverables in its Business Plan.	This year, the ESO has undertaken significant activity to increase the open and competitive procurement of our balancing services- and we are concerned that this metric does not provide a good representation of what we have achieved. This is likely to also be the case in RIIO-2. For services where there is a regular market which is mature and competitive (such as frequency response), any increase in competition will result in lower prices, and hence reduced spend by the ESO. This will then show up in the metric as a reduction in the percentage spend in competitive markets, which would lead the reader to the conclusion that the service is

[11] https://data.nationalgrideso.com/data-groups/carbon-intensity1

		getting less competitive when the reverse is true (as we have previously noted in our response to Draft Determinations[12]). For services that are procured over longer timescales than a year (such as black start, reactive, and pathfinder projects), the metric will not reflect the competitive procurement that has taken place until those services are being paid for. This means that the metric will not accurately reflect ESO performance until several years later (e.g. we have run tenders for black start in 2020, however this won't be reflected in the metric until 2022 when the service commences and starts being paid for). We would welcome further engagement with Ofgem on how to improve these metrics to accurately reflect the ESO performance in this area, as we believe the current one-size-fits- all approach does not provide the necessary information to judge the ESO's performance in this area.
2B Diversity of Service Providers	Measures the diversity of technologies that provide services to the ESO in each of the markets covered by Performance Metric 2A. We will finalise the precise format of the data and reporting requirements as part of the ESORI Arrangements Guidance consultation. We currently expect data to be reported at a monthly granularity and that it should be presented to enable stakeholders to clearly track trends over time.	We are happy to provide the percentage of different technology type of service providers in each market mentioned in Metric 2A. However, we propose not to include Black Start services for security reasons. Initially there will have to be validation of all the units to ensure consistency including checking if units supply more than one service to ensure no double counting. We are currently working on the detail based on the following assumptions: • Some contracts have more than one successful tender at a differing MW – The value from the largest tender will be used. • The MW available may not be the same for the whole month – The value for the largest MW will be used • Clarity of the inclusion of certain contracts i.e. constraint MW (turndown) • Where the provider can nominate the MW available – The value from the largest MW will be used

[12] https://www.nationalgrideso.com/document/176041/download, page 15.

		• If a provider declares unavailability for part/most of the month the MW will still be included We will capture the above points in a methodology document and discuss this with Ofgem.
2C EMR Decision Quality	Measures the number of themes of Capacity Market prequalification decisions overturned by Ofgem in the Tier 2 disputes process. Quantitative expectations (overturned themes per 1000 applications) • Exceeds: Y1: <1.5; Y2: <1.3 • Meets: Y1: 1.5 to 2; Y2: 1.3 to 1.5 • Below: Y1: >2; Y2: >1.5	We welcome Ofgem's approach of grouping dispute overturns into 'themes' and treating each theme as a single overturn for the purposes of this measure. Regarding the proposed ranges, it is our considered view that 1) historic performance in EMR has generally already been to a very high standard (>99% for CM) which makes 'exceeding' this baseline very difficult, and 2) the performance outcome is not entirely in the ESO's control, e.g. the CM rules leave room for interpretation which means different conclusions may be reached by the ESO or Ofgem, without one conclusion being necessarily 'right' and the others 'wrong'. In addition, the proposed range for Year 2 is extremely narrow, i.e. just over 0.2 overturns out of 1,000 decisions (or, in other words, just over 1 overturn out of 5,000 decisions) make the difference between 'exceeding' and 'below' expectations. We therefore remain of the view that our original proposal (<1.5 = exceeding; 1.5-2.5 = meeting; >2.5 = below; all per 1000 applications) is more appropriate. Ultimately, whatever range is chosen, both Ofgem and the ESO want to be in a position where a 'correct' prequalification decision is taken 'first time round', reducing the need to go through the disputes process wherever that is possible (and this benefits all involved: customers, the ESO and Ofgem). We would therefore urge Ofgem to allow discussion of queries between the ESO, Ofgem and, where necessary BEIS, before and during the prequalification application and assessment windows. This could be managed by making it clear that such discussions would be on a 'without prejudice' basis. Looking at this from the perspective of our customers and the objectives of

<table>
<tr><td></td><td></td><td>the prequalification process as a whole, it would be preferable for the ESO and Ofgem (and BEIS) to have such discussions to ensure the correct decision is made ‘first time round’ and unnecessary disputes are avoided.</td></tr>
<tr><td>2D EMR Demand Forecasting Accuracy</td><td>Measures the ESO’s accuracy of Peak national demand forecasts for Capacity Market auctions.

<table><tr><th></th><th>exceeding expectations</th><th>in line with expectations</th><th>below expectations</th></tr><tr><td>2021/2022 T-1</td><td><2% peak demand accuracy</td><td>2% peak demand accuracy</td><td>>2% peak demand accuracy</td></tr><tr><td>2021/2022 T-4</td><td><4% peak demand accuracy</td><td>4% peak demand accuracy</td><td>>4% peak demand accuracy</td></tr><tr><td>2022/2023 T-1</td><td><2% peak demand accuracy</td><td>2% peak demand accuracy</td><td>>2% peak demand accuracy</td></tr><tr><td>2022/2023 T-4</td><td><4% peak demand accuracy</td><td>4% peak demand accuracy</td><td>>4% peak demand accuracy</td></tr></table></td><td>The existing EMR incentive scheme is a sliding scale of profit/loss based on performance. The new metric as drafted is binary in that it would result in Exceeding/Not Meeting expectations for performance over/under a single value. It would be more appropriate to include a dead band for performance, which would equate to Achieving Expectations.

Proposed benchmarks are:
T-1 Exceeding Expectations <1.5% error.
T-1 Achieving Expectations 1.5% - 2.5% error.
T-1 Not Meeting Expectations >2.5% error.
T-4 Exceeding Expectations <3% error.
T-4 Achieving Expectations 3%-5% error.
T-4 Not Meeting Expectations >5% error.</td></tr>
<tr><td>2E Accuracy of Forecasts for Charging</td><td>Measures the accuracy of forecasts used to set industry charges. Precise details to be defined through further discussions with the ESO. We are considering further whether the measure should focus on the overall charge, or the subcomponents of charges that the ESO has most influence over
(eg, forecasts of MWh annual demand). We will also consider further which charges this should apply to.

Aspects we are considering further:
Whether this measure should focus on the overall charge or the subcomponents of charges that the ESO has most influence over (e.g. forecasts of MWh annual demand)
Which charges this should apply to (e.g. just TNUoS or also BSUoS), and
The appropriate reporting frequency</td><td>TNUoS charges recover the cost of providing and maintaining shared electricity transmission assets for the Transmission owners.

At the year ahead stage, the TOs confirm their allowed revenues for the next charging year and ESO calculates TNUoS tariffs to recover the revenue from the transmission networks users. Through the year, the ESO is responsible for calculating the TNUoS charges and making the payments to the TOs monthly.

As a result of the TNUoS K factor being transferred to the onshore TOs from April 2021, the monthly amount payable to onshore TOs is based on invoiced figures minus the payments to other parties (OFTOs, NIC, ESO licence fees etc).

There are three reconciliations:
Generation value issued to TOs May Y+1
Initial Demand value issued July Y+1
Final Demand reconciliation issued October Y+2 (only at</td></tr>
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		this point can we know how accurate forecasts were versus total recovered value) The purpose of our TNUoS revenue forecasting is to provide onshore TOs with the information they need to manage their cashflow, in a timely and accurate manner. We aim to be flexible and responsive, providing additional information whenever required by our stakeholders. We therefore propose that stakeholder evidence, rather than an item of Regularly Reported Evidence, should be used to assess our performance in this area. The assessment should be based on TOs' feedback on our TNUoS charging service. In responding to whether this measure should include BSUoS forecasting, we propose to report our BSUoS forecasting performance as Regularly Reported Evidence, as often factors outside of the ESO's control contribute significantly to the performance of this metric under the 2020-21 scheme. However, we do recognise the data is of great importance to our stakeholders. We are therefore happy to report it on a monthly basis to continue to provide transparency.
3A Future Benefits from Operability Solutions	Forecast medium to long term benefits from new operability solutions (including the NOA pathfinders and other operability measures). We expect this to measure to include, where applicable, estimated: i. Saved balancing costs ii. Saved infrastructure costs iii. Monetised carbon reductions iv. Any indicative impact on the SZCP limit This should be underpinned by transparent, published benefit calculation methodology. We will discuss the final details of this measure, such as the calculation and presentation of benefits, as well as scope of solutions included, with the ESO as part of our ESORI Guidance Arrangements consultation.	For this measure, we believe that the indicative impact on the SZCP limit would provide duplication with RRE 1F. We propose to report the SZCP benefit in the latter to avoid double counting. Out of the other types of saving (i,ii.iii), not all types of saving will be relevant to each project. As suggested, we will report on the estimated savings where they are applicable. For monetised carbon reductions, it will only be practical to do a rough estimate: we will state our assumptions when presenting this figure. It is worth noting that in some cases forecast benefits will not be available until a particular part of the process has taken place (for example a tender event). This means that not all projects will have a full set of estimated figures in the earlier reports.

		In other cases (such as for Regional Development Programmes), a forecast benefit may be calculated as part of the initial phase of each RDP, this would be updated as the need arose. In addition, to provide a more complete picture of our progress on Regional Development Programmes, we propose to continue to report the contracted MW capacity of DER connections for RDP projects (which is Performance Indicator 3F under the 2020-21 Forward Plan), as this better reflects our progress in implementing whole system actions.
3B Consumer Value from the NOA		We are happy with the proposed performance measure.
3C Diversity of Technologies Considered in NOA		We are happy with the proposed performance measure.