

Report

ESO Performance Panel Mid-Scheme Review 2021-23

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The RIIO-2 price control for the Electricity System Operator (ESO) covers the period 2021-26. The ESO's business plan period and incentives framework run over a two-year period (2021-23).

As part of the incentive framework for the ESO's RIIO-2 price control, the ESO Performance Panel and Ofgem will assess the ESO's performance every 6 months.

We are publishing this report as the Secretariat for the ESO Performance Panel, detailing the Panel's assessment of the ESO's performance at the mid-scheme review stage.

This report contains the views of the Panel, not Ofgem.

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RIIO-2 ESO Incentive Framework

Background

In April 2021, Ofgem introduced the RIIO-2 price control for the ESO (covering the period between 2021-26).¹ The price control consists of a pass-through funding approach, supported by performance-based financial incentives to deliver value for money. The incentives framework runs over a two-year period (aligning with the business plan period²) and is underpinned by the ESO Roles Guidance that sets out Ofgem’s expectations for the ESO’s activities and outcomes.³ The ESO’s combined performance on outputs and costs will be evaluated, across the full spectrum of its roles. The incentives will provide the ESO with additional returns where the ESO has delivered exceptional performance.

The ESO Performance Panel (the “Panel”) continues to play a central role in the ESO’s RIIO-2 price control. It assesses the ESO’s performance every six months, identifying areas where the ESO are performing in line with expectations, where it is exceeding expectations and where it is not meeting expectations. This gives the ESO early feedback on its performance and the opportunity to act on this and make any necessary improvements during the remaining months of the scheme. For RIIO-2, we appointed an independent (non-Ofgem) Panel chair to lead the ESO Performance Panel.⁴

Approach

This mid-scheme review covers the first year of the Business Plan period (BP1) from April 2021 to March 2022. The ESO published its mid-scheme report on 6 May 2022.⁵ The Panel convened on 13 June 2022 to assess the ESO’s performance. The Panel followed the process described in Chapter 3 of the ESORI (Electricity System Operator Reporting and Incentive Arrangements) guidance document⁶ to assess the ESO’s performance in relation to each role, taking into account our feedback in the RIIO-2 Final Determination (delivery schedule grading).⁷ The Panel assessed the evidence provided by stakeholders⁸, the ESO and collected by Ofgem throughout the first year of the BP1 period and used the evaluation criteria below to provide scores for each of the ESO’s roles. **These scores are indicative and do not equate to an incentive reward or penalty at this stage.**

¹ RIIO-2 Final Determinations: <https://www.ofgem.gov.uk/publications/riio-2-final-determinations-transmission-and-gas-distribution-network-companies-and-electricity-system-operator>

² The ESO’s business plan period, otherwise referred to as BP1, runs from 2021-23.

³ ESO roles and principles 2021-23:

https://www.ofgem.gov.uk/sites/default/files/docs/2021/03/eso_roles_guidance_2021-23_1.pdf

⁴ Appointment of independent Panel chair: <https://www.ofgem.gov.uk/publications/appointment-independent-panel-chair-0>

⁵ ESO mid-scheme report 2021-23: <https://www.nationalgrideso.com/document/249946/download>

⁶ [ESORI Guidance Document 2021-2023 \(ofgem.gov.uk\)](https://www.ofgem.gov.uk/publications/esori-guidance-document-2021-2023)

⁷ RIIO-2 Final Determinations: Ibid.

⁸ Ofgem six-month call for evidence 2021-23: <https://www.ofgem.gov.uk/publications/six-month-call-evidence-2021-23>

The Panel’s feedback is used to inform Ofgem’s assessment of ESO performance, which is also carried out every six months. This process provides the ESO with regular feedback which it may use to shape its performance and does not lock in or ‘bank’ any outcome. The final decision on the value of the ESO’s financial incentive outcome for the BP1 period (2021-23) will be made by Ofgem by 31 August 2023.⁹

Evaluation criteria

In determining a score for each Role (except Role 3 where performance metrics do not apply), the Panel used the evaluation criteria below to evaluate the ESO’s performance:

- a) Plan delivery
- b) Metric performance
- c) Stakeholder evidence
- d) Demonstration of plan benefits
- e) Value for money

Scoring

For each Role, the Panel provided scores for the ESO on a scale of 1 to 5, where:

| | |
|---|--|
| 1 | Overall performance clearly does not meet performance expectations, for example the ESO has strongly underperformed most criteria |
| 2 | Mixed overall performance and on balance the ESO mostly did not meet expectations, for example the ESO has net underperformance across the criteria |
| 3 | Mixed overall performance and on balance the ESO mostly met expectations, for example underperformance and outperformance across the criteria balance each other out |
| 4 | Mixed overall performance and on balance the ESO mostly exceeded expectations, for example the ESO has net outperformance across the criteria |
| 5 | Overall performance clearly exceeds performance expectations, for example the ESO has strongly outperformed most criteria |

⁹ National Grid Electricity System Operator Limited Electricity transmission licence: [Special Conditions - ESO \(ofgem.gov.uk\)](https://www.ofgem.gov.uk/special-conditions-eso)

Summary of ESO Performance Panel's assessment

Overarching message

The Panel welcomed the opportunity to review the ESO's performance at the midway point of the BP1 period.

The overall scores the Panel has given the ESO reflect the degree of progress it considers it has made against the commitments set out in its business plan. There was agreement that tangible progress has been made in several areas since the Panel's last assessment six months ago, particularly on Role 2, which was assessed as marginally exceeding expectations. However, it was not clear to all Panel members that there is sufficient evidence of tangible progress on Role 1, where the consensus view was that performance was falling marginally short of expectations. On Role 3, the Panel agreed that performance was mixed and that there was room for improvement in several areas.

On Role 1, the Panel once again noted their concern surrounding the increases in balancing costs. While accepting that volumes in this area have reduced and costs have been impacted by external factors, the Panel considered that the ESO could do more to help alleviate costs. Panel members expressed particular concern surrounding the impact of delays in the delivery of critical IT systems and the continued escalation of associated costs. They agreed that while a failure to deliver on IT commitments represents a greater risk to consumers than a marginal overspend in this area, there needs to be an increased focus on both IT project cost management and delivery. The Panel would welcome assurance that critical IT developments are on track and will be delivered within BP1. This includes ensuring that the Balancing Programme Strategic Review is completed according to schedule and that recommendations are implemented effectively to rectify any shortfalls in delivery and ensure that costs are efficiently managed. Over the remainder of the BP1 period, the Panel would like to see an increased focus by the ESO on delivering against its plan for Role 1 to ensure the delivery of associated consumer benefits.

On Role 2, the Panel agreed that good progress has been made on plan delivery, highlighting the reform of the frequency response market and progress towards the establishment of new Grid Forming specifications. Delays in other areas were well communicated to stakeholders and reflected evidence of a prioritisation process which the Panel has previously highlighted as a requirement. The Panel considered that there remains scope for the ESO to further improve the quality of its market design and ensure stakeholder feedback is taken on board, resulting in higher scores. There was broad consensus that it was still too early to evaluate the impact of the market reforms on

balancing costs, which would be an important indicator of overall performance at the end of the BP1 period.

On Role 3, while noting progress in some areas such as the transition to Net Zero operation, the Panel identified scope for improvement in engagement, whole system coordination and facilitating new technologies. The main drivers of the score were concerns around the quality of the ESO’s OTNR engagement with key stakeholders in developing the Holistic Network Design, as well as its management of the connections process and constraints. The Panel would like to see the ESO take on a greater leadership role on Role 3 to produce results and tangible benefits for whole system planning and coordination purposes.

The Panel considers that there is significant scope for the ESO to take action over the remainder of the BP1 period to achieve higher final scores. The Panel would like to see strong industry leadership from the ESO to drive priorities and ensure that existing resources and recruitment/outsourcing are effectively managed. Given the scale of the challenge it faces to deliver in a relatively short timeframe, the Panel would like to see further evidence that the ESO is prioritising deliverables to maximise consumer benefit and to deliver value for money. If priorities change moving forward or deliverables are delayed into the BP2 period, the ESO should provide a clear explanation as to why and what the impacts will be for stakeholders.

Summary of scores

Below is a summary of the overall Panel scores for each Role. A score of 3 denotes that the ESO is meeting expectations. Where the Panel deem the ESO’s performance for a particular Role to be just above expectations but not sufficient to be scored a 4, they have assessed the score as a ‘high 3’. A ‘low 3’ score signals performance that was slightly below expectations but was not considered to merit a 2.

The scores should be read alongside the detailed feedback. This report captures the breadth of views that were expressed, and the reasoning provided by Panel members.

| | Role 1 | Role 2 | Role 3 |
|-------------------------------|---------------|---------------|---------------|
| Six-month Panel score | [Low] 3 | 3 | 3 |
| Mid-scheme Panel score | [Low] 3 | [Low] 4 | 3 |

Role 1: Control Centre operations

This Role requires the ESO to balance the National Electricity Transmission System (NETS) in a safe, reliable, and efficient way. This includes contracting and trading with energy market participants as well as working with network owners to optimise physical networks configurations. Other key functions under this Role include coordinating with network operators on outage plans and network planning, short term energy forecasting, restoration and emergency response as well as managing and sharing system data and information.

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| Role 1 score | [Low] 3 |
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The Panel agreed on a score of a 3 and reflected that the ESO was within the lower range of this score. This score remains unchanged from the Panel’s six-month assessment.

Overall, it was not clear to the Panel that the ESO had made significant progress since the six-month review. Some milestones were delayed, IT delivery was paused through the BM Programme review and internal costs remain significantly above the cost benchmark. That said, the Panel recognised that the ESO has taken on board feedback from stakeholders, prioritising work on critical activities which show the most potential in terms of delivering consumer benefit. The overall score has been given with the expectation that the ESO will deliver Role 1 plan outcomes by the end of the BP1 period.

- The Panel expressed concern that there was limited evidence to suggest that the ESO had taken sufficient proactive actions to tackle high balancing costs which remain well above the cost benchmark. This was especially important within the context of the cost-of-living crisis. The Panel noted that the ESO had reduced its trading volumes, but some Panel members questioned whether the ESO could have done more to limit balancing and constraint costs. The Panel agreed however that it was difficult to gauge a fair balancing cost target in the current price environment. The Panel also agreed that BSUoS forecasts had not improved despite new modelling capabilities.
- On plan delivery, there was some concern regarding delays in the delivery of Role 1 milestones. Of the 92 milestones the ESO planned for the 12-month period, 26 have not been completed, of which 21 were assessed by the ESO to fall outside of its control. Panel members expressed differing views as to the extent to which delays in the delivery of these milestones and cost over-runs could be attributed to external factors, out of the ESO’s control.
- Elsewhere, there was positive feedback on the delivery of the black start trial in March 2022. There was also welcome confirmation that learnings from the Distributed

ReStart project are already being built into the ESO's restoration plans. The Panel also noted good progress on the ongoing development of the Electricity System Restoration Standard (ESRS) which is key to ensuring security of supply, as well as STCP 11.4 (Enhanced Service Provision), which has resulted in an increased collaborative approach working with the TOs and leading to a reduction in grid constraints and associated costs.

- While the ESO seems to be managing existing IT tools effectively, Panel members expressed limited confidence in its ability to deliver new and complex IT systems which will be key in terms of securing consumer benefits into the future. This has driven down the Panel's overall score for Role 1 and represents a major risk to overall plan delivery.
- The Panel agreed that delays in the delivery of the ESO's IT strategy (77% over budget) and increased expenditure of the Balancing Programme have driven up Role 1 costs, which were c.18% higher than the agreed cost benchmark overall. Given the overspend and the volume of work yet to be completed, several Panel members doubted whether IT buildout in the BP1 period would represent value for money. There was nevertheless widespread agreement that any failure to deliver its IT strategy would represent a greater risk to consumers than overspending. Some Panel members acknowledged that the ESO's end-to-end Strategic Review of the Balancing Programme (Scheme 180) represented a move in the right direction as the ESO seeks to address high costs, although there was still much uncertainty as to why the Balancing programme had been paused, and what would be delivered. The Panel agreed that the ESO could do more to improve transparency in this area.
- Over the remainder of the BP1 period the Panel would like to see the ESO focus on completing the BM Programme review and delivering the components of its IT strategy which would provide the greatest cost savings for consumers.
- The Panel noted that stakeholder feedback on transparency and industry engagement has been less positive compared with six months ago, with a larger share of respondents suggesting that the ESO's performance now 'meets' rather than 'exceeds' expectations. There continues to be positive feedback on the Operational Transparency Forum. Several stakeholders expressed disappointment regarding the ESO's management of skip rates, merit order dispatch and inertia, suggesting that the ESO could do more to improve the dispatch efficiency and transparency, including through the provision of more granular data and a roadmap to deliver improvements in these areas.
- The Panel noted improved performance on Role 1 metrics in the first year of the BP1 period. Wind forecasting (metric 1C) exceeded expectations. Demand forecasting (metric 1B) now met expectations.

- Moving forward, the Panel would like to see the ESO increase focus on the rollout of its IT strategy, prioritising key deliverables and capabilities and making cost-effective decisions where appropriate. It would also like to see the ESO demonstrate greater action to drive down balancing costs and improve transparency around its BM review.

Role 2: Market development and transactions

This Role requires the ESO to operate the balancing mechanism and develop and procure additional balancing services to operate the system in a safe, reliable, and efficient way. The ESO administers, and is party, to various codes.¹⁰ It can propose changes to these codes, provide input to aid industry discussions, and influence the final recommendations submitted to the Authority. It is also the Electricity Market Reform (EMR) delivery body and has transmission system operator (TSO) responsibilities relating to the implementation of European network codes and regulations.

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| Role 2 score | [Low] 4 |
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The Panel agreed on a score of 4 and reflected that the ESO's performance fell within the lower range of this score. This represents an improvement from the six-month review and is now in line with Ofgem's delivery schedule grading.

Overall, the Panel generally agreed that the ESO had made good progress towards the delivery of Role 2 activities. The ESO has implemented frequency market reform, although Panel members acknowledged that it was still too early to assess whether new markets and programmes will produce tangible benefits and bring down balancing costs.

- The Panel noted that the ESO met most milestones within the first year of the BP1 period (49 out of 65 milestones), which included the delivery of a suite of new frequency response products.
- Panel members acknowledged that while reserve and reactive reform had been delayed, the ESO had improved transparency and communication in this area. One Panel member expressed the view that reserve reform had been delayed because the ESO had failed to take on previous feedback from stakeholders, and that as a result, service design was not reflective of previous learning and consultations.
- There was also mixed feedback on the quality of the ESO's deliverables, specifically design issues with Dynamic Containment, for which prices were very high. The Panel

¹⁰ The ESO administers the Connection and Use of System Code (CUSC), the Grid Code, the SO-TO code (STC) and the Security and Quality of Supply Standard (SQSS). The ESO is party to the Balancing and Settlement Code (BSC) and the Distribution Code.

would like the ESO to ensure its DC market design is economic and efficient and develop a plan to improve market access as the participation cap is lifted.

- The Panel agreed that good progress had been made towards delivering a policy on Grid Forming capabilities, as well as on Net Zero market reform.
- One Panel member sought to clarify how the ESO plans to develop local constraint markets to fit in with its overarching market design strategy, including progress on work carried out in cooperation with DNOs. The Panel noted that the ESO's 'five-point plan' introduced during the RIIO-1 period had been revised, but it was unclear what changes had been made. Another Panel member enquired as to whether the ESO had made progress towards producing the 24-month forecast for constraint costs mentioned in its six-month report.
- The Panel welcomed the actions the ESO has taken to review and assess what is delivering best value for consumers and stakeholders, as evidenced by its reassessment of the delivery of the Whole System Codes.
- The Panel generally agreed that stakeholder engagement has been good so far for Role 2 activities. The Panel recognised that the ESO's stakeholder feedback relating to Code administration, Net Zero market design Markets Roadmap and reserve reform has improved since last year. The ESO received good feedback from the Association for Decentralised Energy (ADE) on market design for smaller units. This was counterbalanced by stakeholder feedback on the EMR portal, which was mixed.
- The Panel found it difficult to comment on demonstration of plan benefits at this early stage of the two-year scheme but considered that progress towards the delivery of milestones and the delivery of market reform would deliver benefits.
- The Panel considered metric performance (metric 2A) to be in line with expectations, with 51% of services procured through competitive means.
- Moving forward, the Panel would like to see the ESO focus on ensuring that market design is working efficiently, transparently and in close consultation with stakeholders to identify priorities, reduce costs and deliver the Net Zero electricity system. The Panel also expressed the view that market participants would benefit greatly if the ESO could provide a future workplan to indicate what market design and code reform could look like across extended timeframes.

Role 3: System insight, planning, and network development

Under Role 3, The ESO performs a variety of insight, planning, and network development activities. It publishes key insight documents to identify credible long-term pathways for the energy sector and key electricity system requirements. It also produces the annual Network Options Assessment (NOA), wider NOA methodologies and examines long-term operability solutions via the NOA pathfinder projects. The ESO coordinates offshore network

development and works with DNOs to ensure efficiency and coordination in network development activities to maximise whole system benefits across network boundaries. The ESO is also responsible for the network connections process and for managing the impact that new offshore and distribution-level connections have on the NETS.

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| Role 3 score | 3 |
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The Panel agreed on a score of 3, unchanged from the six-month review.

Overall, the Panel would like to see the ESO take on a greater industry leadership role for Role 3, coordinating whole system development, and assessing alternative system design solutions, including non-network and distributed energy solutions. It would further like to see the ESO drive improvements in the management of the grid connections process, leading a coordinated and supported Holistic Network Design (HND) as part of the Offshore Transmission Network Review (OTNR) and, where possible, addressing issues with the Network Options Assessment (NOA) process. Improving the quality of the ESO's delivery in these critical areas would unlock higher scores and incentive rewards.

- The ESO has completed 93 of 116 Role 3 milestones it planned for the period, with the rate of plan delivery accelerating since the Panel's last review six months ago. Panel members welcomed the conclusion of tender exercises for the Pennines Voltage Pathfinder and Stability 2 Pathfinder and acknowledged that the ESO has made efforts to build on lessons learned as it undertakes Stability Pathfinder phase 3. The Panel welcomed the award of five of the ten available contracts to grid forming batteries as part of Stability phase 2, although some Panel members noted that barriers to participation were still high, which limited the range of participants.
- The Panel noted stakeholder concerns regarding the connections process and agreed that the ESO must improve its management of the connections process and queue management as a matter of priority to provide project developers with the certainty they need to support investment decisions. The Panel welcomed the ESO's commitment to undertaking a substantial review of the connections process to deliver improvements. One Panel member sought greater clarity as to how the ESO would manage this process for the 288GW of new generation it has contracted but has yet to receive a connection date. The Panel further noted that OTNR risks being undermined by the connections process in its current state. One Panel member suggested that the Pathfinder projects were exacerbating the problem by driving further demand for connections.

- The Panel recognised that the ESO has had to work under considerable time pressure to produce novel and complex offshore network coordination solutions as part of the OTNR process. The result was an offshore network coordinated design put together within a very short space of time which limited the opportunity for input from TOs and offshore wind developers, given the limited details and timelines for comment the ESO offered these key parties. This was concerning given the importance of this work for the industry as a whole. While the Panel acknowledged that strong improvements in the delivery of OTNR has been made in recent months, they fall outside the scope of this report.
- The Panel acknowledged that the ESO is required by Ofgem to produce NOA assessments but questioned whether the NOA was able to identify the solutions required to meet system needs, and as a result, whether it was efficient to dedicate so much resource to the process. The Panel expressed the view that the ESO should be doing more to adopt a joined-up approach to congestion management which considers both network and operational solutions as well as new technologies such as batteries and LLES. The Panel suggested that the ESO could demonstrate more leadership in this area, including by proposing alternative planning methods to Ofgem, or as part of its OTNR work. The Panel want to see a clear and coherent end-to-end network planning process by the end of the BP1 period.
- The Panel remain unconvinced as to the benefits delivered by the Regional Development Plans (RDPs) but would like the ESO to coordinate more closely with DNOs once DSO responsibilities are made clearer.
- Stakeholder feedback was less positive compared to six months ago, although most respondents still agreed that the ESO was generally 'meeting expectations' for Role 3 (71% versus 58% six months ago). The Panel noted that negative feedback was more prevalent than for any other Role and would like to the ESO address this feedback ahead of the next review period. Some stakeholders expressed disappointment regarding the ESO's approach to the ScotWind projects and the treatment of storage technologies in the NOA process.
- On value for money, the Panel noted that Role 3 costs were broadly on track.

Annex: RIIO-2 Panel Membership 2021-23

The members of the Panel include:

- Jo Butlin (Panel Chair)
- John Carnwath (independent Panel member)
- Robert Hull (independent Panel member)
- Ian Tait (independent Panel member)
- Energy UK (represented by Jack Presley Abbott)
- Energy Networks Association (represented by Lynne Bryceland)
- Association of Decentralised Energy (represented by Chris Kimmet)
- Citizens Advice (represented by Andy Manning)

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