Joint Outage Transformation Programme

To the Commission for Regulation of Utilities (CRU) and the Department of the Environment, Climate and Communications (DECC)

1. Introduction

Outage management is a critical issue for the delivery of the Irish government's Climate Action Plan (CAP).

It is also an area that is very challenging for several reasons such as the exceptional scale and pace of change needed to deliver new infrastructure.

EirGrid and ESB Networks have been working closely on this as a priority and our Joint Outage Transformation Programme (JOTP) is underway and delivering real positive impacts.

This statement builds on commitments made to CRU by EirGrid and ESB Networks as part of the strategic incentive and is to update CRU and DECC on 18 interventions that the JOTP is focused on to increase outage availability, maximise utilization and effectiveness of outages.

2. The Joint Outage Transformation Programme

CRU's Strategic Plan for 2022-24 lays out four strategic priorities to deliver safe, secure, and sustainable supplies of energy and water, for the benefit of customers now and in the future:

- Ensure security of supply
- Drive a low carbon future
- Empower and protect customers
- Enable our people and organisational Capacity.

In response to the CAP, EirGrid's "Shaping our Electricity Future" (SOEF) and ESB Network's "Networks for Net Zero", set out roadmaps for transitioning to a low-carbon future.

To meet the required electrification and renewable energy targets by 2030, significant change and investment is needed on the entire power system, so that it may be operated to accommodate significantly more renewable connections, new interconnectors, and new technologies, as well as continued growth in demand particularly from large energy users.

To operate at 80% renewable energy from electricity sources by 2030 and meet our renewable and electrification targets, we are implementing a step change in the approach to outage management, while protecting and enhancing system security, ensuring regulatory compliance and performance, and delivering continued excellent customer service.

The scale and pace of change needed is exceptional, effectively enhancing and expanding the electricity grid to accommodate three times as much renewable power in only 6 years. This change in itself is a mammoth task, which is not without risk or challenge.

Within this new eco-system there will be greater prioritisation given to outages, and special consideration is being given to managing the risk posed by new major customers (demand and supply) whose work programmes fail to meet key connection milestones.

Such delays have the potential to displace or cancel other new customers connections or work projects and adversely impact an entire work programme.

Fundamental to addressing all challenges and the success of this programme is the support of key ecosystem stakeholders including CRU, DECC, the broader industry, electricity customers, and the people of Ireland.

The Joint Outage Transformation Programme (JOTP) is an enabler for CRU PR5 and PR6 delivery, and has developed 18 interventions to increase outage availability, maximise utilization and effectiveness of outages that fall into 7 natural groupings; *Project Delivery, System, Programme, Regulatory, Policy Information and Technology, Customer and Industry.*

On December 20th, 2023 EirGrid and ESB Networks endorsed the JOTP roadmap and recommendations. A number of these interventions have already been deployed as business as usual (BAU) to optimise outage management. The implementation of additional early-win outage request process changes and interventions such as introducing a new policy of standard ratings for 'brownfield' substations are already underway since mid-2023.

Development of stakeholder communication plans continue, and regular updates will be made as appropriate to ensure transparency of the progress being achieved.

3. Conclusion

The Joint Outage Transformation Programme is well underway, and we are proud of the great progress made to-date towards transforming outage lifecycle performance.

On December 20th, 2023, the Joint Outage Transformation Oversight Board approved the roadmap, including the 18 interventions, as attached.

The delivery of the unprecedented scale and pace of change needed requires collaboration and actions by all stakeholders, including the industry and customers.

EirGrid and ESB Networks are committed to delivering our part to deliver on the CAP targets including optimization of outages in alignment with industry best practice and regulatory standards.

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Dated: December 20th, 2023

Signed jointly on behalf of:-

EirGrid Group

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Appendix A: Intervention Summary - Short and Long Descriptions

18 interventions were developed by the Joint Technical Working Group (JTWG) and endorsed by the Joint Outage Transformation Programme Board (JOTPOB) to be the focus of the JOTP.

Short Description	Longer Description
Progress and continue to develop work methods for working near/on energised apparatus	Progress work that is currently being undertaken, and any future associated advances, by ESB Networks with regards to developing and implementing more opportunities to work near/on energised apparatus, to reduce outage durations
Develop work methods for live working	Progress work that is currently being undertaken, and any future associated advances, by ESB Networks with regards to developing and implementing live working operations, to reduce outage requirements
Across the end-to-end system, including EirGrid and ESB Networks, extend working hours that are prevented by constraints	Across the end-to-end system, including EirGrid and ESB Networks, extend working hours that are prevented by constraints, e.g., planning, working time directive, time at the asset, work methods, operational support, and resourcing
Take more risk on the power system to maximise outage availability	Take more risk on the power system, so that more outages can be granted, which may increase risks to Security of Supply at a localised level
Review Operational Security Standards (OSS) to move to a probabilistic/statistical approach	Review the Operational Security Standards (OSS) with a view to move to a probabilistic/statistical approach, which may allow more risk to be taken on the grid and more outage allocated
Technical focus on the minimisation of outage from GW 1	Technically trained EirGrid personnel (Outage Delivery Experts) to be engaged from the concept phase Gateway 1 (GW 1) of the Framework for Grid Development. These personnel are empowered to influence the technical/delivery solution, which will minimise outages.

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Short Description	Longer Description
Move from a time-based to a risk based asset management approach	Complete a review of the existing time-based maintenance approach, identify what change is required to move to a more risk based or condition-based approach and implement. This change will introduce optimisation and reduce the quantity of maintenance outages that are currently being requested annually.
Align EirGrid and ESB Networks incentives (mandated by CRU, incentivising overall delivery to achieve RES-e)	Align EirGrid and ESB Networks incentives regarding the overall delivery of RES-e and jointly recommend them in the PR6 submission, so that all parties are focused on delivery of projects and energisations that align to the national targets
Consolidate nodal projects and programme manage	Create a joint portfolio/programme management function that is empowered to bring projects together (where nodally / geographically possible) and sequence and optimise project activities and outage
Secure more digital integrations/solutions across the end-to-end system	Create an integrated information and technology (IT) solution that allows for real time reporting (across the end-to-end system), specifically in relation to project life cycle activities and asset maintenance completed works
Implement a totally integrated and agreed programme out to 2030	Create integrated (EirGrid and ESB Networks) programme out to 2030 (inclusive of all Capital Projects, Shaping our Electric Future (SOEF) candidate projects, Engineering and Asset Management (E&AM) maintenance and minor work, projects, electrification, bulk supply points and Distribution System Operator (DSO) activities which includes the level of effort required to deliver the activities.
Extend the outage window	Extend the outage ‘on season' to 12 months per year (except the Christmas window)

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Short Description	Longer Description
Enable ESB Networks to capitalise joint outage planning from GW 3 onward	Create the opportunity for ESB Networks to commercialise activities that are carried out during the EirGrid Project Life Cycle from Gateway 3 (GW 3) of the Framework for Grid Development, so that joint outage planning/mitigations can be considered and worked through
Review Operational Security Standards (OSS) (to undertake more splits and tails/radialising)	Review Operational Security Standards (OSS) and undertake more splits and tails/radialising, which may allow more risk to be taken on the grid and more outage allocated (grouped to other OSS review – intervention 5)
Generate project benefits in a sequenced and prioritised (as required) constrained NDP	Define the value/benefit of every project in the NDP & SOEF 1.0 + 1.1 (in relation to the national target) and jointly prioritise/sequence them so as to obtain the biggest benefit to the goals. Create a shared ownership over the attainment of each milestone towards the target
Progress and develop end-to-end work methods to minimise outage (conduct offline builds in free spaces)	Design and develop a process where project planning and delivery personnel must (by default) consider using the option of building in free spaces to minimise outage requirements
Introduce new policy standard ratings for 'brownfield' substations to reduce outages and unnecessary work	Amend the green and brown field site policy standard (High Voltage ratings) in substations and replace with separate policies to improve delivery in 'brown field', to reduce outage durations. E.g. Bay conductor to match the emergency overload rating of the circuit
Customer and industry	Engagement and collaboration with the customers and industry is at the heart of successfully transitioning to a low-carbon future by delivering on renewable and electrification ambitions. To this end, all parties in the system and industry will be engaged to ensure they are aware of, and comply with, their responsibilities in delivering this programme of work.

Appendix B: Potential intervention groupings

The following shows how the 18 interventions fall into 7 natural groupings of joint workstreams ; Project Delivery, System, Programme, Regulatory, Policy, Information and Technology, Customer and Industry.

