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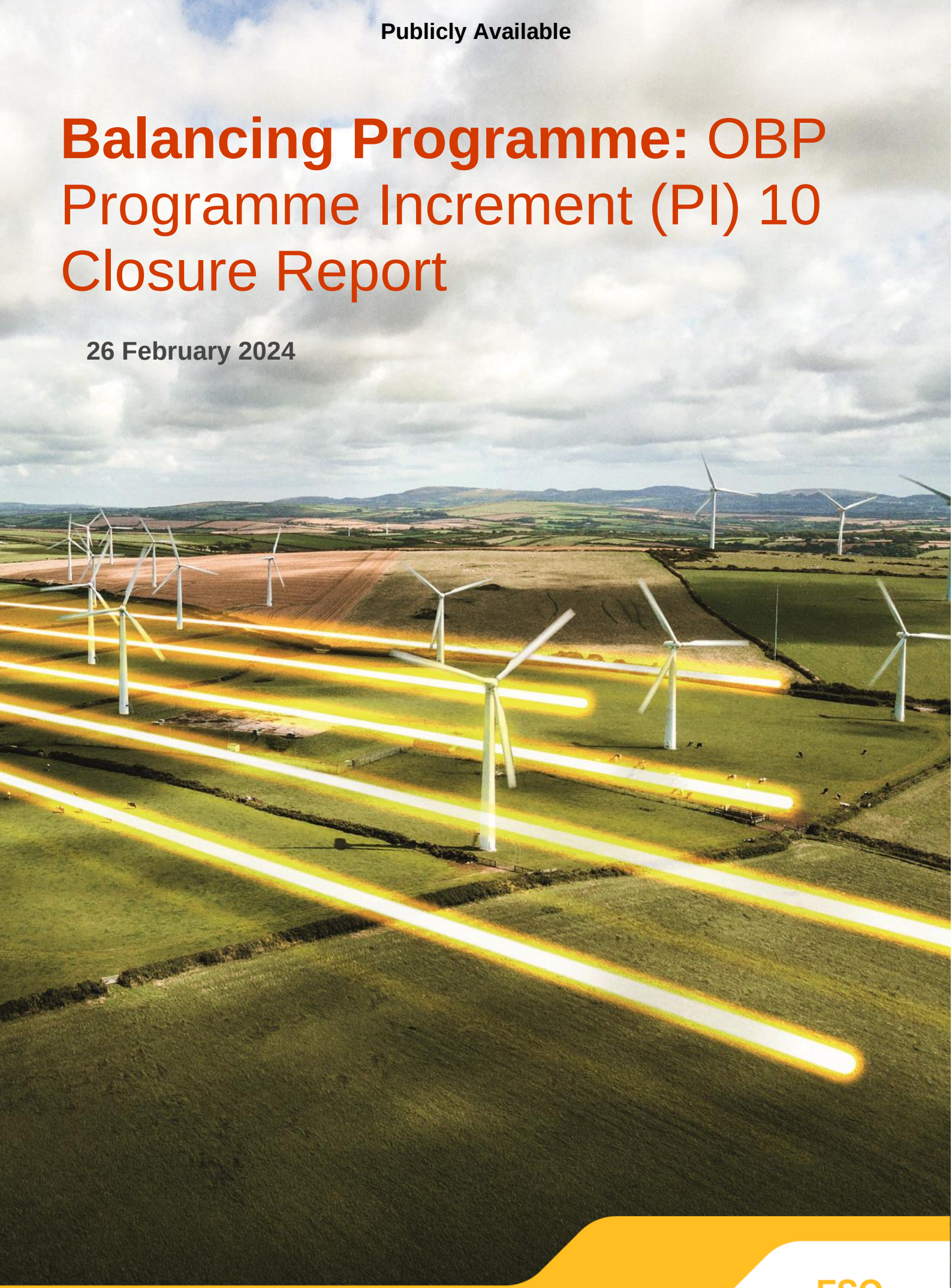
Balancing Programme: OBP Programme Increment (PI) 10 Closure Report

26 February 2024



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Executive summary

Programme Increment (PI) 10 was a major milestone for the Balancing Transformation programme. It had long been marked as the PI that Release 1.0 (Bulk Dispatch) would be delivered to the control room. This was achieved via a two-stage approach:

- The first, a technical release on 08/12/2023 to prove stability in processing declarations from BM, the ability to schedule and optimise, then review created instructions (BOAs) that would be sent, thus proving the core workings of the product.
- The second stage was the business release on 12/12/2023, which enabled the capability to dispatch instructions end to end.

With the exception of 9 high price instructions for which a fix was implemented on 08/01/2024 and 06/02/2024, the system has performed well. It was used to address a frequency drop of >1000MW due to the loss of the Eleclink interconnector on 12/12/2023 and has steadily picked up in terms of instructions to support actions for frequency control. Increasing the use of OBP for dispatching energy has been set out by the business sponsor as guidance, and we will monitor this over the coming weeks. PI11 planning concluded on 25/01/2024, the details of which are below. The key focus is to launch the Fast Dispatch capability into the control room in April 2024.

PI10 Completion Report (What we said & what we did)

PI10 Objectives Summary

The overall 'PI10 Objective' was to: Deliver a working product (Release 1.0).

This high-level objective was refined into 6 committed objectives detailed in the table below.

Committed Objectives (What 'We Said' & What 'We Did'):

Exceeded Met Partially Met Not Met

PI10	Objective	Status	Description	Delivered Value
Develop	**Complete the path to production** 1: Build out remaining CNI environments – pre-prod and prod. 2: Complete remaining non-functionals – CNI (Critical National Infrastructure) backup/restore and observability.		Deliver the remaining path-2-production (incl. Production) with all expected platform services running using the correct versions to support go-live.	The path to production to enable launch has been achieved and partial backup and restore processes have been proven with relation to audit extracts. There is still further work to do that was descoped due to resource availability within the SRE (Site Reliability Engineer) team to execute these ahead of launch.

Develop	**Resolve defects (R1.0 Critical) and complete R1.0 testing** Fix remaining R1.0 critical defects and close testing.		Resolve critical defects for R1.0 across the application and platform.	All R1.0 critical tagged defects were resolved ahead of launch, enabling the delivery of OBP R1.0 with both Small BMU and Battery zones used.
Develop	**Prepare to Operate** 1: Onboard and train our SREs; interlock with CHT (CNI Health Team) and BM. 2: Completion of remaining module designs and achieve Stage Gate E. 3: Key Operational Procedures and Alerting.		Built the priority operational procedure runbooks (and any automated procedures where required), completed training & education for SREs & CHT, validated observability capabilities for SREs, and achieve final sign off from all forums. Hypercare plan in place.	Partially achieved due to resource constraints.
Develop	**Prepare to Balance** Deliver Training. Continued Control Room, BM Team, and Industry engagement.		Control Rom users have received training and support to use OBP in Production. Processing in place to receive feedback from stakeholders – Control Room, BM support, and Industry participants.	Training completed to all user groups across the business, CHT, SREs and the control room.
Develop	**Production Deployment** 1: Pre-prod dress rehearsal. 2: Prod cutover.		Implementation plan delivered and agreed between all parties, including dress rehearsals. Dress rehearsals and production implementation completed following the plan.	Proven the deployment of R1.0 through a dress rehearsal to enable successful production launch.

	**Post Release 1 Development** Define development and deployment process for Post R1.0 for Build Teams. Test and release to support continuous improvement and continuous deployment.		Provide guidance and governance on how post R1.0 development will work from a technical perspective.	Post Release 1.0 development was started for Fast Dispatch, as well as targeted continuous improvement with smaller releases now planned every 2 weeks.

- At the start of PI10 planning, 55 features/enablers were committed to be delivered to the definition of done.
- Throughout the course of PI10, 12 committed features were reprioritised to a later PI. This resulted in a revised total of 43 committed features/enablers to be delivered to the definition of done in PI10.
- 2 features were then brought in late to deliver MPLS (Multiprotocol Label Switching) and penetration test fixes from a platform perspective taking the 43 to 45 committed.
- In addition to the 45 committed features delivered, a further 5 stretch features were delivered. This resulted in 50 features/enablers being delivered in PI10.

PI11 Plan (What we commit to do)

PI11 Programme Plan

At the Balancing Transformation 'PI11 Planning Event' the team produced the 'PI11 Programme Plan'. This plan details the 'PI Objectives' and the plan of which features & enablers will be delivered by the squads during each sprint of the PI (including the related risks, issues & dependencies to ensure successful delivery).

In the 'PI11 Programme Plan' the squads committed to delivering 80 features & enablers and identified a stretch target of 35. Please note although the stretch target is not committed to being delivered by the squads, they will be worked on if the 3 squads have available capacity during the PI. This enables a clear focus on the next level of priority.

PI11 Objectives

Below is an extract of the PI11 Objectives from the 'PI11 Programme Plan'.

 Committed  Stretch Target

PI11	Objective	Status	Description	Delivered Value
	Fast Dispatch released to Control Room to support users utilise fast acting units to manage Frequency events.		Enables the control room to be able to quickly set a requirement, optimise, and send to deviate from the current position.	This will leverage the characteristics of fast acting units (predominantly in the Battery Zone) to deal with frequency events. This greatly streamlines the bulk dispatch process where an urgent action is required.
	Continued improvement to resolve critical high price issues in the current implementation of optimisation and instruction creation.		Remedial actions to better handle rounding, and redeclaration patterns of dynamic data.	Improvement in optimisation and price identification will reduce instances of high price as well as reduce load on the control room to manage high price instructions.
	Continued improvement in platform and development ways of working.		Support for squad system test environments, including feature flag support & automated promotions; backup & restore.	This further matures our development, build and test methodology, bringing the scalability and growth needed to support the OBP roadmap.
	First integration of metering with IEMS within test systems.		Integration with the Metering system.	Enabler for roadmap to bring metering into OBP.

	Development of first phase of constraint margin, with integration with BM on constraints flow.		Integration with BM for more constraints related data, and development of functionality to start constraints management – initially constraints margins.	Enabler for roadmap which will bring constraints management into OBP.
	Development components for OBP to support clock change.		Clock change components, as well as centralised graph development made available to other areas of OBP.	This is the foundation enabler needed for later change to OBP to support clock change
	First phase for EDT (Electronic Data Transfer) shadowing with the development of EDT Adapter.		Creation of adapter to process EDT data.	This will bring EDT data into OBP to support the shadow phase to prove EDT processing.
	First integration with SMP (Single Markets Platform) integration for contracts.		This will set the foundation and integration principles for SMP integration with OBP.	Contract data will offer the ability to provide both situational awareness on contractual availability as well as the option to differentiate processing based on contracts. Later integration will bring unit, prequalification, and contact data from SMP.
	Analysis completed for potential long-term resolution of instruction rounding, pricing issues, and instruction creation.		This is an analysis on the end-to-end solution to address challenges with respect to rounding, pricing and instruction creation.	This will provide improved bulk dispatch logic for OBP, reducing the number of high price incidents or need for user checks.
	Elaboration of the multi-cluster readiness architecture in preparation for OBP Strategic.		Design complete for multi-cluster architecture for OBP Strategic.	Provides the design for multi-cluster architecture to enable high availability/ resilience in OBP Strategic.
	Updated Roadmap through to mid-2025 - at a capability level.		Capabilities created for OBP Roadmap (Epics and Milestones) through to mid-2025.	Allows for clarity and dependency mapping and traceability across the Business Plan 2 timeline and beyond.

	Discovery of OBP sending all instructions, including working with BM team to define their Release 6 and outlook for Release 7.		Understanding of the requirements and high-level architecture to enable all BM instructions (manually) from OBP.	This discovery will provide the vision and design for control room to be able to send all BM instructions from OBP. This is the pre-cursor to, and accelerator for transitioning EDL/EDT (Electronic Dispatch Logger / Electronic Data Transfer) to be master in OBP.
	Discovery of MDA (Modern Dispatch Advisor) as part of OBP.		Approach for introducing the MDA logic and optimisation model in OBP.	This provides the architecture to bring in the scheduling and dispatch advice optimiser which will allow for national optimisation.
	Discovery of wind and roadmap for PEF integration, and possible feed back into BM.		Approach for utilising data related to wind units and forecasts in OBP.	This allows for alignment with the PEF (Platform for Energy Forecasting) programme to receive wind forecasts. This is a dependency for constraints management as well as a related discovery for wind dispatch.

Abbreviations:

- **BM:** Balancing Mechanism
- **BMU:** Balancing Mechanism Unit
- **BP2:** Business Plan 2
- **CHT:** CNI Health Team
- **CNI:** Critical National Infrastructure
- **EDL:** Electronic Dispatch Logger
- **EDT:** Electronic Data Transfer
- **IEMS:** Integrated Energy Management System
- **MDA:** Modern Dispatch Advisor
- **MPLS:** Multiprotocol Label Switching
- **OBP:** Open Balancing Platform
- **PEF:** Platform for Energy Forecasting
- **PI:** Programme Increment
- **SMP:** Single Markets Platform
- **SRE:** Site Reliability Engineer