

# Electricity Balancing System (EBS) Update

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## What's being changed and why?

The BM system is for managing frequency and power flow in real time. Originally developed by the CEGB, it has now reached 'end-of-life' and is being replaced by the EBS system



It is essentially a manual process that originated in the 1980s allowing for the control of a handful of coal units

It now has to handle 100s of balancing units so manual balancing can be “difficult” during high wind

The EBS incorporates automated dispatch which will provide significant improvement to frequency control

A key implementation objective for the EBS is not to change existing interfaces to industry participants

## Transition in stages

Real-time continuous operation of the Balancing Mechanism is essential to the secure operation of the power network during the transition stage



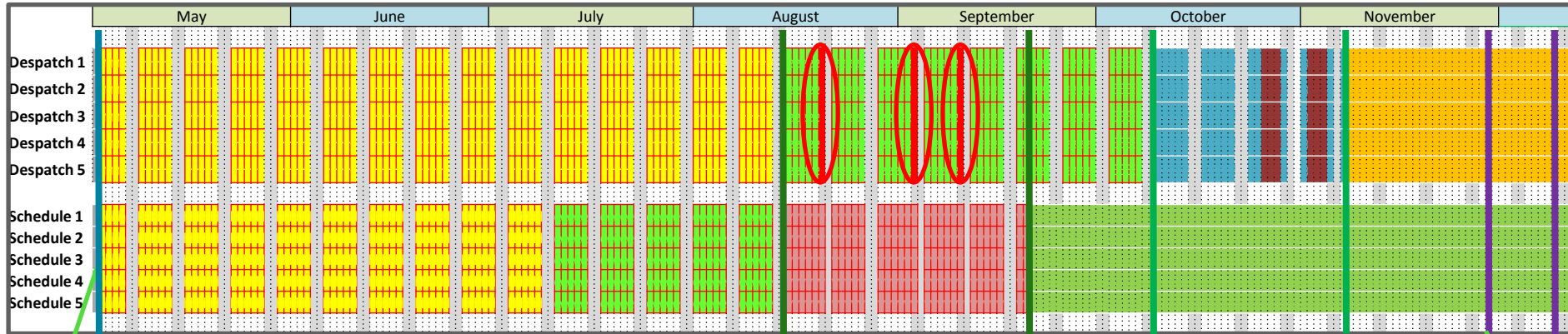
A staged approach will be used to transfer control from the BM system to the new EBS system

Day ahead scheduling, Intraday scheduling and Real time despatch will be transferred over in stages

This staged approach will to allow for reversion back to the BM system up until the final transition stage

The decision to switch off the BM system will be taken once the new EBS system has been established

# EBS stages to go-live transition journey



- Classroom training
- Simulator training
- Scheduling parallel run
- Scheduling enduring
- Despatch pre-trials
- Despatch daytime trials
- Despatch night time trials
- Despatch enduring

Training started on 3 May

Despatch pre-trials

Scheduling parallel runs start on 15 Aug

Scheduling 24/7 start on 21 Sep

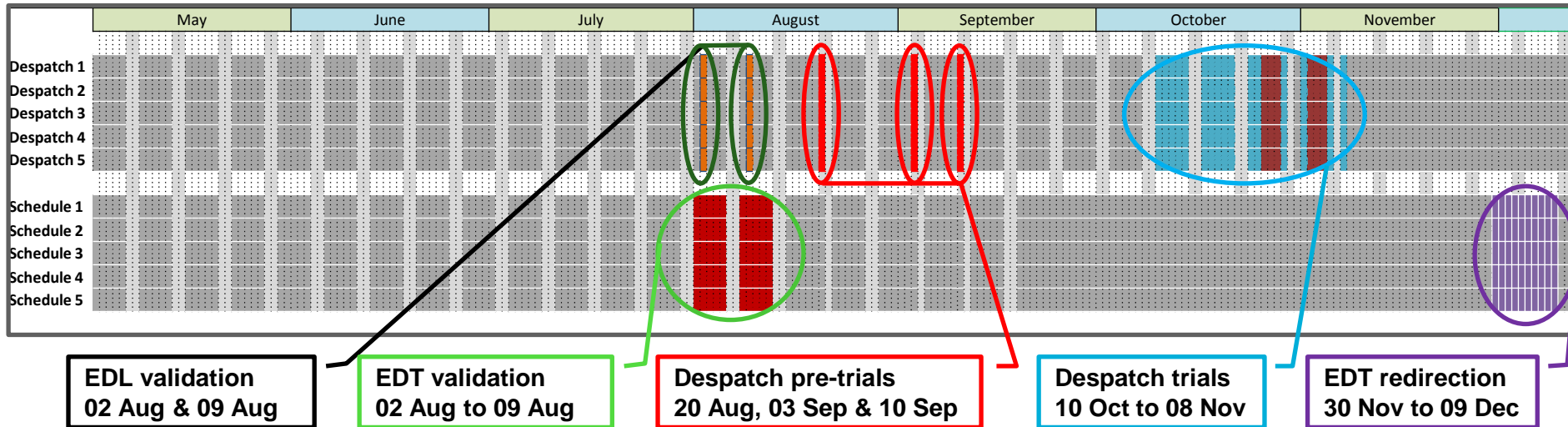
Despatch limited hours trials start on 10 Oct

Despatch 24/7 start on 8 Nov

PNR (no BM) on 30 Nov

EDT switched over by 9 Dec

# EBS Stages to go-live participant transition journey

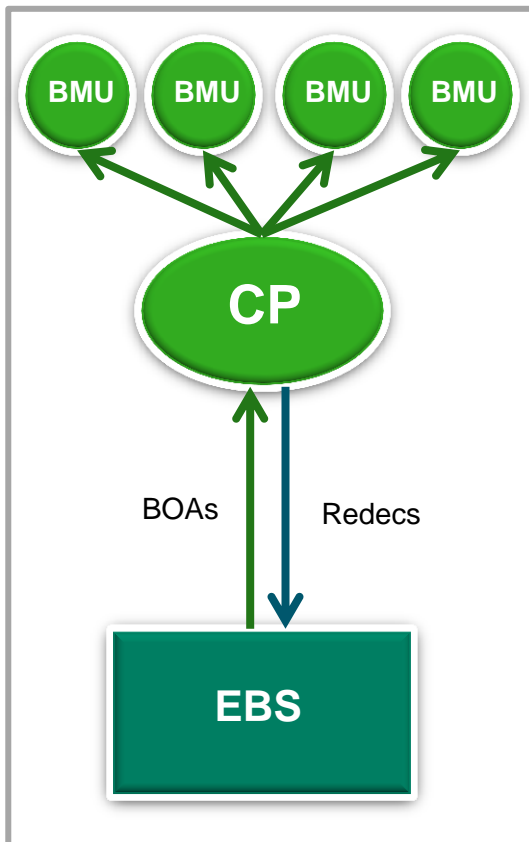


- **EDL validation** – all CPs will be swung over by NG from BM to EBS, be tested, then swung back to EBS
- **Despatch pre-trials** - for duration of each trial all CPs will be connected to EBS, outside trial period back to BM
- **Despatch day trials** - for duration of each trial all CPs will be connected to EBS, outside trial period back to BM
- **Despatch night trials** - for duration of each trial all CPs will be connected to EBS, outside trial period back to BM

- **EDT validation** - each TP will have an agreed timeslot to logout from BM, login to EBS, send test data, log off EBS and log back into BM
- **EDT redirection** - each TP will have an agreed timeslot to logout from BM and login to EBS as the enduring connection

## BOA instructions

At the recent EBSIT forum a major topic of discussion related to the volume of BOAs that may be issued to a BMU by the new EBS. The feedback provided has resulted in the following



The number of BOAs issued simultaneously by EBS to the same BMU will remain at one (as now)

In July information on BOA volume comparison tests between BM and EBS will be shared with participants

In August further information from comparison tests incorporating code improvement will again be shared

In September feedback on EBS operation will be sought from participants during pre-despatch trials

## Conclusion

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National Grid is on track to replace the existing BM system by this Winter. The opportunity is being taken with the new EBS system to introduce automated functionality



A phased transition to EBS is being adopted with the existing BM system in back up mode until the PNR

After the PNR all participants will have their EDT permanently redirect to EBS by 9 December

During the trials if there is any threat to system security then Go-Live will be delayed until the threat is removed

In the lead up to Go-live feedback will be sought from participants and comparison data shared

# Q&A

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