ESO

Scheduling and Dispatch Options Q&A

17 July 2024

Self-Scheduling Models

1. Could you explain the logic for reverting to a dual imbalance price in National Model 1a?

The current single imbalance price rewards parties to be imbalanced if they are long/short in the opposite direction of the system.

Afry set out in the Scheduling & Dispatch case for change that, in the context of constraints, the current single imbalance price creates misaligned incentives which can aggravate constraints if a party is incentivised to go long when a region is congested, even if the wider GB market is short.

Dual imbalance price would address this risk by removing the reward for being in the opposite direction to the market length. It should be noted that under a granular zonal market this misaligned incentive would be removed, as the zonal imbalance price would reflect any congestion.

2. If the ESO requires better and earlier PNs to schedule assets and action constraint management, would it not be better to implement an additional IPN at 4 or 6 hours but retain the 1-hour gate closure for National Model 1a?

Market participants already submit PN data throughout the day to inform ESO of their intended running patterns. The problem we have identified is the lack of incentives to stick to those Physical Notifications (PNs), or for those PNs to respect the constraints of the network – i.e., there are no costs for changing the PNs even when the change could trigger additional balancing costs

We note that work is currently being undertaken by the ESO to improve accuracy of PNs and the option of information imbalance in the list of Counterfactual + reforms. Although we believe applying the latter to Initial PNs (IPNs) would enforce a de facto earlier Gate Closure (GC) since it would penalise trading after submission of the IPN.

3. Is it really necessary to remove portfolio balancing (and settlement) to obtain unit level volume and technical data? Would it not be easier to request additional unit level data as part of enhanced data sharing?

Removing portfolio balancing is not necessary to obtain unit level data. Under the current arrangements, parties are settled at the portfolio level and already submit unit level data into the Balancing Mechanism (BM).

The introduction of unit level balancing and settlement is expected to better align balancing incentives - a specific unit which sold a volume is more likely to deliver that volume, given the risk of imbalance exposure at the unit level.

Alternatively, under portfolio settlement, a party who sold a volume could plan to generate that volume in unit A and 30 seconds prior to gate closure, decide to generate in unit B instead. Parties that do this face no costs, despite potentially imposing the need for balancing action and costs.

By aligning these incentives, we would expect the uncertainty that needs to be managed via the BM to reduce, leading to lower redispatch volumes and costs to the consumer.

4. I am not sure that "portfolio trading may inhibit competition by disadvantaging smaller players who have fewer assets", because on the other hand portfolio trading allows smaller assets to be aggregated within a trading portfolio

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When thinking about smaller players, we were thinking about market participants who own small numbers of assets. It is unrelated to the size of the assets themselves.

5. **Could we explore the difference between portfolio bidding/imbalance settlement and Unit level physical notification to provide the ESO with visibility. Could we have a hybrid of both?**

We effectively have a hybrid approach under the status quo, where market participants are settled at the portfolio level but provide the SO with unit-level data in both PNs and Bid-Offer Pairs (BOPs) for the BM.

The challenge that has been identified with this approach arises from the fact that market participants are free to change their PNs at short notice and no cost, even when that decision triggers redispatch volumes and costs which are borne by consumers

6. **Are you leaving open the option of having two options e.g. zonal self-scheduling and longer Gate Closure? They seem to be addressing different problems, so doesn't necessarily make sense to see them as mutually exclusive options.**

Yes, this is possible; although zonal markets would incentivise more effective scheduling decisions so would reduce the arguments for extended GC, since the SO would be re-dispatching less.

7. **Why would Zonal Model 1 reduce abuse of market power? It's much easier to know (and abuse) knowledge of what's happening in your zone and to manipulate it than across the country entire**

Zonal pricing provides consistent price signals that reflect constraints across different timeframes and therefore provide incentives in line with underlying system operation.

Further, this market power exists under the current arrangements as well and it manifests itself via the BM bids and offers when an asset can forecast that it will be needed to resolve a constraint. The Transmission Constraint Licence Condition (TCLC) is meant to mitigate this.

Under a market with zonal pricing, so long as zone boundaries are accurate, this market power becomes more visible and therefore can be mitigated ex-ante, potentially saving costs to the consumer.

8. **What, if any, non-physical trading is envisaged as part of the Zonal model?**

Assuming liquidity in intraday timescales, there is no reason that non-physical trading could not continue in the same way as today under zonal pricing and self-scheduling.

Hybrid Scheduling Models

9. **How would this fit with (any future) integration with EU arrangements, and what would be the treatment of interconnection?**

The compatibility of current and future trading arrangements with the hybrid model needs to be investigated in more detail although we do not foresee critical challenges given that this model is already in place in other European jurisdictions

Central Scheduling Models

10. **How can central dispatch work in the context of a decentralised system, characterised by intermittent generation (including distributed generation)? Is this a model that assumes a world of a few big fossil-fuel plants?**

This is something we're continuing to assess. There are aspects of central dispatch that could be less well-suited to intermittency e.g. absence of intraday auctions, while some aspects could be more suited e.g. management of inter-temporal constraints and storage.

Markets that use central scheduling apply stochastic methods in the optimisation algorithm to account for uncertainty. These formulations deal well with uncertainty by formally accounting for a range of possible scenarios.

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11. How does the central dispatch gross pool suggestion provide improvements on the current market driven auctions self-dispatch? These auctions already provide efficient dispatch incentives.

The current auctions provide efficient dispatch incentives related to balancing energy at the national level, which is confirmed by looking at the different categories of redispatch volumes instructed by ESO.

These incentives, however, do not account for network or intertemporal constraints. A centralised approach would use an optimisation algorithm that explicitly accounts and prices in network and intertemporal constraints.

12. How would you allocate prices to settlement intervals arising from inter-temporal issues?

In general, energy prices are obtained as by-product of an optimisation problem which minimises the cost of production or maximises welfare gains from trade.

In centralised scheduling the price is the "shadow price" associated to local energy balance constraints. In decentralised scheduling, the price is such that guarantees equilibrium between demand and generation.

13. Be very careful when using modelling to appraise the difference between these options. Any model assumes a view on reality. The essential difference between centralised and decentralised models is a) who knows what and b) who has perverse incentives. Neither of these can be modelled with any degree of certainty.

There is an inherent bias that any modelling framework assumes perfect knowledge, and that central dispatch matches to that perfect knowledge (100% efficient) and decentralised dispatch is (by assumption) <100% efficient.

How can you avoid that bias in the appraisal of options?

We understand the concern raised. We are aware of the challenges in modelling different approaches to scheduling and dispatch.

Any quantitative work that ESO undertakes or commissions will take this into consideration.

Counterfactual

14. Could we add in the good stuff around digitalisation, automation, and control room functions as part of the counterfactual?

Yes, BM and ESO systems reform is included in the Counterfactual scenario, e.g. through the Open Balancing Platform (OBP).

15. Under the counterfactual, can we also consider the positive impact that the ESO's data roadmap will have on the market's ability to self-dispatch effectively?

Yes, agreed this would be impactful; we'll ensure this is incorporated into our view of how different options address the 'Visibility & Access' issue.

16. Are there any specific ideas in play around "more efficient interconnector trading"? This is a key issue whichever path is taken

The Trade and Cooperation Agreement between UK and EU mandates the implementation of more efficient interconnector trading arrangements at different timeframes. We agree this needs to be taken into consideration throughout the development of the different options. DESNZ is also working on options to improve interconnector trading efficiency and we are supporting this work.

General/Governance

17. Are decisions on dispatch not very much tied to - arguably - higher level decisions on zonal pricing, evolution of CfD etc?

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Yes, this is a critical consideration for the REMA programme. ESO has been asked to provide a shortlist of dispatch models and is working with DESNZ & Ofgem to explore how each model interacts with other reforms being considered in REMA such as changes to CfDs.

18. How will this be aligned with the SSEP and the CfD options work?

There are clearly significant interactions between decisions being made on CfD reform, network planning, and other areas such as Charging Reform that this assessment needs to account for. We are continuing to work closely with relevant ESO teams as well as those at Ofgem & DESNZ.

19. Is there an agreed hierarchy of decisions? e.g. do you decide on dispatch then look at options that work with that?

The broader REMA programme has done significant work to identify dependencies; however, there is no concrete sequence determining which decision need to be taken first that would mean particular workstreams are prioritised. However, no decision will be made in isolation but will be considered as one aspect in the wider package of reforms.

20. When will you be consulting on these?

We will be continuing to share these ideas through DESNZ formal industry engagement processes and will engage with wider stakeholder community in due course.