Balancing Transformation - Optimiser Stakeholder Group

ESO

1. Terms of Reference Feedback

Drag and drop a post-it and place it on the board!

What do you like ?

- Regular opportunity to meet, collaborate, share
- Regular feedback opportunities
- Quality of data released by ESO - far greater than other markets
- Allowing the industry to help shape development
- ESO's openness to collaborate and take input
- These collaborative sessions are very welcome.
- how optimisation
- Ways to get people to interact, like this board!
- The open communication that is happemning.

What could be better?

- Data reliability - frequent outages for balancing data
- Data quality and handling- Data format can be inconsistent and hard to retrieve
- Greater transparency on how ESO solves their optimisation problems
- More information of what ESO is looking to achieve or solve via new products and services
- More opportunity to feedback (or understand more technical aspects of BESS or other assets) in relation to how they operate within markets
- Roadmaps need to be updated monthly.
- Fair and applicable treatment/enforcement of industry rules across tech types
- Whistle stop introductions don't give a fair view of people's experiences and expectations. Is there somewhere we can write this and share?
- Define, build, release timeframe - setting expectations

- Not exactly on terms of reference... but two points which interest me are:

  - relationship between market design and tractable optimization

  - enduring solution for v high penetration of DERs

2. Views on the next steps.

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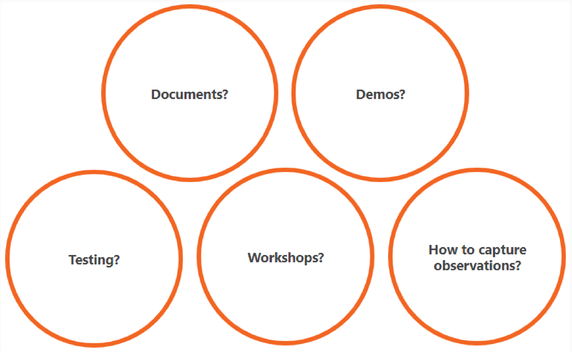
What outputs do you want from this group?

- A broad perspective of the challenges within optimisation in electricity balancing
- Understand the as is and what is proposed for December. What time do we have to influence?
- Have you looked at other best practices globally?
- What challenges research organisations should be addressing looking to the next generation of developments required in control room algorithms.
- Market design and algorithm design explainers
- Understand which pieces of information will be used to inform dispatch decisions (price, PN, MEL, MIL, power, duration, PNs, DFR contracts, ...)
- Understand which pieces of information will be used to inform in-merit skips of flexible assets
- Seems like a key piece of missing info for any algorithm is available headroom / footroom (i.e., state of charge) will this just be done using MEL/MIL?
- Gain an understanding of how DERs and smaller assets will be used by NG-ESO across products and services.
- Get clarity on information visibility / reporting requirements for providers - what information promotes participation and market liquidity.
- Documentation with worked examples to detail technical knowledge (market design, rules and algos), followed up with demonstrations to show workings in practice
- This could also be linked to demos - for instance linking model specs to how lowest marginal cost units are not always the best ones to schedule.
- Gain an understanding of the data feeds, and integrations with existing related systems, required going forward for the OBP to function efficiently.
- Get insight into NG-ESO AND provider requirements for the 'rules' around optimisation - e.g. rampup and rampdown times of selected resources and how that plays across multiple requests.
- Insights from other TSOs also experiencing a rapid transition e.g. ERCOT, Austrlia, CAISO, Eirgird and how they are approaching the optimisation challenge
- More understanding of the role / use of flexible assets in balancing (how do you want to use us / how are we valuable to you?)
- Detailed documentation on how the optimisation takes place would be perfect. The maths, algorithms, rules, etc. Prevents misunderstandings with why dispatch instructions happened and allows recreation
- If you expect to revise these algorithms after December then changelogs will also be really important
- Understand the roadmap for promoting control room visibility of flexibility actions by time and place.
- Demo's / examples are super useful (with some maths). We can then try the problem ourselves, spot any clear errors, and question "what would happen if X changed in this example"
- A Demo will likely bring it to life more. Generally I think a combination of worked examples and a demo. Maybe even a tool to play with so see how it works.
- documents to explain algorithm, objective, inputs and outputs
  Send documents before workshops
  Some dmos to test typical scenaros
- Demos would be great - much easier to understand Control Room decisions when we understand what they can see or do
- Good to manage what benefits will be delivered and when.
- Understand how the mathematical solver Gurobi Optimizer is being utilised and offer support to resolve challenges with the product, if any.

  Collect requirements for the solver roadmap and for the user community that may emerge from the discussions.