

Market Design

Is the market designed to allow all generation types are allowed to participate

Demand side assets may not always be able to deliver firm response. Consequences of this need to be appropriate to not limit DSR access but appreciate grid's need for firm response.

Locational aspects/constraints are going to get more and more important - need to reflect this

Windows should align with the products that the reserve products are able to stack with. If new frequency products are eventually to be bought at an SP granulation, then so should the reserve products

Renewables require at least day-ahead setup. Preferably also allowing bids to be adjusted after day-ahead clearing until one hour before delivery.

SP level granularity but with the ability to easily price blocks/whole day for those who do not want the flexibility would be a much better solution. Auction can be opened to the market for the week and closed at DA to enable all parties to participate. There is no simple/perfect answer to trying to capture the value of stability within this. However something like an uplift per GVA.s equivalent provided, per SP could be a reasonable compromise. It would require the ESO to calculate on a SP basis the value of additional GVA.s in each SP.

Putting bids in week ahead and changing up to day ahead would work well

Within-day markets seem an obvious choice, as allows far better cooptimisation, as better information available.

Constraints from local network providers do not allow frequency response at some network locations

Are you paying for availability or use or a combination?

smaller sizes of behind the meter are not economic at this time

A day ahead market setup with hourly windows and an hourly settlement period is essential. (Or higher resolution -- e.g. 30 minutes)

Do you want new providers or happy with the current providers? If you need new then you need to give at least some certainty of revenue for a period for bidders to invest, If you don't need new, you can just go day ahead

Need separate market structure for inertia, don't confuse inertia with frequency response. "Synthetic" inertia is just clever fast frequency response.

The ESO should consider a combination of long-term and short-term contracts. Striking the right balance between short and long-term procurement is key to create financial certainty required by investors, ensuring a sustainable ancillary services market. Understand that the ESO is constrained by the CEP requirements, but still believe there is scope for a more appropriate mix within the current legislative and regulatory framework.

Many MWh of batteries are available in industry and data centres, but there has to be an incentive for those industries to be bothered with supporting the grid.

It seems clear that both standardised rules and allowing max number of asset types into the market is a good thing. Therefore looking at international examples of e.g. approaches to baselining that allow largest number of assets to participate seems the best approach.

settlement period windows would be ideal - ODFM's 3 hour minimum restriction excluded smaller assets that could have potentially been aggregated to deliver a 3 hour service

I'm concerned that we can go through the work designing a product, or the Grid doing so (as in ODFM) only for Grid/ESO get their big stick out with a command&control type mod (like GC0147) which allows the Grid to avoid using market mechanisms

If a contract or action is required at National Level, can the contract be transferable to another qualifying asset with equivalent capabilities to provide to that service at National Level? Or similar for assets in the same GSP? This would allow greater flexibility for operators of ESS managing State of charge of a battery portfolio as opposed to focusing on single assets

Could storage with grid forming inverters provide an equivalent product to spin gen/spin pump in the future?

Re spin gen question - surely need separate markets for inertia and reserve then assets can stack these?

Interaction with reserve procured through the BM

Seems like there isn't a realistic proposition of contracts long term enough to incentivise asset build so should only do further in advance products if it benefits NGENSO

Short term advantages. For the ESO - more certainty = need to buy less. For assets like wind, they can provide 'firmer' volume close to real time, and for storage they can provide firmer volume too as SOC is better known. Technologies that 'don't' have a ramp rate offer great optionality to the control room.

A day ahead market is essential for renewable providers - short term delivery is an advantage

Also need to be stackable with CM.

Settlement periods

how will carbon content be reflected

How would you price the value of inertia from optional fast reserve?

put bids in week ahead and change them up to day ahead