

Dear sir/madam,

Thank you for this. I've booked the meetings - thanks for pre-filling the form!  
And in this consultation you have been very receptive to feedback - thanks.

One problem: ESO's slides are getting increasingly difficult to read because of the font/background colours selected. It's not just you.

My feedback is:

Slide 3

- Tender process bullet 1: Projects only need certainty at bid stage. At earlier stage they can be much less certain because you're only gathering general information and entering into dialogue.
- Maintaining competition bullet 1: Why do you need to maintain competition after tender award? As long as the winning tenderer delivers the contract, they retain it at the price tendered - unless it's a Cost Plus contract, and I don't believe you're considering them.
- Maintaining competition bullet 2: The performance bond may prevent small players / new technologies coming into the market.
- Roles (also slide 11):
  - The principle advantages in the TO being the procurement body would be simplicity, knowledge and flexibility: they would know how to judge additional capabilities offered or capability shortfalls that may yet offer a viable solution, and they have to operate the resultant grid. Set against that, they can bid and would have a conflict of interest.
  - There is only one viable other procurement body: the ESO, who has all those advantages without the conflict of interest.
  - The only advantage of a separate procurement body would be to improve impartiality, though they too would have their prejudices.
  - Therefore I'm in favour of the ESO doing it, with Ofgem keeping an eye on it and providing an appeal route.
  - (I know that in previous discussions I said the TO should do it, but we hadn't really considered the ESO doing it. With Ofgem in the Approver role [slide 11], external oversight is retained.)
- In distribution: I agree.

Slide 4: the timescales should be flexible.

Slide 10 bullet 3: resolve this by making the ESO the Procurement Body.  
Since (bullets 1 and 2) the ESO identifies the bidding / project / system

needs, this may resolve the potential conflict.

Slide 12: Agreed. The simpler, the better - and cheaper.

Slide 13, certainty of need:

- System requirements aren't only identified in FES, also in the other network analysis documents.
- ESO and TO should be open for initial discussions from the first appearance of the need in these documents; such discussions may educate judgement of the "new and separable criteria". It should only move formally into the competition plan at second appearance, but there should be an opportunity to flag a more urgent need at first appearance and thereby accelerate it by a year.
- Such initial discussions (pre-competition) would be the "very early" stage, without altering your plans for the "early" stage.

Slide 14:

- The biggest omission in the entire regulatory and network planning system is the long term. FES considers 2050 but only in abstract; nothing else looks beyond 10 years. There needs to be a major focus in both regulation and system/grid operation on the longer-term future: 10-20 years and 30-50 years, without which the grid would never have been built.
  - The main constraint on the energy transition is the lack of grid connections and lines available in appropriate parts of the country, because the focus is on sweating assets (maximising utilisation) rather than on enabling grid evolution. That's why, instead of investing a decade ago in the Scotland/England boundary, you've had a decade of constraint payments and delayed / cancelled projects; ditto in many other parts of the grid. You don't see such projects because developers see the constraints and just don't bring them forward.
- Where the ESO sees needs developing that can be delivered by solutions in which it's not allowed to invest (e.g. inertial storage, for the ever-increasing needs of balancing, stability and Black Start), it should be permitted to encourage such projects (without being technology specific) by offering long-duration contracts for them. Note that this statement applies to contract procurement, not just grid/network constraints which are the principal subject of this consultation. Therefore a 5th bullet is needed on this page relating to such long-term contracting trends.

## Slide 15:

- CPIH is good, but should be explained!
- Agreed with the omission of Transfer. If the operator doesn't want it any more, they can sell it. Having an asset at the end will enable them to bid more competitively. And even if there's a new (as opposed to Re-) tender for related (not identical, or it would be Re-) services, then they could bid this old asset with or without adaptations.
- During the course of project construction, there are bound to be occasional changes to the requirements. There should be a means of flexing the contract by externally (Ofgem?) adjudicated mutual agreement accordingly. The external adjudication is to prevent a scenario occurring such as hospital construction contracts which were bid cheap because the bidders knew that they could make their money on changes (I've seen a case of an £800 quote to plum a new piece of kit to a pipe that passes it, and similar amounts to connect a different computer to an existing network connection socket!).
- This has some relationship to Needs Change in slide 16, but is of much broader scope.

## Slide 17:

- The Procurement Body should proactively contact businesses who engaged in "very early" discussions (see my comments on slide 13).
- It should also be encouraged to contact trade associations to contact their members (both named members and members with other relevant offerings), in cases in which the ESO suspects that there may be viable solutions that are not registered in the tender process.
- The pre-tender process may be too long for some needs.
- (Crossing to slide 18): interpretation of TRL level should be flexible: is a new modification on an existing system TRL 9 because the system exists, TRL 8 because it's a modification of it, or TRL 6 because it's new? TRLs don't work for technological developments, as opposed to new inventions - we've suffered from being rejected for "proof of concept" because we use existing equipment and should have applied for "prototype development", and "prototype development" because it's a new process; we've also been rejected for innovation funding because the first would be a commercially profitable plant, and for infrastructure funding because we haven't built one before - all by the same bodies. Don't be rigid - rigidity and lack of both interaction and imagination all kill good technologies! Please avoid

use of TRL terminology because it then becomes a distorting template.

## Slide 18

- Technical evaluation: sometimes a digital model is a low-quality proof because the technologies are new; however, when technologies are well modelled in real life (e.g. the technology uses power station type equipment), then a digital model can be very accurate, to the point of being almost as good as there having been one built. This is important because innovations at infrastructure scale can't always be proved at small scale.
- The evaluations should be open to challenge PRIOR TO selecting a preferred bidder, by when it's too late.

Slide 19: CATOs are only suitable for network solutions, not non-network solutions.

Slide 20, decommissioning: Some of the plant (e.g. a pumped hydro scheme lake, the caverns for CAES) may be of potentially eternal life (to all intents and purposes), in which case the decommissioning plan should be replaced by a plan to ensure its ongoing viability, or mothballing with suitable level of oversight.

Slide 21: why so long? Why can't it be done next Autumn following FES 2021 for "very early" discussions (my comments, slide 13) and a year later for the tender? This is important: these timescales don't fit in with network needs relating to 40GW offshore wind by 2030.

Slide 22: There could be an ESO role in the distribution networks, identical to that in the transmission network, with the DNOs taking the TO roles. But if DNOs were to become DSOs with legal separation of DSO from DNO, then the DSO would take over the ESO role.

----

If I get the time, I may add further feedback on the detailed documentation at another time.

Kind regards,  
Mark

--

*Mark Howitt*

*CTO and Co-Founder, Storelectric Ltd*