Mod_13_19 Payment for Energy Consumption in SEM for non-energy Services Dispatch

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Background to Proposal

- Not all generator modes are modelled in SEM

- The TSOs may need to dispatch a unit for system support reasons, for example into synchronous compensator mode to provide increased voltage support or dispatch a wind farm which can provide reactive power at 0MW

- When operating in such modes, units consume energy, which is not accounted for in SEM

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Recap of Solutions Examined to date

- Following extensive discussion within the TSOs, four possible solutions were identified and explored, of which two were agreed as warranting further discussion in a conference call with industry on July 21st 2020

- At Modifications Meeting 100, the TSOs were asked to submit legal drafting in advance of a Working Group

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Two solutions for further development

- **Solution 1: Ideal solution**
  - Create a new dispatch instruction whereby a unit could be instructed to a negative generation level, to consume energy while providing a reactive power service
  - Profile DI in the instruction profiler and allocate energy consumed to imperfections

- **Solution 4: Unit as part of a TSSU**
  - Proposed in the context of windfarms – could also be applied to other units
  - Energy being drawn while the unit is providing reactive power at 0MW could be treated as negative generation
  - Unit could be reassigned to be part of a TSSU (rather than an ASU)
  - A flag could be sent to settlement to denote the period where the unit has been instructed to provide reactive power at 0MW, where the demand on the site was not related to the site load, but provision of services on the site.

Mod_13_19 V2

- The proposed legal drafting submitted as version 2 of this mod relates to Solution 4, proposed by William Carr, ESB GWM, which would be a faster to implement, if not perfect solution.

- Since the last meeting, some potential issues/discussion points in relation to Solution 4 have been addressed:

Issues examined

- All relevant charges need to be considered (e.g.TuOS and PSO levy charges)
    - Preference not to expose service providers to such charges, but for a medium term solution the answer to this may not be perfect.
- Question raised as to how this energy will be accounted for
    - Further consideration between the TSO and MO concluded that it will appear in the residual error by default.
    - Decision needed as to whether it needs to be captured as a separate line item in DBC reporting.
- Solution will not allow a distinction between energy used to service house load and load consumed to provide a service.
    - Might be balanced against the fact that service providers may be exposed to the charges outlined in first point.

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Issues examined cont'd

- Question as to whether there is any issue where multiple units are registered under the same Trading site (such units will be needed to be split out).
  - Question for the Mods Panel/wider industry as to whether this will have credit cover implications and whether it could disadvantage small units?

- The MIC will need to be renegotiated to avoid units incurring overrun charges.
  - There is a process in both jurisdictions for renegotiating MICs/seeking modified connection agreements.
  - *Need to confirm NIE process

- TSOs needed to check if generating and sending a flag from system services settlement is feasible (daily ex-post).
  - While not formally impact assessed, in principle the SOs think that it should be possible. For example, an EMS alarm could be used when a unit is dispatched to enter the mode in which it is providing reactive power at 0MW.

- Consideration whether the tolerance on the current scalar for Wattless Vars needs to be reviewed, as a limited number of units currently qualify for it in a limited number of periods.

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Recommendation

- The TSOs propose that both Solution 1 and Solution 4 be examined further at a Working Group